



Zonal Railway Training Institute

Central Railway, Bhusawal



READING MATERIAL FOR LDCE FOR THE POST OF AOM/ATM/WAM



PREFACE

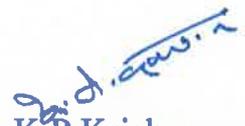
I am extremely happy to know that traffic and commercial faculties are bringing out its specific reading material for candidates who are appearing for LDCE for traffic (Transportation and Commercial).

This reading material also includes topics relating to Establishment Rules, Financial Rules and Rajbhasha.

I am sure that this reading material will be beneficial for the candidates who are appearing for LDCE.

I specially congratulate all faculties who are associated with this job for preparing / compiling reading material however this is not exhaustive, and does not supersede or alter in anyway the rules in the G&SR, codes, manuals and other instructions at Zonal and Divisional levels.

With warm and best wishes to all aspiring candidates.


K.P. Krishnan
Principal

DISCLAIMER

This reading material has been prepared for the guidance of candidates appearing for LDCE Exam for the post of AOM/ATM/AM, hence it should not be looked in substitute of G&SR, BWM, AM, and code & manuals.

This is not exhaustive, if any doubt, it is advised to refer concerned code, manuals and rulebooks.

Principal
Zonal Railway Training Institute
Central railway - Bhusawal

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SYLLABUSS FOR LDCE - FOR PROMOTION TO GROUP 'B' POSTS IN THE TRAFFIC (TRANSPORTATION & COMMERCIAL) DEPARTMENT

A. TRAFFIC (TRANSPORTATION) :-

PAPER-I :

I. GENERAL

- Hierarchical set up and line of control of Operating Dept, at the Divisional, Zonal and Railway Board level.

II. TRAFFIC, TRAIN AND POWER CONTROL ORGANISATION

- Objective and set up of Control Offices.
- Functions of Control Organization pertaining to Train Ordering, Punctuality, Maintenance of Operating Statistics, Wagon & Loco Stock Management, Blocks (Engg. TRD etc) management, Management during Accident & unusual Situations/ Circumstances & Disaster Management.
- Duties and responsibilities of Chief Controllers, Dy. Chief Controllers Section Controllers, TNCs, Recorders and their Co-ordination with Lobbies, Station & Yards.
- Freight Train Operations (FTO) & Freight Train Ordering Principles with or without co-ordination with Crew Lobbies.
- Special instructions during abnormal conditions of working & during emergencies like Cyclone, Civil Disturbances, Accidents etc.
- Daily Performance Reporting from Stations/Yards/Sheds to Area Sub-control, Area Sub-control to Divisional Control Office and from Divisional Control Office to Zonal Control Office and from Zonal Control Office to Railway Board.
- Basic and important Documents/Registers maintained in Control Office and their basis.
- Periodical Performance Reporting and analysis of Operating Performance along with compilation of statistical data.
- Power Control Organization, Engine and crew scheduling.
- Factors affecting wagon & Engine utilization and methods of improvements.
- Working pertaining to issue of caution orders from nominated and Notice stations.
- Liaison/Co-ordination with Control Establishments of other departments like Engg., TRD, Traction Control, Signaling Control etc.

III. FREIGHT TRAIN OPERATIONS

- Functioning of crew & Guard Lobbies.
- Integrated Lobbies.
- Shunting operation in Yards or Road side stations.
- Working of Marshalling Yards & Transshipment Point.
- Causes of Yard and section congestion and remedial strategies.
- All India Marshalling Order and Railway-wise Marshalling Orders- principles and Procedures.
- Rules regarding carriage of Explosives and other General goods.
- Priority schedule.
- Indent Allotment and Supply of Freight stock at stations.
- Wagon Stock Management for loading and unloading operations.
- Imposition of operating Restrictions on Wagon Loading and acceptance of Wagon Indents.
- Observance of civil ban and Carriage of Contraband goods etc.
- Important Documents/Registers maintained in Yard & at Stations.
- Familiarity with G&SR, Accident Manual, Operating Manual, Block Working Manual, Red Tariff, IR Act, 1989 etc.
- Crew Management.
- Engine Utilization aspects requiring special attention:-
 - ❖ Engine Crew and Train Crew Schedule.
 - ❖ Rules Regarding Outstation and Home Station rest, etc. to ensure observations of 10 Hour Rule or Rules applicable from time to time.
 - ❖ Movement of Dead Locomotives.
 - ❖ Management of maintenance Schedule of Locomotives.
 - ❖ Shed and Traffic Outage of Locomotives.
- Wagon Turn Round Time (WTR) & factors affecting optimum utilization of the wagon fleet and methods of improvement:-
 - ❖ Running of unit trains and formation of Captive Rakes.
 - ❖ Block Train Operations.
 - ❖ Nominated day loading.
 - ❖ Rationalization Scheme of movement of Freight traffic for avoiding congestion by specific routes.
 - ❖ Merry-Go-Round (MGR) System.
 - ❖ Engine on Load (EOL) System.
 - ❖ Mini Rake System.

- Supervision and control over movement of Special type of Stock, ODC consignments.
- Maximum Moving Dimensions.
- Wagons Census.
- Uses of Computer:-
 - ❖ Freight Operations Information System (FOIS)
 - ❖ Coaching Operation Information System (COIS)
 - ❖ Rake Management System (RMS)
 - ❖ Terminal Management System (TMS)
 - ❖ Computerized Train Charting.
- Relevant Rules and important Policy guidelines.
- C&W examination for intensive, Round Trips, Premium and Close Circuit rakes.
- Sick lines and TXR Repair Depots including POH & ROH Depots and their functions.
- Supply of Coaches/Wagons to C&W shops for POH and special repairs.
- Working of travelling traffic cranes for handling heavy consignments at Intermediate stations.
- Detaching of Sick Wagons at enroute Stations and their repair and clearance.
- Inter change transactions – Junction returns of inter Railway Inter change traffic.
- Weightment of rakes.
- MIL RAIL
- Permissible Axle Loads & Heavy Haul Operations.
- 'Payload' to 'Tare' Ratio of Wagons.

IV. OPERATING STATISTICS

- Definition, meaning and methods of compilation of the Fundamental and Derived units.
- Analysis of the Operating Statistics.
- Important Operating Efficiency Indices, their meaning and uses.
- Operating Ratio.

PAPER-II

I. WORKING OF TRAINS GENERALLY AND GENERAL AND SUBSIDIARY RULES

- Responsibility and function of Engine crew before starting and while on run and during abnormal/unusual situations.
- Responsibility and function of Guard/Asst. Guard before starting and while on run and during abnormal/unusual situations.
- Role & Responsibility of Station Staff in working of trains.
- Various system of working of trains and Conditions for Granting LC.
- Classification of Stations, Standard of Interlocking, Signaling systems, Equipment & their working.
- Station Working Rules and Block Working.
- Level Crossings.
- Line capacity and measures for augmenting it MAUQ, Token less working, Centralised Traffic Control, Doubling, Automatic Block, IBS/IBH.
- Combined train Report, guard's Rough Journal Book, Vehicle Guidance, Driver's Ticket, Brake Power Certificate etc.
- Rules regarding Marshalling of vehicles on Passenger, Mixed and Freight trains.
- Vacuum Brake & Air Brake System along with Continuity Test.
- Precautions to be taken on Ghat Sections.

II. PASSENGER TRAINS OPERATION

- General principles and methodology of Time Tabling of Passenger trains.
- Consultative Machinery for revision of Time Table at Divisional, Zonal and Railway Board level.
- Publication of Working Time Tables, Public Time Tables & Sheet Time Tables.
- Punctuality of Passenger carrying trains.
- Factors affecting Punctuality of Passenger carrying trains and method of improving the Punctuality.
- Augmentation of train loads for meeting traffic requirements.
- Running of Tourists coaches, Special carriage and Special trains.
- Planning & Running of Holiday Specials, Mela Specials Tourist Specials, etc.
- Introduction of new trains, extension of train runs, Introduction of through and Sectional coaches.
- Preparation of Engine Links, Driver/Guard Links & Rake Links.
- Computer Service Operations.

III. ACCIDENTS AND SAFETY ORGANISATION

- Accidents, types and their classification, causes and their prevention.
- Functioning of Railway Safety Organization.
- Chief Commissioner of Railway Safety and his Functions.
- Rules for reporting Accidents.
- Accident Relief Medical Equipment (ARMEs) & Accident Relief trains (ARTs).
- Role & Responsibilities of various officials and Departments during Accidents.
- Responsibility of the control Organization Station Masters and Traffic staff on the affected Section.
- Accidents enquiries and DAR action against staff held responsible for the Accidents.
- Review and analysis of Accidents for taking corrective measures.
- Disaster Management & implementations of High level Committee's report on Disaster management on Indian Railways.

ACCIDENTS PREVENTION

- Psycho analysis in case of accidents attributed to human failures.
- Improved mechanized aids to prevent human error like:-
 - Improved signalling and inter-locking arrangement,
 - SM's central and Inter cabin control over route
 - Track circuit and Axle counters
 - Route Relay Inter-locking
 - Automatic cab warning system and automatic braking system.
- Refresher Courses, Safety camps and campaigns.

IV. PLANNING ON THE RAILWAYS

- Set up & Functions of Planning Wing on IR.
- Corporate Plan and Annual Plan.

PART A- Establishment and Financial Rules-

ESTABLISHMENT RULES:-

- General conditions of service of Railway servants including rules regarding leave joining time passes.
- Railway Service (Discipline and Appeals) Rules – 1968
- Railway Service Conduct Rules – 1966
- Retirement Benefits
- Payment of Wages, Allowances and Overtime
- Labour laws including the Payment of Wages Act, the Workmen's Compensation Act, Hours of Employment Regulations, the Factories Act, the Industrial Disputes Act, the Contract Labour Act.
- Manpower Planning the Training.
- Welfare measures in Railways.
- PNM, JCM and PREM.

FINANCIAL RULES:-

- Parliamentary Control over Railway Finance – Public accountability, Cannons of Financial Property.
- Railway Budget – Budgetary terms, type of Budgets, Budget Cycle, Demand for grants, Expenditure Classification.
- Works Programme – Financial Justification of Works – Preparation of Estimates, Capital Budget, Control over Capital Expenditure.
- Financial Cost Control in Railway Workshops, Sheds and Depot.
- Delegation of Powers
- M and P Programme, RSP.

Traffic (Transportation)

PAPER – I

I GENERAL

History of Rail Transport in India

The **history of rail transport in India** began in the mid-nineteenth century. In 1849, there was not a single kilometer of railway line in India. By 1929, there were 66,000 km (41,000 mi) of railway lines serving most of the districts in the country. At that point of time, the railways represented a capital value of some British Sterling Pounds 687 million, and carried over 620 million passengers and approximately 90 million tons of goods a year. The railways in India were a group of privately owned companies. The military engineers of the East India Company, later of the British Indian Army, contributed to the birth and growth of the railways which gradually became the responsibility of civilian technocrats and engineers. However, construction and operation of rail transportation in the North West Frontier Province and in foreign nations during war or for military purposes was the responsibility of the military engineers.

In 1845, along with Sir Jamsetjee Jeejeebhoy, Hon. Jaganath Shunkerseth (known as Nana Shankarsheth) formed the Indian Railway Association. Eventually, the association was incorporated into the Great Indian Peninsula Railway, and Jeejeebhoy and Shankarsheth became the only two Indians among the ten directors of the GIP railways. As a director, Shankarsheth participated in the very first train journey in India between Bombay and Thane, which took approximately 45 minutes.

A British engineer, Robert Maitland Brereton, was responsible for the expansion of the railways from 1857 onwards. The Calcutta-Allahabad-Delhi line was completed by 1864. The Allahabad-Jabalpur branch line of the East Indian Railway opened in June 1867. Brereton was responsible for linking this with the Great Indian Peninsula Railway, resulting in a combined network of 6,400 km (4,000 mi). Hence it became possible to travel directly from Bombay to Calcutta via Allahabad. This route was officially opened on 7 March 1870 and it was part of the inspiration for French writer Jules Verne's book *Around the World in Eighty Days*. At the opening ceremony, the Viceroy Lord Mayo concluded that *“it was thought desirable that, if possible, at the earliest possible moment, the whole country should be covered with a network of lines in a uniform system”*.

By 1875, about £95 million were invested by British companies in Indian guaranteed railways.

By 1880 the network route was about 14,500 km (9,000 mi), mostly radiating inward from the three major port cities of Bombay, Madras and Calcutta. By 1895, India had started building its own locomotives and in 1896 sent engineers and locomotives to help build the Uganda Railways.

In 1900, the GIPR became a government owned company. The network spread to the modern day states of Assam, Rajasthan and Andhra Pradesh and soon various independent kingdoms began to have their own rail systems. In 1901, an early Railway Board was constituted, but the powers were formally invested under Lord Curzon. It served under the Department of Commerce and Industry and had a government railway official serving as chairman, and a railway manager from England and an agent of one of the company railways as the other two members. For the first time in its history, the Railways began to make a profit.

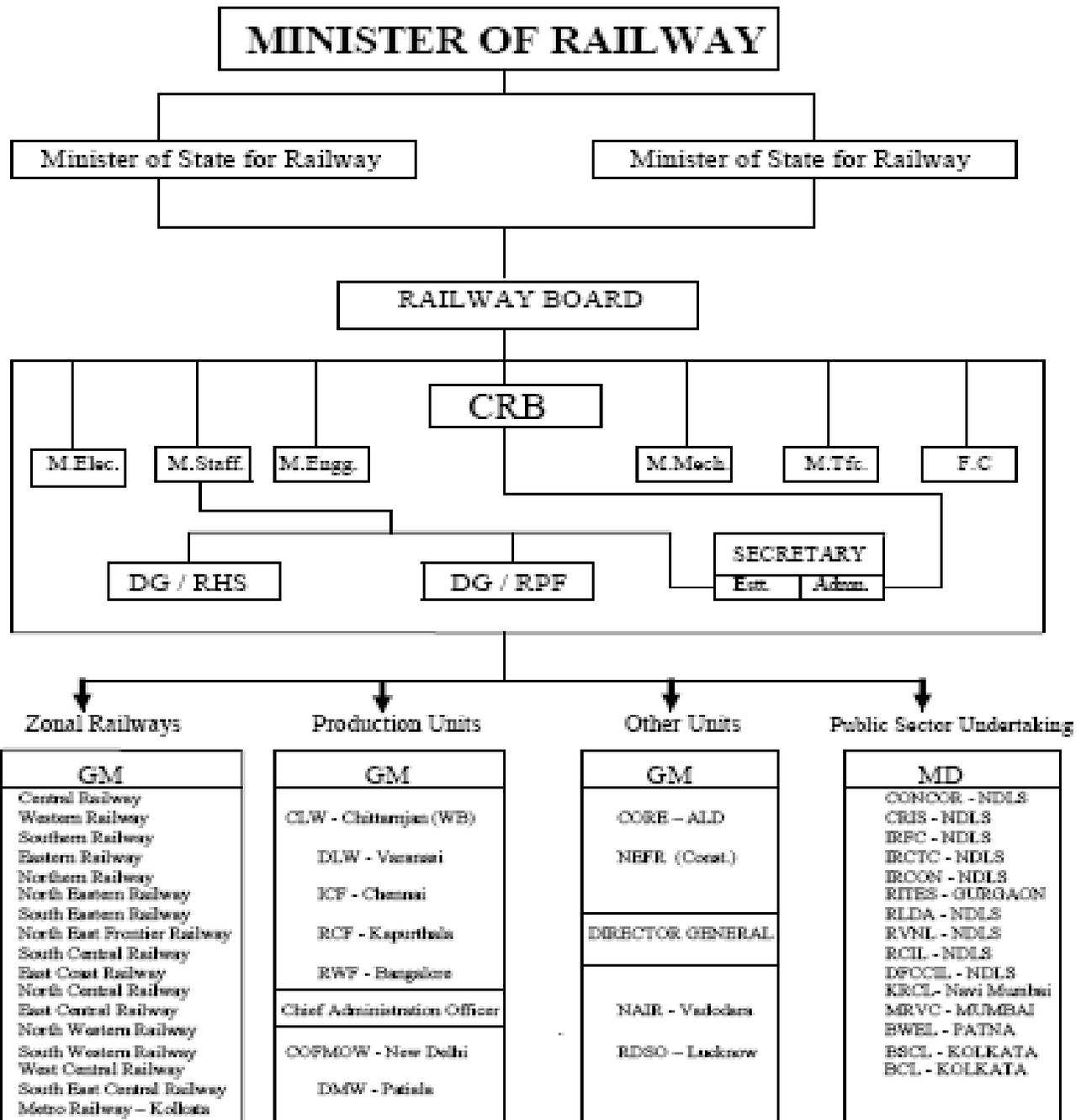
In 1907, almost all the rail companies were taken over by the government. The following year, the first electric locomotive made its appearance. With the arrival of World War I, the railways were used to meet the needs of the British outside India. With the end of the war, the railways were in a state of disrepair and collapse.

In 1920, with the network having expanded to 61,220 km, a need for central management was mooted by Sir William Acworth. Based on the East India Railway Committee chaired by Acworth, the government took over the management of the Railways and detached the finances of the Railways from other governmental revenues.

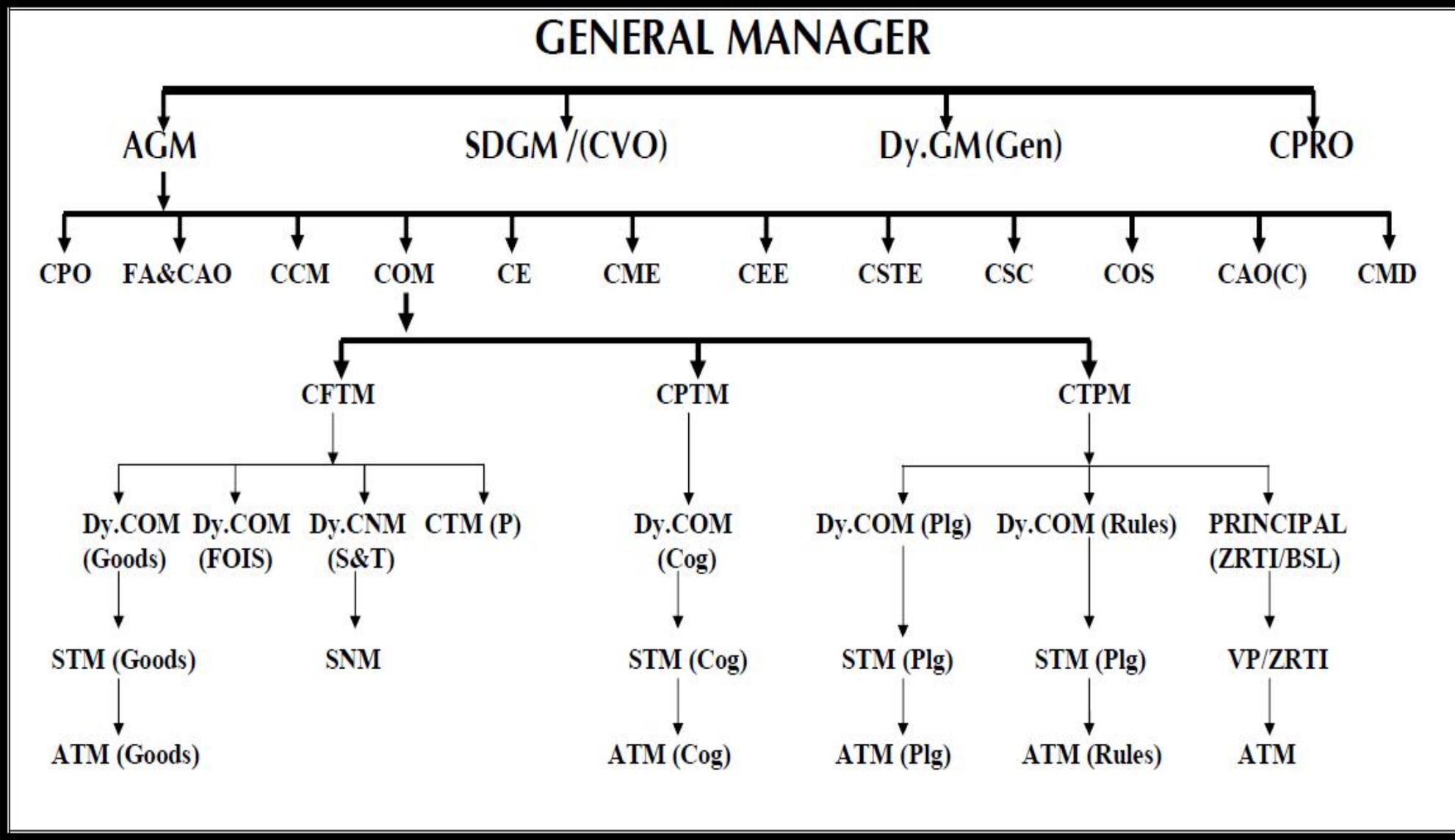
The period between 1920 and 1929 was a period of economic boom. Following the Great Depression, the company suffered economically for the next eight years. The Second World War severely crippled the railways. Trains were diverted to the Middle East, railway workshops were converted to ammunitions workshops and some tracks (such as Churchgate to Colaba in Bombay) were dismantled for use in war in other countries. By 1946 all rail systems had been taken over by the government.



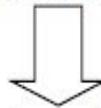
ADMINISTRATIVE ORGANISATION ON RAILWAY BOARD LEVEL



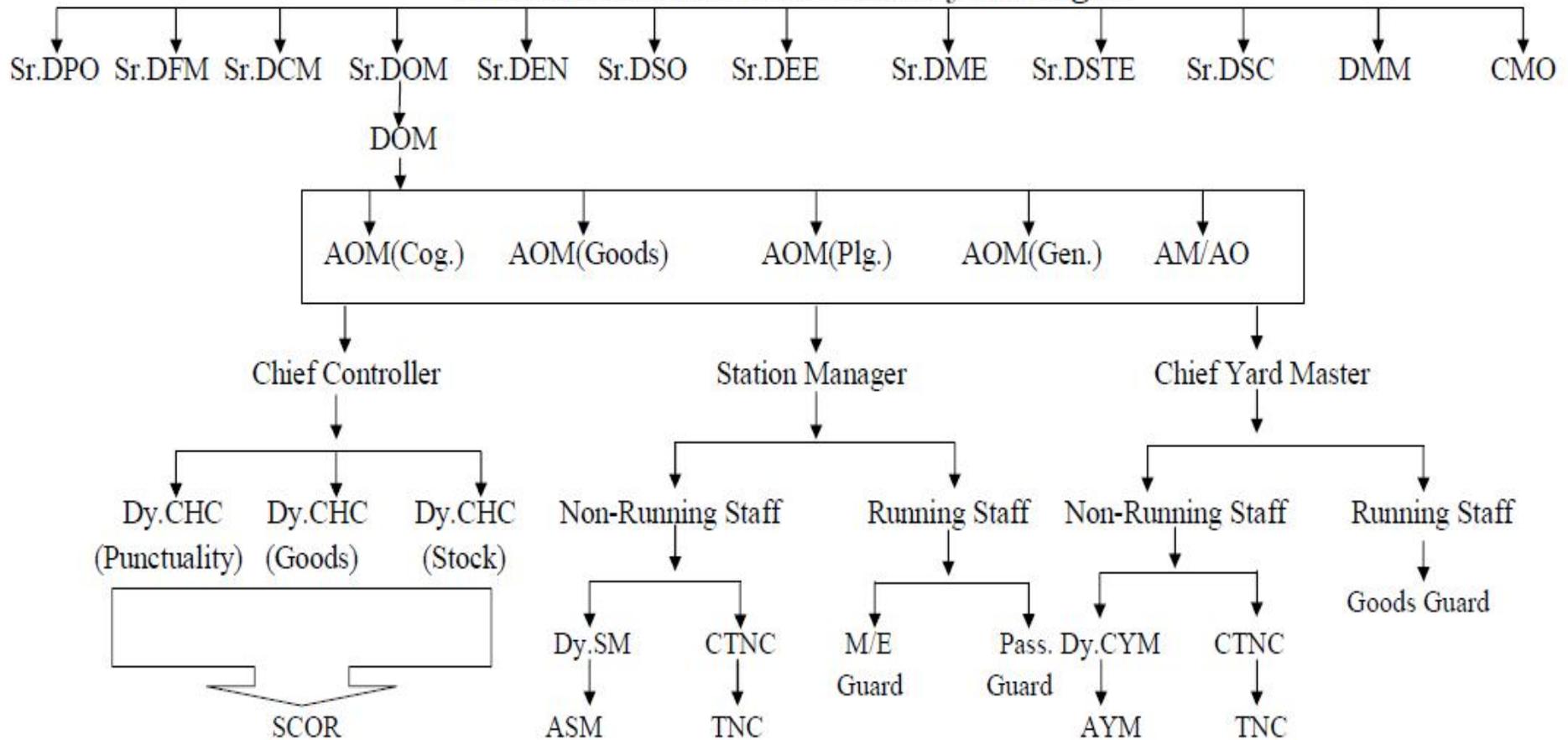
ZONAL RAILWAYS	HEADQUARTERS	ZONAL RAILWAYS	HEADQUARTERS	ZONAL RAILWAYS	HEADQUARTERS
Central Railway	Mumbai CST	North Central Railway	Allahabad	West Central Railway	Jabalpur
Western Railway	Mumbai Chhatrapati	North Western Railway	Jaisalmer	South East Central Railway	Bilaspur
Southern Railway	Chennai	South Western Railway	Kolhapur (Gandhinagar Road)	North East Frontier Railway	Gorakhpur (Mithapur)
Eastern Railway	Kolkata (Bally Haze)	South Central Railway	Secunderabad	East Coast Railway	Bhubaneswar
Northern Railway	New Delhi	South Western Railway	Mahbubnagar	Metro Railway - Kolkata	Kolkata
North Eastern Railway	Guwahati	East Central Railway	Bhujpur		



DIVISIONAL RAILWAY MANAGER



Additional Divisional Railway Manager



Functions of the Traffic Department

1. Proper and Economical use of available resources such as locomotives, Rolling stock, track, signalling and telecommunication equipment and manpower etc.
2. Timely planning for additional line/track and rolling stock capacities based on realistic traffic forecasts.
3. Better Quality of service: This will include the following:-
 - [A] Passenger Train Operation
 - (i) Better Time-Table.
 - (ii) Punctuality of passenger carrying trains.
 - (iii) Adequate & proper accommodation for passengers to travel.
 - (iv) Safety of passengers.
 - [B] (Goods Train Operation)
 - (i) Prompt, regular and assured supply of proper type of wagons for loading.
 - (ii) Quick, assured, and safe transit of goods.
4. To identify business opportunities through market studies.
5. To define and determine product design and product mix for freight and passenger segments through close interaction with customers/markets.
6. To collect customer/market information through market surveys and customer complaints.
7. To determine cost of different product and services.
8. To recommend pricing of different product and services.
9. Maximum loading by prompt supply of wagons.
10. Attracting height rated and high yielding traffic.
11. For additional capacity to meet the future growth of traffic efficiently.
12. Ensuring Safety.

II TRAFFIC, TRAIN AND POWER CONTROL ORGANISATION

CONTROL ORGANIZATION

The control organization of Indian Railways is the nerve centre of train operations. It controls the asset management of the Railways, in a dynamic situation, round the clock incessantly moving trains on its entire network. It has come a long way from being an exclusively telephone based system emerging in the form of an Information Technology enabled organization.

This basic structure of Operating control on Indian Railways exists at the Divisional Level, which has also been extended to Area control levels. In addition, Central Control office is situated in the headquarters office and one at Railway Board.

Objectives of the control organization:

1. To ensure Punctuality of the mail / express and passenger trains.
2. To ensure maximum utilization of the rolling stock
3. To ensure maximum utilization of the section capacity
4. To increase the speed of goods trains.
5. Maximum utilization of the train crew.

Control organization at RB level

CRB		
MT		
Additional member (T)	Additional member (C)	
ED (Freight services) Director (Freight marketing)	ED (Cog) Director (P)	ED (Safety) Director (Cog)
	Director	
JD	JD	JD
DD (F/Cell)	DD	DD
AD	AD	AD
CHC Dy. CHC	CHC (P.Cell) Dy. CHC	CHC (Safety Cell) Dy. CHC

Control organization at Zonal level

		GM		
		AGM		
		COM		
CFTM	CPTM		CTPM	CTM (POL)
		CMPE		
Further:				
	Dy. COM (Goods)	Dy. COM (FOIS)	Dy. COM (CNM)	
	ATM (Goods)	STM (FOIS)	ATM (Central Control)	
	MI / TI		CHC	
	TNCs	TNCs	Dy. CHC	
			TNCs	
	CPTM	CTPM	CTM (Pol)	CMPE
	Dy. COM (Cog)	Dy. COM (Pl)	CTW controller	Dy. CME/Dy.
	CEE			
	STM (Cog)	Dy.COM (Rules)	TW controller	AME/AEE
	ATM (Cog)	ATM (Rules & PLG)	TNCs	
	Emergency control	MI / TI – C.Pl.I		
	CHC	Pl. I		
	Dy. CHC			
	TNCs			

CFTM: Chief Freight Transportation Manager,
 CPTM: Chief Passenger Transportation Manager,
 CTPM: Chief Transport Planning Manager,
 CTM: Chief Transportation Manager (POL – Petroleum, Oil and Lubricants),
 CNM: Chief Network Manager;
 STM: Senior Transportation Manager.

Traffic control is divided into two units at the HQ level for easing up its objectives:

- a. Central control, and
- b. Emergency control

Responsibility of traffic operation through out the zonal Railway lies with COM assisted by CPTM, CFTM. The COM advices all divisions regarding traffic and ensure that the objectives are fulfilled as per policy guidelines and planning.

Central Control: Chief controller is the head of the central control. All the functions are done on his direct supervision. He is responsible to the COM. Dy. Chief Controller (Coaching, Goods, and Stock) assists the Chief Controller.

The following are the functions performed by the central control:

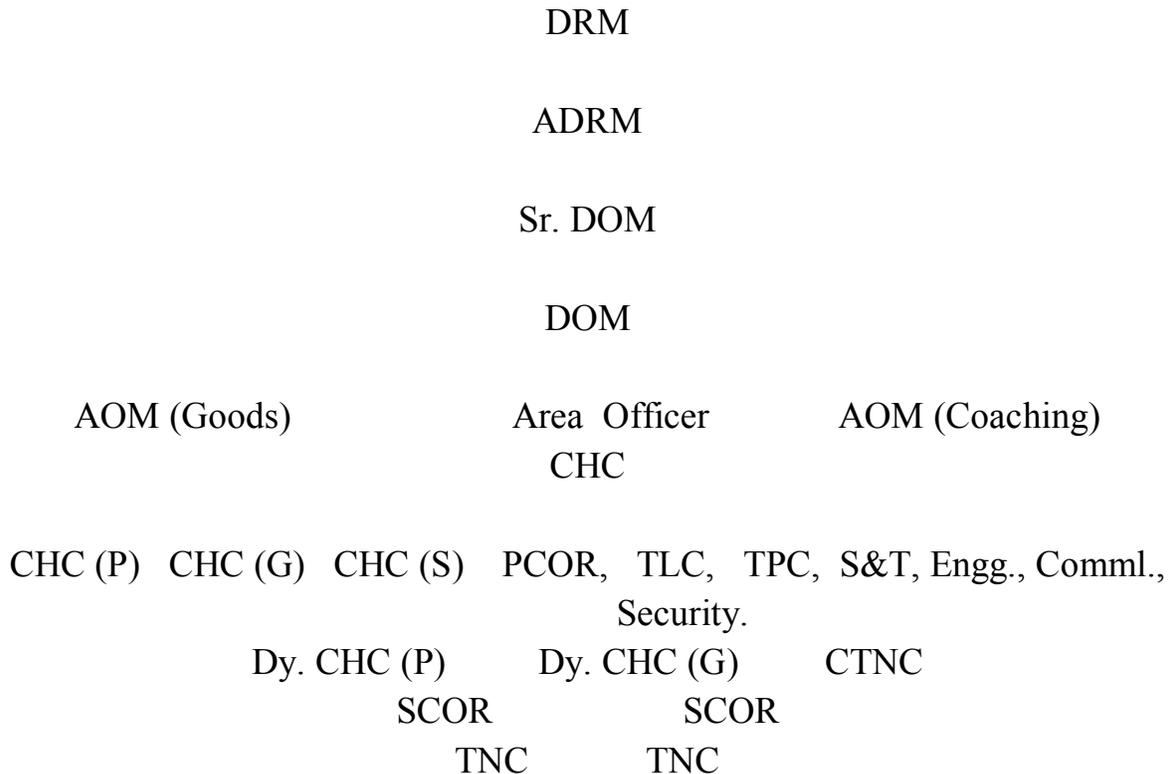
1. Wagons available in divisions, received and forwarding wagons, yard balance at ZERO hour and figures of wagons at 24:00 hours i.e. clearance.
2. Data is made in case of accident and concerned department's officer is informed.
3. Keeps a close watch on the relief trains.
4. Collection of figures of received tank wagons in excess, and for transshipment.
5. Collection of figures of stabled wagons with description of vehicle / train.
6. Analysis of detention to trains.
7. Running of goods trains to their best possible paths.
8. Elimination of avoidable detention to goods stock at loading and unloading and Transshipment sheds.
9. Allotment and distribution of goods stock to the Stations.
10. Arrangement of line blocks and to provide maximum time possible for the working of material trains.
11. Arrange relief for crew.
12. Ensure optimum utilization of the locomotives.
13. Issue proper instructions for train working during abnormal working.
14. Arrange speedy relief in case of accident.
15. Help connecting the unconnected wagons.
16. Ensure correct marshalling of trains.
17. Assist in the preparation of timetable in coordination with neighboring divisions, and Railways.
18. Advise stations and permanent way staff regarding weather warning to take necessary precautions.
19. Arrange periodic census.

B. Emergency Control:

1. The Chief of Emergency Control Office is CHC assisted by Dy. CHC in shifts.
2. Dy. CHC prepares figures of passenger trains run shift wise and as per the directives of CHC.
3. In emergency control, advance diary is prepared in which special instructions are mentioned. This diary is made date wise in different pages.
4. Maintain punctuality of all passengers, M/E trains run in CR.
5. Inform the running position of trains to foreign Railway along with late running and also the description of late running trains and departure time of trains.
6. Observe loss of punctuality percentage, its causes, and position of coaching stock, current situation of wagons, parcel vans etc and collection of data.
7. Record of operation of special trains, bogies is kept in this office.

8. Concerned divisions are informed of passenger trains and other coaching trains.
9. All the data regarding coaching such as Fair Special, Summer Special, Relief Special etc is collected.

Control organization at the Divisional level



The Control Organisation is one of the Principal Means by which the essential Co-ordination is obtained in Railway Operation. It is from where, the planning activities of day to day working are done and the orders are issued to the stations and yards for execution.

It can be compared to the brain of human. Normally the Divisional Control Office is located in the Divisional Head Quarters and connected to the station and yards through various communication systems. If the size of the division is large and controlling becomes difficult a sub control office may also be provided at a convenient location.

The area spread of a division is divided into control sections having a given number of stations. A section is generally of the range of 50 to 150 km stretch and the trains are controlled in the section by the Section Controller. The two-way telephone system, also called an omnibus circuit which permits all stations to have direct communication with section controller, who is responsible for train

regulation in his area. The section controller can speak to all stations at the same time or to one station selectively, using individual numbers/buttons. Movement of train is plotted on time distance graph to record their actual progress, these records, called control charts, can be analyzed later.

Sr.DOM has the administrative control of the Divisional Control Office. CHC is the head of the control organisation. For easy and effective controlling, the entire division is divided into various sections and a well knit communication is provided for monitoring minute to minute activities at stations and yards. CHC (In-charge) is assisted by –

Dy. Chief Controller Goods/Mainline
Dy. Chief Controller Coaching
Dy. Chief Controller Stock
Section Controllers
Chief Trains Clerk
Head Trains Clerk
Trains Clerks

The Chief controller being the head of the control organisation is assisted by Dy.Chief controller in Freight and Passenger train operations. Dy. CHC looks after the Traffic Control who will guide and assist the SCORs. All technical disciplines involved in train movement have are representative in the control office to provide the required support from his department. These would include-

Chief Diesel Power Controller
Chief Traction Loco Controller
Chief Traction Power Controller
T X R Controller
Commercial Controller
Engineering Controller
Signal & Telecommunication Controller
Security Controller
Crew Controller
ETL Controller
F O I S In-charge

The entire organization works round the clock, all days of the year without any interruption to monitor actual movement of trains on the entire rail network.

The detailed organization of the control selected and duties assigned to employees depends on the demands of the transport task appropriate to each grade of employee or to diversity in the transport task. The Chief Controller is the head of Divisional Control Organization.

Basic Function of control:

1. Train Control:

- a) This job is done by SCOR(Section Controller).
- b) Each SCOR is provided with the master chart of that section.
- c) In the master chart the path of M/E and Passenger trains are charted in different colors.
- d) This master chart helps in making advance planning by SCOR.
- e) With the help of master chart, SCOR guides the SM and Yard Master relating to the movement of trains.
- f) SCOR gets advices regarding train operation and optimum use of wagons and engines from the CHC and Dy. CHC.
- g) Supervising & regulating movement of trains from station to station on the section to avoid delay to trains and to maximize utilization of the capacity of the section by :-
 1. Monitoring movement of trains from station to station and recording paths and detention on charts.
 2. Arranging crossing and precedence of trains judiciously.
 3. Arranging working of departmental and material trains.
 4. Giving time signal to all stations on the section daily at appointed time.
 5. Fulfilling interchange commitment.
 6. Arranging proper movement of assisting/banking/light engines.
 7. Clearance of sick wagons from Roadside stations.
 8. Arrangement of relief for 10 hours duty staff.
 9. Incident management on rail network & at station.
 10. Arranging Engineering and/or power blocks in such a way as to involve minimum disturbance to train running.
 11. Maintaining fluidity of yards by controlling the flow of stock in and out of yard.
 12. Arranging Speedy relief in case of accidents.

2. **Traffic control** is the general and over-riding control of supervision of the movement of goods and coaching traffic on the section. It is exercised by:

- a) Traffic Control means controlling and regulating the movement and distribution of coaching and goods stock and directing it's loading, unloading, dispatch and arranges passage through yards.

- b) The aim of traffic control is to maximize unloading and loading in the division, fulfill the interchanging of trains and effective utilization of the available resources such as engines, wagons and bankers etc.
 - c) This job is performed by Dy. CHC in the division such as ordering the movement of goods train, allotting the wagons to goods shed and station for loading, giving special attention to block rakes, giving inward traffic for loading, advise regarding running of loaded or empty wagon rakes.
 - d) Granting of blocks to engineering, OHE and S&T departments.
 - e) Look out for speed restrictions and running of material train and give blocks for repairs and maintenance in such a manner so that it would not affect train movement.
 - f) To admit trains in yard in such a way so that working capacity of the yard is not affected.
 - g) Collecting information from the various section in respect of -
 - i. Registration of wagons outstanding at stations and arrangements for supply of wagons.
 - ii. Number of wagons loaded and empty wagons/rakes awaiting despatch.
 - h) Arranging running, regulation, putting back and cancellation of trains. (both freight & coaching) and to ensure optimum utilization of loco and staff to derive maximum benefit..
 - i) Collecting stock position from the different stations, marshalling and terminal yards, arranging supply of wagons against pending registration and ensure optimum utilization of stock by securing maximum loads for trains with minimum detention
 - j) Arrangement of crew & Guard for freight trains.
 - k) Monitoring and coordinating working of yards, goods shed sidings, loco-shed, TXR depots etc and to keep liaison with adjoining Railways and Division for interchange commitments.
 - l) Keep strict vigil on the wagons, which are unable to move and make arrangement for quick repair of them.
 - m) In case of accident inform all the concerned officials and the other staff.
 - n) To make arrangement of men for speedy availability of assistance at accident site including ART/MRV, crane etc and ensure quick despatch of the break down in case of accidents and other coordination.
3. **Power control** is responsible for provision of motive power to all trains by maintaining position of locomotive
- (a) Requisitioning engines from loco sheds for all operating requirements, i.e. Train working. Shunting and Banking.
 - (b) Ensuring most economical use of engines by close supervision both in Traffic Yards and sheds.
 - (c) Ensuring the return of engines to “Home Sheds” at regular intervals for servicing and maintenance.

- (d) Ensuring an even balance of engines and crews between running sheds for meeting demands of traffic,
- (e) Ensuring that light engine kilometers is kept to the minimum.
- (f) Provide guidance to running staff for troubleshooting.

4. Carriage and Wagon control is responsible to assist the train and traffic control and to-

- (a) Ensure timely examination and fitness of all trains
- (b) To keep a watch over the detachment of sick wagons/coaches and to arrange for their early repair and fitness.
- (c) Keeping a watch over availability of vital C & W components, like Air Hoses, Washers, clamps etc. and efficient working of equipment & machines in C&W depot to avoid detention to trains.
- (d) To keep a watch over placement of wagons/coaches in sick line and their release.
- (e) To keep account of detention to trains on C&W account and take remedial action.
- (f) To provide guidance to running staff for trouble shooting.
- (g) For Electrical Multiple units, this function is performed by EMU controller.
- (h) Monitor the movement of POH due stock to workshops.

5. Commercial control assists the Traffic control.

- (a) To expeditiously dispose off unclaimed and unconnected wagons. Parcel consignments.
- (b) To keep a watch on detention to trains on commercial account like Alarm chain pulling. Carriage watering, parcel working etc., and take remedial measures.
- (c) To ensure quick transshipment of sick wagons by arranging matching stock and labour.
- (d) To keep a watch over submission of station returns.
- (e) Monitoring of public complaints lodged at the stations.
- (f) To ensure proper maintenance of public amenities available at stations.
- (g) Any other job entrusted by Sr. DCM/DCM.

6. Traction power control is provided to assist in Traffic and Train control for-

- a) Arranging maintenance blocks for OHE
- b) Arranging alternative power supply in case of tripping etc., though remote control.
- c) Monitoring OHE failure and taking remedial action.
- d) Monitoring detention of trains on OHE accounts.
- e) Guiding running/station staff in trouble shooting.

7. Engineering control:

Monitors imposition & cancellation of Engineering Restrictions, working of track machines & monitoring integrated maintainable blocks, co-ordinates works during maintenance blocks and running of Material trains.

8. **Signal control** assists Traffic and Train control and is responsible-

- (a) To keep a watch over the S&T failures and take remedial action.
- (b) To ensure efficient working of communication channels.

9. **Security control** is responsible for prevention of theft of property and assists passengers in trains/stations.

10. Crew Control:

- a) Crew control ensures availability of Train crew (Loco Pilot).
- b) He has got the details of all kinds of loco pilot available in the division like Goods & passenger.
- c) Issue instruction to all depot/Lobbies regarding movement of crew so that crew may be available for the traffic in all directions as per forecast.
- d) Maintain the balance of crew with all adjoining divisions.
- e) Arrange relief for loco pilot and avoid bursting of 10 Hour rule.

12. ETL Control:

Issues instructions to ETL staff if complained regarding fan, light, Battery and dynamo in train.

Functions of control:

The main functions of Traffic Control are:

- a. Continuous supervision of the movement of all traffic in the controlled area with a view to achieve the maximum possible operating efficiency.
- b. Correct ordering of trains and use of locomotives so as to reduce to a minimum the productive time of power and personnel, and losses on account of wasted haulage capacity on trains and thus to keep the "turn round" as low as possible;
- c. Systematic maintenance of accurate charts of train movement and the arrangement of crossing and precedence to the greatest advantage.
- d. Analysis of detentions to trains
- e. Planning, ordering and running of goods trains to the best possible paths.
- f. Maintaining the fluidity of marshalling yards/freight terminals.
- g. Taking remedial action in the event of yard/terminal congestion.
- h. To allot and distribute coaching and goods stock and direct its loading, dispatch, and movement, particularly through intermediate marshalling yards, and to so direct its placement and quick release so as to attain the quickest possible "turn round" and ensure elimination of avoidable detentions to goods stock at loading and unloading points and at transshipment stations.

- i. To keep in the closest touch with the operation of continuous sections and divisions so as to avoid congestion and lack of fluidity;
- j. Supply of information to adjoining controls, terminals and engine changing stations regarding the movement of trains to enable adequate timely arrangements for their reception and onward dispatch.
- k. Arranging engineering and other department blocks with minimum detention to traffic.
- l. Running of material trains and other track machines, tower wagons etc.
- m. Arranging relief for engine crew and Guard.
- n. Ensuring maximum utilization of locomotive.
- o. Issuing instructions for train working in case of equipment failures and whenever abnormal method or working has to be resorted to.
- p. Speedy arrangements for relief rescue and restoration in the event of accident.
- q. To assist in the realistic planning of time tables and punctual running of passenger trains in co-ordination with various departments other divisions and other railways.
- r. To keep a watch over damaged stock at road side stations, yards and sick lines and to ensure that they are promptly attended to.
- s. To rectify immediately the irregularities on the part of line staff and provide them necessary guidance.
- t. To provide operations management information.
- u. To ensure smooth functioning of FOIS and other IT applications.
- v. To provide an impulse of human energy and brain power throughout the section and by coordination and direction ensure the free movement of traffic and thereby obtain the maximum output from each unit involved at the minimum cost to the administration.

The functions of the Control organization may, for the purpose of understanding be conveniently classified under the heads of planning, execution and review, though in practice, of course, all three activities would be going on simultaneously.

PLANNING

1. forecast of interchange;
2. forecast of trains to be run section wise;
3. forecast of supply of empties for bulk loading transshipment, etc.;
4. forecast of unloading;
5. planning for engineering blocks and special moves.

Information required for this purpose:

1. power availability
2. availability of loads
3. disposition of empties and planning for loading
4. analysis of midnight divisional wagon balance

The plan is made by CTNL daily at 0800 hrs. and reviewed by Sr.DOM and HQ is informed by 1000 hrs. both immediate and antecedent, for taking remedial action to prevent their recurrence.

EXECUTION

The day's plan is to be executed by yards, loco sheds, TXR depots, transshipment supervisors, area controls, SMs and must, therefore, be communicated to them as soon as it is finalized.

Instructions are given in the course of the morning conference, modified as necessary after conference with the HQ. The performance is reviewed once at 1600 hrs and briefly at night.

REVIEW: OBJECTIVES

1. Analyzing shortfalls of previous day to take remedial measures and pin point weak spots;
2. Provide basic data for planning for current day.

The following are the main features of the previous day's performance which are reviewed:

- interchange
- divisional wagon balance
- train running
- disposition of empties
- particulars of stabled loads
- yard balances
- unloading on division
- registrations and loading
- transshipment performance
- punctuality
- power utilization
- sick line working
- accidents, unusual occurrence
- special type stock
- crane wagons (heavy lift)

Telecommunication-Facilities in Control:

Extensive, efficient and reliable communication network is necessary for the efficient functioning of the Control organization. The following telecommunication network is available in control offices.

1. FOIS Network
2. Mobile Train Radio Communication (MTRC)
3. Dual Phone Modulation Frequency (DPMF)
4. Hot lines are provided between:
 - a) Headquarter and divisions

- b) Adjoining Divisions and Railways
 - c) Intercom facility to various officers and other functionaries concerned with the control is connected with important work with STD or Trunk exchanges.
3. Deputy Control lines:
This circuit is provided between various functionaries in the control office, stations and important work centers like yards, loco sheds, crew booking lobbies.
 4. Section control circuit:
This circuit is connected to all the stations and the section controller, Chief controller etc.
 5. Traction Power control circuit:
This additional circuit is available on the electrified sections; this is connected to T.P.C. in OHE remote control centre, all stations, control offices and selected work places. The section controller or T.P.C. can also be connected from the emergency socket provided over the sections of line by means of portable telephone of the control point with indication on the electric mast, direction wise, to the nearest circuit.
 6. Section control board:
The section controller of each section is provided with control board with telecommunication facilities for coaching stations, certain important cabins, big freight terminals, loco shed etc. over a section. For the guidance of section controller, the lay out of all the stations and sidings is painted on a large board.
The station lay out diagram is also provided with details of holding capacity of each of the running & non-running lines, gradients and signals. In electrified area, OHE sectioning diagram is provided. This depicts element section in different colours & other details of sectioning post (SP) and Sub-sectioning post (SSP).
 7. Graphs and Plotting:
 1. Trains are plotted on control graphs which consist of horizontal and vertical lines representing distance and time respectively. Along side vertical lines stations are each and each unit is further sub-divided into 5 smaller units of 2 minutes each.
 2. Each control graph at the end of the shift may have the following information on it.
 - a. Name and total distance of the section in Kilometers.
 - b. Distance in Kms between each station on the section.
 - c. Weather condition in each shift.
 - d. Engineering restrictions on the section.
 - e. Code names of each station of the section.
 - f. Time lost by each train on loco, traffic or engineering account at or between stations.
 - g. Section controller's remarks against item (f).
 - h. Time made up each train on loco, traffic or engineering account.

- i. Guard's record of time lost on loco, traffic or engineering account at or between stations and remarks.
 - j. General remarks.
 - k. Signal failures.
3. In plotting various types of trains the coloured pencils shall be used as per extant convention. All up trains are plotted from the bottom of the chart upwards and from the left diagonally towards the right; and all down trains are plotted from the left diagonally towards the right; and all down trains are plotted from the top of the chart downwards and also diagonally from the left towards the right.
 4. For judicious crossing and precedence, it is necessary to have plotting of passenger trains at least one hour in advance depending on traffic density in easily erasable lines. Now through computerised charting this is automated. On certain selected controls, this function has been automated.

8) **Master Charts:**

For every section, Master charts indicating trains run in 24 hours are prepared which show the running of each Mail, Express or passenger trains over the section according to its scheduled running. In between the running of the trains carrying passenger, paths for goods trains are worked out and plotted. They are helpful in revision of Time tables and planning the running of any extra trains and guidance of SCORs and should be displayed on the board to which they refer.

Preparation of Master Charts:

Trace out the paths of Passenger/Mail/Express Trains keeping in mind the timings necessary at divisional and zonal interchange points.

The following points are to be kept in mind while preparing Master Charts:

- (a) The Capacity of originating yard in forming trains and starting them.
- (b) The capacity at the terminals to receive the trains (Availability of platform lines, Pit line, TXR lines etc)
- (c) Facilities at enroute for crossing or precedence.
- (d) Spreading out evenly occupation of Block Section to avoid bottlenecks, if trains run late.
- (e) On Double Line sections, grouping of trains of uniform speed so that detention and precedence becomes minimum.
- (f) On single line sections, if the paths of Up and Dn direction trains can be traced at different periods the number of crossings can be reduced.
- (g) Running time of Trains suiting to 10 Hours duty of running staff.
- (h) Keeping in mind the time for crew changing, fueling, watering the coaches, passenger lunch/dinner.

Integrated Blocks:

In order to ensure safety and reliability of the system the maintenance and repairs to the track, points and crossings, Bridges, Signals and Overhead equipments etc. is inevitable. To make best use of available time integrated blocks are planned in co-ordination with different departments to undertake the maintenance works simultaneously instead of piecemeal blocks taken by different departments separately. Duration of the integrated blocks is determined on the basis of margins available in the Master charts and passenger operations. The details of integrated blocks are notified in the working timetables separately for each division indicating the section up and down lines, duration of block period and their implications, if any. These blocks are subject to minor adjustments depending upon running of trains. However, all out efforts should be made to ensure that the blocks are permitted as prescribed in the working time tables. The running of trains particularly goods trains should be adjusted by the Sr.DOM and Chief Controllers of respective divisions to avoid detentions during the block on account of temporary single line working and precedence being given to passenger carrying trains. Except for the works given in the TWOs, no other maintenance block shall be given to any department. All works shall be allowed within the Engineering allowance provided for each division.

Principal Chief Engineer, who shall co-ordinate the operation of blocks and maintenance works by all other departments, nominates one of the Sr.DEN of the division. The works to be executed shall be planned in advance in block meetings attended by officers of concerned department with all preparatory arrangements made well in advance for the smooth and timely execution of blocks without causing undue detention of traffic and inconvenience to passengers.

All concerned should ensure that blocks are not burst as to avoid adverse effect on running of trains and inconvenience to traveling public.

Traffic Corridor Block:

1. It is the time interval between two successive scheduled Mail Express trains in the particular section on the Division available for maintenance work done by various departments.
2. It is mentioned in the Working Time Table of concerned division.
3. The corridor block is shown in the master chart of the concerned division.
4. This period of corridor block may also be used for running goods trains.
5. Maintenance schedules on the divisions are to be managed as per the corridor blocks.

CHARTING:

It is nothing but plotting all the train movements in a time and distance chart by

section controller. Master Chart is prepared and kept before him as a guide for plotting Passenger / Mail / Express movements. After tracing the paths for all Passenger Carrying Trains the paths of Goods Train can be traced and they are classified in to 3 kinds.

- 1) Goods Path - Requiring minimum running time.
- 2) Auxiliary Path- Suitable for short distances
- 3) Bad Path - Shall not be used except in case of emergency because it occupies maximum time.

For the purpose of Section Capacity the paths of scheduled trains and goods paths are only taken into consideration and the number arrived at, shall not be less than the number obtained by Scott's Formula. If so, it is considered as lead charting and requires revision.

Method of Charting:

Every chart is printed for 8 Hours which shall be charted neatly and legibly in the following manner:

1. Station names are printed in vertical rows, as far as possible in proportion of main distances with required details like Kilometer, inter-station distance etc., in the left and station codes on the right.
2. The station name from Top to bottom refers down direction and bottom to top - Up direction.
3. In the horizontal row, broad lines refer to hours and these are further divided into by thin lines in 6 parts. Every line is referring to 10 minutes each of which is further sub divided into 5 parts, by dots each dot referring to 2 minutes.
4. The timings of trains are marked by dots above the line for Up trains and below the line for Down trains usually.
5. The progress of Up trains is indicated by a line from bottom left to top right and progress of Dn train is indicated by a line from top left to bottom right.
6. Trains being received from other stations from other sections or going to other sections from a section or starting from a station in the same section or terminating in a station in a same section are to be shown by a line in the same Up and Down inclination either with vertical line or dissimilated inclination starting or ending.
7. Blocking of running line is indicated by drawing a continuous horizontal red line either below or above the line, as per its direction, from the time it is blocked till it is cleared.
8. Time loss or gain in a section is shown as plus or minus with minutes.
9. Temporary speed restrictions are indicated in the form of a small red triangle with prescribed speed restriction, on the right side between two station codes.
10. Attaching of loco is indicated by a semi circle up or down depending upon the actual direction.

11. Train parting / dividing is indicated by showing detention in mid-section by drawing a horizontal line, the plotting movement of the first portion to the next station. The second portion is indicated by a dotted line in red. Arrival of engine, attaching and clearing second portion is plotted normally.
12. When scheduled trains lose time, in section, the schedule passage is shown in dotted line and actual passage is plotted.
13. Detentions to trains are to be serially written in remarks column.
14. Usually the following colours are used for plotting:
 - (a) Mail/Express Trains and other trains – Red
 - (b) For other passenger carrying trains - Blue
 - (c) Goods trains (Electric Traction) - Green
 - (d) Goods Train (Diesel Traction) - Lilac (Violet/Pale Purple)
 - (e) Other Goods Trains, Ballast Trains - Ordinary Pencil

Checking of Control Charts:

Control Charts have to be checked regularly to take up all cases of detentions that have taken place and also other irregularities. Chief controller to scrutinize the charts, AOM looks and gets a picture of it and DOM does test checks.

Chart reading brings out the following:

Late Starts; Wrong crossings and precedence; Wrong stabling of goods trains; Cross working of light engines etc.,

Duties of Control Staff: The main duties of control staff which are only guidelines to their day to day working and are not exhaustive are as under.

a) Chief Controller (In-charge)

The chief controller is in overall charge of control office and is responsible for the total transportation of the Division on day to day basis. His duties include –

- i. A review of previous day's performance to conform that all forecasts made have been fully met. For shortfalls, convincing reasons have to be pinpointed to prevent recurrence.
- ii. Prepare current forecast indicating assistance needed from headquarters, adjoining Division, Railways.
- iii. These will generally relate to interchange, loading and locomotive utilisation.
- iv. Checking control chart and bringing to the notice of the Senior Divisional Operations Manager/Divisional Operational Manger all avoidable detention to trains.
- v. Punctuality performance with particular reference to trains which lost punctuality.
- vi. Maintaining statistics regarding the punctuality of passenger trains.
- vii. Scrutiny of stock papers, Monitoring interchange obligation.
- viii. Watching detention to stock at stations and terminals.

- ix. Watching the work of Marshalling yards/Freight terminals.
- x. Maintaining liaison with neighbouring Division.
- xi. Watching utilisation of loco and their terminal detention.
- xii. Checking duty hours of running staff and balancing of crews.
- xiii. Granting engineering, power blocks etc.
- xiv. Attending control office in cases of accident.
- xv. Establishment work of control office.

b) Chief controller (Movement)/ Dy. Chief Controller / Shift duty:

He is responsible for:

- i. Running of goods train, preparing interchange forecast, and monitoring the same, loco utilisation and passenger and goods train operations in general.
- ii. Allotting empty stock/rakes to loading stations in accordance with current priority regulations along with Deputy Chief Controller (Stock), maintaining constant touch with adjacent Division through regular conference to facilitate the smooth flow of traffic.
- iii. Dealing immediately with significant detention or transport bottleneck and other unusual.
- iv. Keeping constant touch with the working of major terminals & Marshalling yards and taking timely action to deal with congestion.
- v. Giving advice of serious accident to all concerned, and taking charge of the affected sections.
- vi. Supervising the running of oversized consignments.
- vii. Maintaining liaison with Power controller.
- viii. Coordinate the work of various section controllers.
- ix. Maintain discipline among control staff in the absence of Chief controller.
- x. Maintain coordination and liaison with various functionaries involved in train running.

c) Chief controller (stock) / Dy. Chief Controller:

He is responsible for:

- i. Scrutinising the indent register in details with regard to the oldest date of registration, nature of goods and type of stock required for lifting goods as per the oldest date of registration.
- ii. Checking Divisional stock report and position of empties.
- iii. Checking of different stock reports received from the various points and Planning in advance the supply of stock, loading and clearance keeping in view interchange obligation and orders received.
- iv. Checking transshipment activity.
- v. Chasing movements of stock as per supply order issued on the previous day.
- vi. Keeping a close watch over hot axle, special type and unconnected wagons.
- vii. Cross checking the daily Restriction Bulletin with Restriction Messages received from HQ office and issuing the same.
- viii. Assisting the Sr.DOM/ DOM in allotments.

- ix. Keeping a close watch over the movements of seasonal perishable traffic and supply of suitable stock for its clearance.
- x. Watching movements of damaged loaded stock in sick lines and yard on their Division.
- xi. Informing all major customers about their inward trains' expected arrival based on FOIS pipe line, Optimising loading, unloading, transshipment etc.

d) Duties of Dy. Chief Controller (Punctuality):

- i. Ensuring punctuality of passenger trains in system.
- ii. Ensuring punctuality at the start of the all outgoing passenger trains.
- iii. Maintaining Detention Reports of Coaching trains.
- iv. Ensure that late running trains make up time.

e) Section Controller:

The Section controller shall be responsible for:

- i. Reporting for the duty at the prescribed time and ascertaining the position of the section from his reliever.
- ii. Recording the movement of trains on the 'Control' graph including crossing, connections and shunting reasons for detention etc.
- iii. Arranging for the supply and clearance of stock as ordered by Dy.Chief Controller.
- iv. Advising stations in advance of the work to be done on trains on move.
- v. Informing sheds and stations about the late running of the trains to avoid the calling of Crew and Guards earlier than necessary or to put back train wherever advisable.
- vi. Informing major stations and concerned Section controller about the current running of trains on the section and their anticipated arrivals well in time.
- vii. Keeping in close touch with Engineering –blocks and working of material Trains so as to give the maximum possible time with least detention to other traffic.
- viii. Incident management to include adjusting movement of the trains in view of the likely impact of the incident, informing all concern.
- ix. Keeping a watch over damaged vehicles detached at road side stations and arranging repair or transshipment of their contents and proper attention on the part of the train examining staff.
- x. Arrangement of ART & M/Van in case of accident.
- xi. Eliminating all possible detention to train and stock.
- xii. Watching the working of Marshalling yards & major terminals.
- xiii. Making timely arrangements for the relief of Guards/Loco pilots whose duty Hours are likely to exceed enroute.
- xiv. Recording stock report (where stock clerks are not posted)

f) Power controller/Traction Loco controller:

- i. Planning and directing engine movements so as to ensure efficient engine utilization and maintaining the prescribed charts, and regular statistics.
- ii. Co-ordination with sheds and Dy. Chief Controllers (Movement) for sending overdue engines and obtaining time of engines coming out of shed.
- iii. Making timely arrangement for the relief of crew whose duty hours are likely to be exceeded enroute.
- iv. Taking timely action to balance crew so as to prevent cancellation or putting back of trains on account of shortage of crew.
- v. Arranging relief in case of accidents as per Chapter iv to viii of accident manual.
- vi. Maintaining charts indicating engine position/ utilisation.
- vii. Rendering advice and assistance to locomotive running staff regarding trouble shooting.
- viii. Carrying out any other duties allotted to him by the Sr.DME/DME or SRDEE/DEE from time to time.
- ix. Monitoring day to day stock position of diesel fuel at RDIs and watching Movement of diesel fuel tank wagons (for power controllers only)

g) Traction Power Controller:

Traction power Controller shall be responsible for-

- i. While taking over shift duty acquaint him self with the prevailing position of the entire section, including the working of the Remote Control equipment position of all transformers, current breaker's interrupters and isolators, section under power block, position of tower wagons and break down vehicle etc.
- ii. Maintaining continuous contact with the Traffic Section Controllers in regard to power supply affecting train movements, imposition of power blocks etc.
- iii. Taking prompt action for restoration of supply in the event of power supply interruptions or other failure.
- iv. Imposing and removing power blocks in consultation with Traffic Section controller.
- v. Advising promptly the concerned officials in case of accident, OHE breakdown, failure of power supply and keeping them posted with all important developments.

Operating Discipline

- i. Line Staff to obey orders of control:
Station staff, Shed staff, Crew and Guards etc must obey orders issued by the control as long as these orders are consistent with the General and Subsidiary Rules, extant instructions and the instructions contained in this Manual.
- ii. Control order register:

Important instructions from control will first be recorded in a register maintained in the control office and serially numbered, commencing with number 1 after midnight each day. These will be issued as messages indicating the time of issue.

All such orders received by the Station Masters or Running staff and Guard's lobby from Control should be entered in the control order register by the staff. Each entry must be initialed with time. At the end of each turn of duty the relieved as well as the relieving SM or Crew Controller must sign their name in full below the last entry in the register. On days when no orders are received from control, "Nil" Entry must be recorded and signed as prescribed above. When a Station Master or Crew Controller has received an order from the Controller and entered in his register, he may repeat it to the control in order to satisfy himself and the control that he has understood it correctly.

- iii. No terminal Station should start a goods or unscheduled train or block the section without the permission of the controllers.
- iv. Every station on the section must report the movement of every train-passenger, goods, special, departmental, light engines, TTMs, Tower wagons, trolleys etc. to the controller.
- v. When the control is in function, Line Clear must be asked from the station ahead for every train unless orders to stop it are given by the controller.
- vi. The controller's permission must be obtained before stopping a train that should run through except to avert an accident or dangerous condition.
- vii. No station should allow a train, which has been stopped out of course, to proceed, without first informing the controller that the train has been so stopped and receiving his further orders.
- viii. Station Master must advise the controller of any unauthorised or undue detention to trains at their station with full explanation.
- ix. Whenever a train, either passenger or goods is detained at a station for longer than the booked halt without the orders of the controller, on its departure the Station Master must immediately inform the brief cause of the detention to the controller.
- x. Whenever any damaged wagon is detached out of course at a station, the Station Master on duty should inform the controller.
- xi. Station Master must promptly advise the controller of any defects of signals, points, interlocking apparatus and line clear instruments at their stations. Information should be given of any defects in any other station machinery such as cranes, wagon weigh bridges, turn tables, water columns, hydrants etc.
- xii. Starting stations to report particulars of outgoing train: As soon as a train leaves a train starting station, the Station Master must intimate the following particulars to the control office: Number and description of train, Engine number and class, Loco pilot's Name, Guard's name, load of the train (in tonnes and vehicles) particulars of shunting to be done on the journey, time of departure, brief reasons of late start, time of S/O of crew, fuel balance etc.
- xiii. Intermediate stations to report arrival and departure time of trains:

Station Master of intermediate station must communicate to the control as early as possible, the following information in regard to every train dealt with:

- a. In case the train has run through, the time it passed the station.
- b. If it is a stopping train, the time of arrival and departure along with the explanation for every detention beyond the scheduled stoppage.
- c. If any shunting has been performed, the number of vehicles attached and detached.
- d. If any extra time has been taken in loading and unloading of packages, the number of such packages and name of the loading station.

xiv) Terminating stations to report the particulars of incoming trains:

Station master of terminal and engine changing station must, as soon as possible, after the arrival of a train, communicate to the control the time of arrival and the load of the train, particulars of loco detached / attached.

xv) Engine movement to and from sheds to be reported:

Loco foreman must communicate to control the time at which train engine leave from or returns to the shed 'Bahar' line. This in no way relieves the Station Master of the responsibility for issuing necessary all concerned messages regarding engine failures and engine trouble enroute. The Controller shall record the duration of such defects in his chart, diary and registers.

xvi) Time to be checked with Control:

Station Master, crew controller and lobbies must check their time with Control at appointed hours every day when control gives a general ring for setting their watches / clocks at 16.00 hrs. Staff must obtain Station Master's permission before speaking to controller.

xvii) Mode of using the control phone:

The control telephone is to be used for operation purposes. The field staff wanting to talk to control will give their identity and wait for their turn to communicate. As this network is intensively used, the conversation should be brief, meaningful and polite. Discussions, disputes and arguments must be avoided.

- a) Station master and others must not start to speak to control unless they have ascertained by lifting the receiver and listening in, that the line is free. They must then announce the name of the station, shed, lobby or site from where they are speaking and wait for its being repeated by the controller before beginning the conversation.
- b) When, however an urgent message has to be conveyed and the line happens to be engaged, the station name must be called indicating Emergency. The

controller will immediately attend to the Station having an emergency. Station Masters must attend Control call promptly.

Co- ordination between Control and stations:

1. **Asking line clear:** In order to avoid the detention to passenger trains for crossing a less important train, line clear enquiry for the less important train must not be asked until the train is ready to leave and until the Section Controllers permission has been obtained. The Station Master receiving the line clear enquiry must immediately ask the controller permission to give line clear before giving the reply. The station Master on duty is entirely responsible for seeing that the necessary General and Subsidiary rules and station Working Rules are observed before giving Line Clear.
2. When a Station Master for any reason finds it difficult to carry out Controllers arrangement to receive the train in yard station due to yard Station constraints, he must explain his reasons clearly and fully to the controller.
3. **Work at Station:** The permission of the controller must be obtained before the performance of any shunting; Controller must be informed of the likely duration of shunting to enable his to arrange crossing and precedence of trains. In the event of Station Master being unable to start a train on receipt of line clear he must at once report the circumstances to the controller.
4. **Control order regarding crossings etc.**
The section controller will give definite instruction for crossing or precedence and will not change them except under unavoidable circumstance because last minute change of order will result in confusion and unsafe operation. The Station Master is entirely responsible for seeing that the crossing is affected safely and strictly in accordance with the rules. The controller must see that sufficient time is available for the necessary operations to be carried out. If the controller fails to do so, the Station Master should represent that delay may occur but it does not allow him to disregard any rules in order to avoid such delay.

General Order of precedence of Trains:

Unless specific orders to the contrary are issued by the COM or by those acting on his behalf, the following general orders of precedence shall be observed by control and stations.

1. ARME, ART proceeding to the site of accident.
2. Presidents and VVIPs specials (Unless otherwise specified in the Time Table.)
3. Suburban train in peak rush direction.
4. Super fast trains like Satabdi, Rajdhani etc.
5. Mail/express trains.
6. Military personnel special. If instructed by emergency control / DOM.
7. Fast Passenger train.

8. Special engaged by the public (precedence order may be revised.)
9. Passenger trains.
10. Mixed trains
11. Military stores special
12. Express or special goods train
13. Through goods train.
14. Accident relief train returning from the site of accident (unless otherwise ordered)
15. Shunting and van goods train.
16. Departmental trains

Note : The following general principles are mentioned for the guidance of controllers but it must be distinctly understood that nothing in these instruction modifies the safety precautions laid down in the rules (General and subsidiary rules, Station working rules etc.)

- i. A passenger train nearing the end of its run should not normally be detained in preference to a train which has a longer run before it, as the latter train is more likely to make up time and reach its destination punctually than the former.
- ii. A train running to time should not be detained more than 30 minutes to effect crossing on single line (This should be decided by the Division based on actual condition.)
- iii. A train running late due to defective engine, or defect in rolling stock or any other cause, which is likely to continue to operate against it and prevent it from making up time, should generally give way to a train running properly.

Accidents:

Controllers and other staff should thoroughly understand and act on the guidelines contained in G & SR and Accident manual. Saving of lives and rescue of injured and mitigating hardship to passengers must be given the topmost priority.

Working of Trains when control is interrupted:

When the control is interrupted and no communication with the controller is possible, Station Masters will be responsible for the working and regulating of trains, keeping in view the instruction issued by the railway administration.

Items checked by Sr. DOM daily / at regular intervals:

(i) Interchange of Trains:

Three checks a day (at 08.15 Hrs, 17.00 Hrs, and 22.00 Hrs.)

(ii) Train Running and Train Ordering:

A study will be done at 08.15 Hrs, 17.00 Hrs and at 22.00 Hrs.

(iii) Analysis of DWB:

This should be done in the morning when the forecast being scrutinized.

(iv) Yard Balance:

This should be checked once in morning secondly at 17.00 Hrs. This information also should be given in a proforma.

(v) Unloading:

Previous day's unloading and left over for unloading is assessed. Planning for the day's unloading should be checked. Placement of wagons done for the day also should be checked. In the evening the position has to be ascertained by Sr. DOM once again.

(vi) Loading:

One check in the morning is sufficient. But, if loading is more, an additional check may be done in the evening.

(vii) Transshipment:

The position of Transshipment points should come to Sr. DOM on prescribed proforma twice a day.

(viii) Performance of Sectional Trains:

Every day, Sr. DOM should verify from the Prescribed registers.

(ix) Power Position:

The position of Electric Loco, Diesel Locos should be checked thrice a day. Utilisation may be checked once in a day. Dy.CHC should bring the abnormal delays to the notice of Sr.DOM as and when required.

(x) Average Speed of Goods Trains:

Daily position is given to Sr. DOM. If average speed comes down in a section below the target, Sr.DOM will check up the control chart and suggest corrective measures.

The following items may be checked periodically once in every 10 days:

- Analysis of performance of sectional trains.
- Analysis of running link and crack trains.
- Percentage of Right Time start of trains from yard.
- Analysis of Detention to trains for reception in yard.

The following are analysed in detail monthly:

- Average speed of goods trains.
- Wagon utilization, Engine utilization; and Marshalling yard statistics.
- Performance of major goods sheds and transship shed.
- Average detentions to sick and special type of wagons.
- Loading performance on special commodities and Staff strength.

Review of Freight Operations by Divisional Control Organisation: (objectives)

- a) Analysis on shortfalls during the previous day performance and to take remedial measures.
- b) Pin pointing areas which need special attention.
- c) Providing basic data for planning (forecasting) for the current day.

The items of review may vary appreciably from division to division depending on local conditions and pattern of traffic. Some of the common aspects for review are mentioned below.

(a) Interchange: Prepared in a proforma with details of previous day's performance, which includes Made over, Taken over. The differences in handing over and taking over and divisional wagon balance shall be mentioned in a proforma.

(b) Trains Running: Number of Trains run section wise, stock cleared (Throughput), and the balance left over is another important aspect to be reviewed.

(c) Analysis of DWB: The analysis should pin point streams and regions which have excessive balances and which need special attention.

(d) Deposition of Empties: It is necessary for mopping up empties with proper planning, loading and to hand over at the interchange points.

(e) Particulars of Stabled Loads: Though some times, it is inevitable to stable the load at enroute stations, efforts to clear them early are to be reviewed.

(f) Yard Balance: Detailed study on the position of individual yards is to be analysed.

(g) Loading / Unloading: The loading and unloading performances are recorded in the proforma wagon wise, Commodity wise and reviewed. For any short fall corrective measures are suggested.

(h) Power Utilisation: At least 8 Hourly position should account for Diesel / Electric loco holding in the division and their deployment. Average detention is to be compared with the target. If any rise in detention, the area of detention is to be identified and remedial action to be taken.

(i) Sick Line Position: Sick Line placement is to be watched. Review whether the full capacity is used or not and releases from sick line is optimum.

(j) Accidents and Unusual Occurrences: This is reviewed daily by the DOM. The area of slack working / Unsafe working are to be identified and action has to be initiated.

Books / documents and basic records to be kept in control office.

- 1. Station working rules of all station.
- 2. Working facilities available on the transshipment sheds.

3. Schedule of shunting engines in the various yards.
4. Link diagrams of rakes and engine working the passenger services and also of goods trains where laid down.
5. Crew link diagram of the various services, for the running staff.
6. Details of maximum moving dimensions permitted on the various sections of the railway.
7. Map showing the Maximum permissible axle load on all the railways with which traffic is interchanged.
8. Charts showing line capacity of the various sections.
9. Index sections and plans of the various sections of the jurisdiction and details of train watering, engine fueling etc.
10. Master charts depicting all trains indicated in the working time table in force.
11. Charts showing jurisdiction of the various official details of :
 - a. The maintenance branch of the post and Telegraph department responsible for maintaining control circuit wires in good condition.
 - b. The various department of the railways,
 - c. Zone and telephone numbers of Civil, Police, Military authorities.
 - d. List of various hospitals with Telephone Numbers.
 - e. List of stations Civil, district-wise.
 - f. OHE Sectioning diagram.
12. Diagrams showing the layout of line wires of the Control Circuit.
13. Line patrol chart
14. A calendar of returns.
15. Cranes and wagon weigh bridges.
16. Turn tables and Triangles.
17. List of spare coaches based in the divisions as well as slip coaches running on and across the division.
18. List of coaching Rakes allotted to the division and those passing over the division.

Registers generally maintained in control:

1. By the section controller :
 - a. Sections controller's diary and charge book.
 - b. Inward message book.
 - c. Outward message book
 - d. Working Order register
 - e. Weather warning and acknowledgement register
 - f. Sick wagon register.
 - g. Yard report register.
 - h. Stock report register
 - i. In-coming and out-going trains RD (Running Diary) (other than passenger)
 - j. Train Advice (T.A. Book)
 - k. Caution order register.
 - l. Caution order message book.

- m. Morning (6'O clock) position registers.
 - n. Engine book.
 - o. Interchange Register.
 - p. Load register.
 - q. Incoming and Outgoing passenger Train Running Diary.
 - r. Points and S&T Failure Register.
 - s. Important Yard balance Register.
 - t. Control failure Register
 - u. Safety circular register
 - v. Road map register
 - w. Night order book
2. By the Chief Controller (Movement), (Coaching) / Dy. Chief Controller:
- a. Yard Running Balance Register.
 - b. Dy. Chief Controller's Diary & Charge Book.
 - c. Train Advise Book.
 - d. Bans and Restrictions register
 - e. Forecast and Acceptance Book.
 - f. Train Ordering Book.
 - g. Punctuality Register.
 - h. Without brakevan movement register
 - i. Accident Register.
 - j. HQ's Conference Register.
 - k. Central control register
 - l. Emergency control register
 - m. Goods Train Performance Register
 - n. FATO register
 - o. GM's Unusual Occurrence Register.
 - p. CTNL (Movement) / (Coaching) / Dy. CTNL's Order Book.
 - q. ODC Register.
 - r. Rajdhani Express (and similar trains) Caution Order Register.
 - s. Emergency and General Control Office Message Register (Inward)
 - t. Emergency and General Control Office Message Register (Outward)
 - u. Engine Book.
 - v. Interchange Register.
3. By the Power Controller :
- a. Power Position Book.
 - b. Out Station Loco Pilot Register.
 - c. Power Controller's Diary
 - d. Engine Link.
 - e. Crew Link.
 - f. Crew Position Register.

- g. Register of Movement and Diversion of departmental / Diesel / lube oil Fuel Tank /Wagons.
- h. Register showing undue and Abnormal Detention.
- i. Shed Conference Register.
- j. Fuel Balance Register.
- k. Schedule Dates of Locos.

Periodical Performance Reporting and analysis of Operating Performance along with compilation of statistical data.

Periodical performance is reported confidentially every month by DRM of each division to GM. It is called Periodical Confidential Demi Official Report (PCDO / MCDO). It is prepared separately by individual departments of division and submitted to respective HODs. Apart from this a consolidated PCDO / MCDO is also sent to GM by DRM.

Additional Guidelines: Additional information and guidelines regarding control are given in various other chapters of the Manual, particularly the chapters on goods train and passenger train operation.

Why do trains sometimes slow down on some sections instead of continuing at the same speed throughout?

There are many reasons for a reduction in speed. There may be **permanent speed restrictions** on the section of track: because of sharp curves or curves with inadequate cant; approaches to crossovers, diamonds, etc.; structures too close to the track; ghat sections; lineside tenements or pedestrian traffic; level crossings; old bridges or culverts; inferior track or lighter rails than normally required; unstable trackbed; frequent threat of flooding, etc. The working timetable usually has a detailed list of these restrictions for all sections within a division.

There may also be **temporary speed restrictions** (also simply temporary restrictions) such as **engineering speed restrictions** because of construction work or track maintenance, or because of flooding or other track damage, etc., all of which necessitate following the appropriate **caution orders** or caution notices in force for the section. See below for more on this. Sometimes newly-laid track may not yet have been certified for higher speeds while lower speed traffic is allowed.

CAUTION ORDER

A Caution Order (or caution notice) is a written notice issued by a station master (or other official) to the driver and guard of a train, formally advising them of special conditions and restrictions in effect on the section of track that the train is

about to enter. The Caution Order may have instructions on speed restrictions and other special procedures to be followed on account of damage to the tracks, flooding, work on the permanent way or on the electrical equipment, accidents (or reminders of spots where accidents recently occurred), work on or damage to OHE equipment, or unusual situations.

A caution order can also be issued to advise the driver and guard of the presence of manually operated or motor trolleys, tower cars, MOW wagons, or other such maintenance or emergency vehicles that have entered the block section ahead. The caution order usually specifies the location of the affected section of track, the temporary speed limits in effect, the locations of caution indicators and termination indicators, etc.

Some representative examples of caution orders are the following:

- Track doubling in progress - whistle to alert men at work
- Track distressing - 20km/h
- New colour-light signal location
- Level crossing gate - no acknowledgement given; be prepared to stop if gateman does not display hand signal
- Accident spot - 75km/h
- Up distant signal number ... of station ... inoperative due to a cable break; keep a good look-out, whistle while approaching and Proceed

A caution order is generally issued by the station master of a station adjacent to the block section which is affected. In addition, divisional caution orders are also issued by station masters of certain specified stations on the route, known as **notice stations**.

A caution order is specifically addressed to the driver and guard of a particular train identified on it. Separate caution orders are issued for each train passing through on to the affected section. At many of the larger stations nowadays the caution orders are printed out but at smaller stations, handwritten notes still prevail.

A **nil caution order** is issued by a notice station to inform the driver and guard of a train that there are no special caution instructions or temporary speed restrictions in effect between that station and the next notice station. A **reminder caution order** may be issued by a notice station to reiterate caution orders already issued by other stations or authorities.

Caution Order, Amla-Itarsi, April 2007. Click for a larger view.

Caution Order, Nagpur-Durg, April 2007. Click for a larger view.

SPEED RESTRICTIONS AND ENGINEERING RESTRICTIONS

These are various kinds of speed limits below the normal sanctioned speed limit for the route section in question, imposed in stretches of track where unsafe conditions exist because of track damage, ongoing repair work to track or OHE, accidents, or unusual circumstances in the construction of the permanent way (see above).

A **temporary engineering restriction** is specifically one that is imposed for a fixed duration on account of ongoing work on the permanent way or OHE equipment; a **permanent engineering restriction** is one that is in effect indefinitely because of characteristics of the permanent way. Other temporary speed restrictions may be imposed because of flooding, track damage, accidents, etc. A **stop dead** restriction is one which requires a train to come to a complete halt before obtaining permission to proceed.

For short-duration (1 day or less) temporary speed restrictions, hand signals are used at appropriate points (30m to the rear, and 800m (more in some cases) to the rear) to advise drivers of the location of the restriction. For a short-duration stop-dead restrictions, a red banner flag is placed across the tracks just before the obstruction, and another banner flag is placed beside the tracks 600m (BG; 400m for MG/NG) before the location of the affected portion of track. Three detonators are also placed 10m apart, about 1200m (BG; 800m for MG/NG) before the banner. Hand signals are used 30m to the rear of the obstruction and 45m to the rear of the detonators.

For longer temporary speed restrictions (lasting more than a day) a speed indicator is placed 30m to the rear of the affected portion, and a caution indicator 800m (or more in some cases) to the rear. For longer stop-dead restrictions, the speed indicator is replaced by a stop indicator, whereas the caution indicator is placed 1200m to the rear (BG; 800m for MG/NG).

Normally the driver and guard of a train are issued caution orders that provide details of the temporary restrictions. Caution orders are not issued for permanent restrictions of any kind.

The caution or stop indicators, banner flags, hand signals, and speed indicators are all dispensed with if the affected portion of track is within station limits and if it can be appropriately isolated by the settings of points and leaving signals protecting it 'on' (at danger). The caution indicator is also dispensed with if the affected portion of track is protected by an automatic signal less than 1200m (BG; 800m MG/NG) from the obstruction. In this case the detonators and banner flags

are placed at 180m and 90m to the rear of the obstruction for a stop-dead restriction

COMMAND, CONTROL AND COORDINATION OF EMERGENCY RESCUE OPERATIONS ON THE OPEN LINE.

Purpose

- i. The purpose of this Standard Operating Procedure (SOP) is to delineate responsibilities and procedures for the control and coordination of all responses to emergency situations on the mainline.
- ii. To provide step by step guidance on how to deal with incidents should they happen.
- iii. Particular note should be taken of the need to provide suitable training to keep staff aware of what needs to be done in the event of a serious incident.

1. Objectives of incident Management Plan.

In Order of priority these are:

- a. Save lives and alleviate suffering
- b. Provide help to stranded passengers and arrange their prompt evacuation.
- c. Instill a sense of security amongst all concerned by providing accurate information.
- d. Protect Railway property.
- e. Ascertain the cause of accident, preserving clues by cordoning of incident site etc.
- f. Expedite restoration of train operation.

There is a difference between a disaster and an accident. All disaster need not be the outcome of train accident, neither are all accidents classified as disaster.

Accidents are occurrences where safety has been affected. Disasters are those situations, which cause acute distress to passengers, employees and outsiders and may even be caused by external factors and unless promptly managed the distress levels are likely to increase with time.

2. List of serious incidents requiring use of this plan.:

- a) Fire, smoke emission, explosion in railway premises including train.
- b) Derailment of a passenger carrying train.
- c) Collision of a train/ trains.
- d) Security threats / Terrorist attacks, widespread violence, bomb explosion.
- e) Release of Chemical or biological gas in trains, stations or tunnel.
- f) Natural calamities like cyclone, floods and earth quakes.

3. Definitions : In the context of India Railways, unusual events are classified as under:

- a) Incidents - which cause delay to trains.
- b) Accidents - which have the potential or do actually cause loss of life and or injury and damage to property.
- c) Emergency / Serious Accidents / Disaster – these may or may not necessarily be the outcome of train accidents but have the potential to cause loss of life and or injury to human beings causing further death / injury and wide spread and prolonged distress to all those involved unless tackled in an effective manner.
- d) Disaster Management Team (A team of Railway officials earmarked to reach incident site by first available means & take over site management) at Zonal, Divisional and area / major station levels.

4. **Scope:** This SOP is applicable to all IR personnel working on the Open Line.

5. Responsibility :

- a) The Assistant Operations Manager Divisional Control Office, or designated Divisional Control Office Supervisor, is responsible for the overall control and coordination of emergency situations on the mainline.
- b) The OCS (officer in charge site) is responsible for overall control and coordination of all activities at the incident scene under instruction of Divisional Control.
- c) Traction, Track and Structure, Signalling and Telecommunication, fire service and security personnel are responsible for providing technical assistance to divisional control office & OC site.
- d) Rolling Stock Department is responsible for providing technical assistance to Divisional Control Office and OCS, as required and managing site restoration work.
- e) Station operations and Commercial personnel are responsible for making appropriate station announcements, and providing information, rendering first aid, mobilising medical & fire services & assistance from civil administration, including police and providing all other assistance in alleviating suffering and hardship to passengers and others.
- f) The Guards in charge & Loco pilot in the area affected by the incident are responsible for :
 - i. Providing their passengers with up to date and timely information regarding the situation's status and / or progress ; and
 - ii. Operating their trains in compliance with applicable rules and procedures and Divisional Control Office instructions.
- g) Government Railway Police and Railway Protection personnel are responsible securing the incident scene and for performing / directing investigation activities in compliance with existing procedures. (In case of incidents caused by criminal acts)

- h) The senior police official at the scene is responsible for controlling and coordinating all police activities at all times. In doing so, this official has final authority to determine when these activities are complete and shall coordinate these activities with the OCS and the senior fire services official.
- i) Security Personnel will assist Civil / Railway Police, Fire services personnel, medical services or station staff as directed by OCS.

6. General :

The following is the list of personnel authorized to act as officer in charge site (OCS) This list also indicates the probable change of command at the scene.

- a. Train Superintendent or Guard of the affected train.
- b. Loco pilot
- c. Station Manager / Station Master.
- d. Rail Operations Supervisor or Traffic Inspector.
- e. Any Railway Officer, either on duty, of duty or on leave, present at the site of incident.
- f. Member of Division Disaster Management Team.

When none of the above mentioned personnel are present at the scene, Divisional Control Office shall appoint an OCS as directed by DRM from the personnel available.

Guard in charge, Loco pilot and Station Manager must assume and carry out the responsibilities of the OCS until relieved.

The first Guard in charge / Loco pilot, on the scene, shall act as the OCS until he / she is relieved by the first senior personnel / Rail Operations Supervisor to arrive. The Rail Operations Supervisor shall continue acting as the OCS until he / she is relieved by an authorized senior official or released by DIVISIONAL CONTROL OFFICE after another OCS has been designated. However, it is the responsibility of DIVISIONAL CONTROL OFFICE to select the most qualified person, for the type of incident, to act as the OCS. The mere presence or arrival of an authorized senior official at the scene shall not indicate his/her assumption of command as OCS. Such senior official shall remain in an evaluating capacity unless he / she specifically assume command. The method of managing an emergency situation will be in compliance with the applicable Zonal Railway Rules and procedures contained in Accident Manual, Disaster Management Manual or as directed by DIVISIONAL CONTROL OFFICE during incidents not covered by Rules or Procedures. The OCS has the authority and the responsibility to command the presence of any personnel and equipment required at the scene and to command the removal of any unnecessarily personnel or equipment from the scene. This does not apply to police or Fire Department personnel. Entry in to the incident area by the news media or other visitors must be authorized by the CPRO and shall be

coordinated with Divisional Control Office, Divisional Railway Manager, OCS and Metro Police.

When it is necessary to notify the fire services, and / or to seek medical assistance the following information shall be provided:

- a. Identification of caller;
- b. Nature of problem (give in plain English / Hindi e.g. fire, flood, smoke, injuries) ;
- c. Type of assistance requested; be specific
- d. Specific location of the problem and the best access points.

7. **Procedure** : The chief controller / Operations Manager of Divisional Control Office, or designated Divisional Control Office Supervisor shall:

- a. Ensure that ARME & ART is turned out on time.
- b. Appoint the initial OCS.
- c. Co ordinate all field activities and requests through the OCS.
- d. Notify members of Disaster Management Team and all departments and personnel, as required.
- e. Coordinate and direct the safe movement of all trains, to include those trains which may be involved in the incident:
- f. Request police / RPF assistance in critical stations for crowd control.
- g. Keep Loco pilots and Station Managers informed of system status and instruct them to make appropriate announcements to their passengers:
- h. Ensure that system-wide public address announcements are made frequently to provide patrons with up-to-date information concerning Rail System status:
- i. Coordinate and assist OCS with restoration activities.
- j. Provide and obtain, from OCS frequent updates on events
- k. Inform Commissioner Railway Safety and local civil authorities as per procedures in vogue in the event of train accidents like, derailment, Collision, fire, terrorist attack etc. of a passenger carrying train or any other accident relating to train operation resulting in death and / or grievous injury (as per Railway Act provision.)

The OCS shall:

- a. Ensure that the safety of passengers and personnel at the incident scene is maintained; ascertaining that all injured and stranded passengers have been safely evacuated. Till evacuation is complete necessary succor in the form of drinking water, tea & edibles are made available to stranded passengers.
- b. Ensure that all personnel involved, at the scene, work efficiently to restore rail service as quickly and safely as possible.
- c. Control and coordinate all field activities with personnel at the scene.

- d. Coordinate all police related activities and requirements with the senior police official at the scene.
- e. Coordinate activities with the senior Fire Department official at the scene and, when available, provide the Fire Department Command Post with a knowledgeable employee, to act as a communications link to Divisional and Central control and to the OCS.
- f. To the senior official at the scene.
- g. And activities at the incident site and keep Divisional Control Office informed of progress.
- h. Establish a command post; at the incident scene direct all inquiries and / or requests made by jurisdictional police officials, appoint individual (s) to provide public address announcements, at five (5) minute intervals, to passengers of the incident train and or inside the incident station.
- i. Direct all inquiries and / or request made by the news media to the CPRO Office.
- j. Maintain a chronological log of all events.

Station Operations / commercial Personnel shall:

- Make appropriate station announcements
- Assist Policy with crowd control : and
- Make every effort to identify and retain knowledgeable witnesses or to obtain their testimony along with their address.

Guards and Loco Pilots shall:

- a. Operate their trains in compliance with applicable rules and procedures and
- b. Keep their passengers informed by making frequent announcements regarding system and delay status.

All Rail personnel at the incident scene shall honour the requests of and obey the directions of the OCS.

Emergency Control in the Zonal Office

Emergency control shall be manned by designated officers as per procedure laid down. It shall take prompt action to inform concerned officers, plan all assistance to the Division. Mobilize resources and manpower.

Seek GM / COM's approval to relay the information to Railway Board Regulate traffic on the affected line, on adjoining divisions and Zonal railways, to include train cancellation, diversion, rerouting, road bridging and air lifting of stranded passengers.

CPRO will continuously brief media to inform passengers of the current status of rail situation.

Duties of Commercial Staff in case of Accident.

1. On receipt of information of accident from the Operating Emergency control following Officials of commercial departments at HQ will be informed by the Commercial Control of the headquarter : (Designation of HODs and DyHODs may differ from zone to zone)
 - a. CCM
 - b. CCM/G
 - c. CCO
 - d. CCM / Passenger Services and Marketing
 - e. Dy. CCM General
 - f. Dy. CCM Catering
 - g. SCM General

2. Nominated Commercial officials (Para no. 3) on receipt of information of train accident would proceed to the site of accident by the quickest available means. In case of serious accidents involving trains CCO (in absence of CCO, CCM (S&M) or CCM / IT will proceed to the site of accident. CCM/G will remain in commercial control)

3. Centers of Activity :
 - a. Headquarter
 - b. Divisional Commercial Control
 - c. Site of Accident

Headquarter :

- i. Commercial control will have DOT and railway Telephones, FAX, photocopier machine and a PC with an Internet. The details are as under :
Telephone Nos. P & T; Railway and Fax.
- ii. Commercial Control office in Headquarter would be manned by officers round the clock basis. In case of serious accident of passenger carrying trains, CCM/G will immediately come to Control office. In his absence CCM (T) / CCM (S&M) and Dy. CCM / G will come to the Control office. If Dy. CCM/G is not available, SCM/G will attend. Thereafter, Control duties will be assigned as per roster for manning the Control office round the clock. Besides regular staff manning commercial control at least one officer and one inspector will remain in the control round the clock. Officer deputed will be responsible for proper functioning of the control.
- iii. Headquarter Commercial Control would collect following information :
 - a. Time and place of accident from Operating Emergency Control.
 - b. Details of dead / injured passengers, rescue operation, helps/ assistance being rendered at the site of accident enroute operations, helps/ assistance being rendered at the site of accident, enroute etc. from the divisional Commercial control at the site of accident.
 - c. Details of specials being run to the accident site and official accompanying from Operating Emergency Control.

- d. CCM / IT will get the reservation charts printed and supplied to control. In addition the addresses as per requisition slips shall also be get collected by CCM/IT & supplied to Commercial control, and Divisional Control.
- iv. Commercial control at HQ will maintain:
 - a. Telephone and FAX numbers of the control at accident site manned by commercial officer.
 - b. Names and phone numbers of hospitals where injured are admitted / (i) with names of passengers and (ii) location of dead bodies identified (iii) digital photographs of all all injured and dead transmitted through computer network to be displayed and at sites or telecast & all enquiry offices.
 - c. Telephone and FAX numbers of enquiry offices that would have been set up at various stations including at other Zonal Railway.
- v. Commercial control in the Headquarters office would constantly monitor the information relayed from the divisions and other railways regarding the dead and injured persons and enquiry offices opened at important stations.
- vi. Commercial control in the Headquarters office will monitor coordinate regarding assistance required by the division from other divisions / other railways in terms of deployment of material, staff and officers.
- vii. In case of confirmation of death / injury the Commercial control will inform the concerned division / railway (Commercial Control) to convey the information to the family of affected passengers.
- viii. Maintain a log of events.

Divisional Control :

- i. Control offices will have DOT/RLY, Telephones, FAX, photo copier machine and a PC with an internet connection. The details of telephones and faxes of all the divisions should be clear.
- ii. Commercial control in Division would be manned by officers on round the clock basis. In case of serious accident of passenger carrying trains, DCM in his absence, DCM/Catering, where available or one of the ACMs will immediately come to the Control office. Second senior most officer of the division will work as in charge of the Commercial control.
- iii. Divisional Commercial would collect the following information from Divisional Emergency Control/accident site:-
 - a) Time and place of accident from Operating Emergency Control office.
 - b) Details of casualties- dead/injured and safe passengers from operating emergency Control office.
 - c) Details of specials begin run to accident site and official accompanying from Operating Emergency Control office and monitor their arrangements.
 - d) Details of rescue operations and assistance being rendered to the affected passengers.

- iv. Information collected should be relayed to all concerned including HQ Commercial control, Enquiry offices opened at stations through phone, fax, etc. without delay.
- v. Commercial Control in Division will maintain:
 - a. Telephone and FAX numbers of the accident site.
 - b. Names and phone numbers of hospital where injured are admitted and dead bodies shifted, and
 - c. Telephone and FAX numbers of enquiry offices that would be set up at various Stations including at other Zonal Railways.
 - d. Name of Commercial Officers deployed in each hospital.
- vi. Divisional control will advise headquarters commercial control, details of assistance required from Headquarter or the adjoining divisions.
- vii. Maintain a log of events.

Site of Accident: Sr. DCM in his absence, DCM will attend site of accident and work as site in charge of the Commercial department.

I. Setting of Control Office at the site:

- i) Division would set up a control office at the site with telephone, FAX and Public Announcement System (PAS) to be manned by Commercial, Security and Medical departments.
- ii) Announcement would be made for registering the names of injured passengers, and the list would be verified by Doctor to be relayed to the Control offices at the division and headquarters, separately indicating the extent of injury viz. Trivial, simple & grievous.
- iii) Control office at the site will be manned by Assistant Commercial Officers on round the clock basis.
- iv) The site control office would maintain a long book. Flow of information both incoming and outgoing would be recorded along with the time and names of the officers / staff who were given information to keep track of chronology of events.
- v) Commercial officers / personnel at site will NOT interact with the press.
- vi) All necessary arrangements for refund as per rules should be made.
- vii) A manual/guide be made available with train crew like; TTEs, AC Coach Attendants, AC Pantry Car Staff, which will inter-alia to include Dos and DONTs for them in case of accidents.
- viii) Commercial Control will ensure that at stations where trains are
 - Delayed
 - Diverted, or
 - Terminated.

Additional alphabetical list of passengers on board with their current status must be available and displayed at enquiry counters for quicker dissemination of information. It will be ensured by CCM/IT and divisional Commercial officers.

II. Rescue:

Sr. DCM will ensure the following functions.

- i) Sufficient number of TTEs/TCs and licensed porters in uniform would be rushed to the site. The required personnel would be mobilized from the affected division and the neighboring divisions by the quickest available means. For this purpose TTEs from the divisional squad should be utilized. Requirement of staff could be continuously reviewed and augmented depending on the assessment of the officer in charge of site.
- ii) Arrangements will be made for speedy dispersal of stranded passengers of the train(s) involved in the accident, as well as of trains regulated or terminated as a result of the accident in association with operating department. In case of non availability of rail services, adequate arrangements should be made to disperse them by arranging road vehicles etc. This would be done by site in charge.
- iii) Depending upon the need, accommodation in hotels/Dharmashalas would be hired for accommodating passengers and providing resting facilities to officials working at the site.
- iv) Make arrangements to inform the next of kith & kin of the deceased/injured persons involved in accident. It will be done free of cost.
- v) TTEs of the affected train will not leave site of accident till ordered by the site in charge.
- vi) Train Superintendent or Conductor or senior most Ticket Checking staff till a commercial officer from division reaches to the site of accident, will allot duties to each available ticket Checking/other Commercial staff/volunteers in a manner to ensure maximum help to passengers under the prevalent circumstances. The function will be taken over by a Commercial officer as soon as he reaches to the site of accident.
- vii) Duties of ticket checking staff on board will be:
 - a. Collect Railway staff, Doctors and volunteers on the train or near the accident site for obtaining assistance.
 - b. Provide assistance to Guard in making quick assessment of assistance required.
 - c. To carry out the duties assigned to them by Guard/Senior official present at the site of the accident.

- d. Take action to save lives and render First Aid and organize relief operations with the available assistance.
- viii) In case of involvement of Goods train, following actions will be taken promptly.
 - a. Arrangements of adequate labour by mobilizing resources available at other stations as well as from the market locally, for unloading of material from the wagons involved in accident.
 - b. Adequate tarpaulins to cover the contents so that these are saved from rains etc.
 - c. Arrangements of gunny bags etc. for retrieval of loose materials lying at the site of accident.
 - d. Consignor / consignee would be informed regarding involvement of their consignments in accident besides intimating forwarding / destination station. The information will be conveyed through the commercial control of the division / HQ as the case may be. Also to make arrangements for delivery of the consignments at the site of accident if they desire.
 - e. Arrangements of road transport for evacuation of the contents from the site of accident.
 - f. To coordinate with the Operating branch for supply of adequate empty stock for transshipment / disposal of the contents.
 - g. Till such time, the consignment involved in the accident is not removed / transported; the same shall be made over to RPF In charge for security purposes.
- ix) Staff using their personal mobile phones in connection with the accident will be eligible for a lump sum grant of Rs. 200/- without any clerical work to be performed in accidents.
- x) In case of bodies, which remain unclaimed / unidentified, the division shall get such bodies photographed by hiring a photographer. Each body will be given a number, which can be displayed, on the body of the dead for subsequent identification.

III. Safety of passengers / Passengers luggage:

- i) Separate tent for packages / bags and belongings of the injured and dead should be arranged and guarded with the help of RPF at site.
- ii) A list of each item with distinguishing marks should be made.
- iii) Luggage claimed should be handed over on the satisfactory proof of ownership.

- iv) Unclaimed items will be safely transferred to one of the stations and for this purpose, if need be, road vehicles will be utilized/hired. Their personal belongings are useful in establishing identify of deceased/missing.

IV. Catering arrangements:

It will be ensured by the site in charge.

- i) Sr. DCM will ensure that adequate eatables, water etc. is available at the site of accident in case of involvement of a passenger carrying train in an accident. This arrangement will be made for the passengers free of charge at the site of accident and at roadside station where train involved in the accident is stable temporarily.
- ii) Gas stoves, Gas cylinders, drinking water, provisions for preparation of meals, etc., should be rushed to site for left over stranded passengers and officials involved in rescue operations. This will be augmented later, if necessary. Sufficient cooks and catering staff from departmental catering or catering contractor would be ensured at the site for arranging tea, biscuits, packed meals like poories and vegetables to the stranded passengers, and staff engaged in rescue and restoration.
- iii) Sr. DCMs would prepare advance section-wise nomination of catering agencies both departmental and private for rushing to site.
- iv) To supplement railways catering arrangements, nearby Dhabas and hotels should be contacted and arrangements made for opening up stalls at the site.

V. Hospitals:

- i) One assistant officer each in the hospital will be deputed to look after where injured passengers are admitted or dead passengers are kept. In case of non-availability of assistant officer, one CMI/ Inspector/ Sr. supervisor will be deputed by Sr. DCM. All dead bodies must be photographed after wiping their faces to establish identify.
- ii) The nominated officer will work in close coordination with doctors and render required help.
- iii) Officer in charge of the hospital will assist kith and kin of the passengers involved in disposal of dead bodies, release injured passengers.
- iv) Deputed official will obtain details like names, address etc. of hospitalized/dead passengers. He will also obtain the details of injured, nature of injuries with the help of doctors and convey it to the divisional commercial controller.

VI. Payment of ex-gratia:

- i) Payment of ex-gratia at the site as well as in the hospitals will be arranged on the basis of the identification of injuries by the doctors.
- ii) Sr.DCM/DCM will ensure availability of sufficient cash for payment of ex-gratia.
- iii)CCO will also depute claims officials at the site/hospitals to assist the relatives of the injured/dead passengers regarding filling of claims for compensation.
- iv) If some injured passengers/kith and kin of deceased involved in accident have not been paid ex-gratia at the site of accident or in the hospital, arrangements should be made to pay at their residence by deputing officials of the division or seeking help of the other divisions/railway. Such payment will be witnessed by the Pradhan or Sarpanch or any other responsible official of the area.

VII. Enquiry offices at the important stations enroute.

This function will be ensured by the in charge available in divisional control.

- i) Emergency offices would be opened at important stations as per the route of the train. On the basis of need, enquiry offices would be opened at other important stations also
- ii) All these enquiry offices should have DOT and Railway telephone with STD facility, FAX machine, photocopier and a PC with internet connection. Identical telephone numbers will be preferred.
- iii) These enquiry offices would be manned on round the clock basis by deputing additional staff. It will be supervised by a commercial officer, where feasible/commercial inspector/CIT.
- iv) These control offices should constantly keep in touch with the divisional commercial control.
- v) Emergency offices would display the list of dead and injured passengers at the notice board at stations.
- vi) Officers attending these emergency offices would not interact with the press.
- vii) Sr. DCMs will prepare their own contingency plan on similar lines.
- viii) Withdrawal of money from station earnings:

Money withdrawn from station earnings will also be used for relief operations like purchase of items immediately required, hiring of vehicles and other equipments directly.

High Level Committee's Report on Disaster Management:

Indian Railways do have a well-established system for disaster response, which has been fine-tuned over a century and a half of its existence. The system delivers what it has been designed to do. But increasing traffic density, longer length of trains with lot more passengers per train and higher operational speeds drive the need to change the system.

The Ministry of Railways have constituted a high level committee to review the disaster management system of IR and give recommendations for strengthening and streamlining the same.

The committee consists of the following:

- | | |
|--------------------------------|-----------|
| 1. Member Mechanical | Convenor |
| 2. Member Traffic | Member |
| 3. Director General (RHS) | Member |
| 4. Director General (RPF) | Member |
| 5. Additional Member (Budget) | Member |
| 6. Executive Director / Safety | Secretary |

The terms of reference of the committee are:

- a. To review the existing disaster management system over IR related to train accidents and natural calamities and to suggest improvements.
- b. To identify the technological and managerial inputs in order to quicken the pace of relief and rescue operations.
- c. To institute a standing arrangement with other central ministries, state governments and armed forces to enable quick and smooth restoration operations without any legal or procedural hurdles.

In India, Railways have been historically handling rescue and relief operations in railway accidents, and therefore IR has to rise to the expectations of the public. Significant technological advancements have taken place in the area of post disaster relief and rescue operations. Consequently, a number of state of the art relief and rescue equipment, tools and plants and innovative techniques have emerged for quickening the pace of rescue and relief operations.

It is natural and logical that in most of railway accidents / disasters, the relief in the form of response arrives quickly in urban / vicinity of urban areas. However, in case of remote area accident / disasters, factors such as lack of communication, lack of immediate accessibility, covering of distance gap to reach the site of accident and conveyance of equipment and trained manpower create serious problems for carrying out rescue and relief.

The committee believes that IR's first responsibility in case of accidents is to reach and extricate accident victims and organize effective trauma care. The basic principle of trauma management is speed & expediency – **“Most trauma patients die of shock, which comes from sluggish or non-existent circulation and the resulting chemical changes in the body.”**

Thus the first hour after the accident is termed as **“The Golden Hour”** as

- Most trauma patients can be **saved** if bleeding is effectively stopped and blood pressure restored **within an hour**.
- It is likely that patients, who have experienced shock and remain in the state of shock for long duration, will die. Surgical intervention within that first one hour is, therefore, crucial for increasing the patient's chances of survival.
- This hour, called **“The Golden Hour”**, begins the moment the injury occurs.

Therefore, the basic steps for quick and effective rescue and relief operations are following:

- a. Rapid access to the site of accident
- b. Quick extrication of victims and effective on-site medical management.
- c. Stabilization of condition
- d. Expeditious extraction and shifting to rescue vehicle(s)
- e. Speedy transportation to hospital.

The committee believes that in case of major accidents involving hundreds of lives, there is a need for better managerial and technological inputs for the Disaster Management System to function satisfactorily.

Being the multi-departmental emergency function, needing a high degree of precision, speed & coordination, the post accident management leaves some deficiencies and lacunae occasionally. These are corrected and updated periodically.

To ensure that IR's organized disaster management system is designed such that the victims are retrieved within the “Golden Hour”, it would require ARMVs/ ARTs to be based at each and every station.

The concept of Golden Hour is an ideal one, which cannot be achieved in any disaster / accident unless it occurs in the vicinity of the railway disaster management infrastructure / city / civil / armed forces establishments with adequate medical infrastructure. Therefore, a paradigm shift is now called for. The total approach to the concept of disaster management and the investment decisions thereof need a revamp. The strategy for setting up an effective disaster management system on the railways has to be based upon the twin plank of a stronger and appropriate infrastructure, backed by a well – trained team and disciplined and dedicated manpower.

The committee notes that a National Disaster Management Authority (NDMA) is being constituted by the Government of India. This authority is expected to coordinate disaster management activities among various departments / ministries. NDMA will work under the over all supervision of Home Secretary. Ministry of Railways has nominated Addl. Member (Mech. Engg.) as its representative in NDMA.

III FREIGHT TRAIN OPERATION

Lobby system:

A Lobby is like a control office in the field. It is established with the twin aim of reducing engine detention and crew detention in a yard or a crew or engine changing station by realistic ordering of trains and Crew/Guard booking.

It is advantageous to have a combined crew and guard booking lobby so that both are available simultaneously. The lobby supervisors/staff can take forecast of a train running from the Deputy controller/section controller along with details regarding the names of crew, Guard and their signing in time, loco particulars, last C&W examination etc.

They can verify the dates of Loco schedules from the chart available with them and keep liaison with the Power Controller/TLC. They also keep watch on “expect” of train formation, examination, readiness etc. and by constant chasing, planning and updating of information, trains are ordered on realistic expect, Trains may be put back or cancelled, it required and crew booking and engine allocation changed promptly.

Some overlapping crew/guard may also be kept in lobby to take care the last minute absenteeism. Shunters may also be kept in the lobby big yards / junctions to attach, detach and run round locos or to pull the train yard up to the Crew changing points so as to avoid wastage of main line loco pilots.

The pre departure detention to the crew, crew hours balancing, rescheduling of loco and yard detentions to loco can be thoroughly monitor by the lobby and remedial measures taken.

Shunting (GR 5.13 to 5.21)

Definition: Shunting means the movement of a vehicle or vehicles with or without an engine or of any engine or any other self-propelled vehicle, for the purpose of attaching, detaching or transfer or for any other purpose.

Types of Shunting:

1. Hand shunting
2. Loose shunting
3. Hump shunting / fly shunting
4. Push and pull shunting.

General rules of Shunting: SR 5.13 -1 and SR 5.14 – 1

1. Shunting must be performed under the supervision of properly authorized operating staff only including SM, YM, Shunting Jamadar, Shunting master, Guard etc.
2. At roadside stations, Guard in charge of the train must personally supervise shunting under instructions from the SM.
3. The Guard shall ensure that the points are correctly set and locked and exhibit hand signals to the Loco Pilot.
4. Guard must travel in the brake van while shunting a train from one line to the other across the main line.
5. Shunting may be performed in station section provided Outer and Home are in on position and on single line shunting may be carried on between the first stop signals without block back provided line clear has not been given.
6. Shunting shall be performed only by the Loco Pilot.
7. Guard shall sign shunting order T/806.
8. Guard is responsible to acquaint himself with shunting restrictions before starting shunting.
9. Shunting instructions shall not be changed and points shall not be changed unless shunting operation is completed and shunting staff have been advised.
10. MPS of shunting is 15 km/h which is restricted to 8 km/h incase of shunting/marshalling of wagons loaded with inflammable liquids, and explosives.
11. Impact speed when shunting one box wagon must not exceed 5 km/h while impact speed when shunting a group of 5 box wagons coupled with transition coupler must not exceed 2 km/h.
12. Securing of vehicles after shunting should be done by station staff.

- 13.If interlocking permits, lock bars shall be used to lock facing points at interlocked stations, otherwise all points at non-interlocked stations shall be locked either by a clamp/through bolt with a padlock provided, points are not governed by shunt signals. This is not applicable to yard shunting.
- 14.Fixed signals except Outer, Home and the Last stop signal may be taken ‘Off’ for shunting purposes.
- 15.Hand signals shall be clearly visible to Loco Pilot who shall act only on the hand signals shown by the in-charge of shunting.
- 16.Conflicting signals must not be shown to the Loco Pilot.
- 17.Multiple unit is treated as one engine for the purpose of shunting but incase of two engines, one engine only must be used for shunting.
- 18.Screw couplings must not hang down and drag. Before the screw coupling is unhooked, vacuum/air hose pipes must be placed on dummy plugs.
- 19.When vehicles are moved by an engine for attaching to a passenger train, the vacuum/air brake should be connected up and in case of shunting a goods train at intermediate stations, vacuum/air brake should, as far as possible, be connected with the engine.
- 20.Carriages occupied by passengers must not be moved without warning the passengers and Guard shall see that vacuum/air brake is connected up and points are set correctly.
- 21.When shunting is done simultaneously from both ends, person in-charge of shunting must inform the CASM/Switchman/Cabin man at his end to inform the CASM/Switchman/Cabin man at the other end to advise the person in charge of shunting at the other end before shunting/backing a train which may foul a line on which shunting is done from other end. He shall also depute a man in rear of load to pin down hand brakes to prevent the points in rear being fouled and exhibit a danger signal when the fouling mark is being reached.
- 22.Except under the supervision of an operating ‘Officer, no hand shunting by hands is permitted.
- 23.SM must personally ensure that the following practices are prohibited-
 - Uncoupling of vehicles in motion,
 - Riding on buffers/screw couplings in motion,
 - Getting between vehicles before the engine comes to a stop,
 - Passing under vehicles during shunting,
 - Sheltering under wagons,
 - Sleeping in the yard,
 - Working on vehicles under repairs without protection,
 - Keeping slip coaches on a blocked line in rear of a passenger train.

Shunting in block section:

If it is required to perform shunting in block section, the line shall be blocked back or blocked forward by the SM.

In such cases, one of the following authorities is given to the Loco Pilot to enter into the block section for the purpose of shunting:

- (a) Shunting key; or
- (b) Block occupation key; or
- (c) Taking 'Off' the shunt signal provided below the last stop signal; or
- (d) Private No. in lieu of block back or block forward on T / 806

Following train shunting on a double line: GR 8.06

1. Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward: Provided that when the block section in advance is occupied by a train traveling away from the station, shunting or obstruction may be permitted behind the train under special instructions taking into consideration the speed, weight and brake power of trains and the gradients on the section, and as soon as intimation has been received that the train has arrived at the block station in advance, the line shall be blocked forward if it is still obstructed.
2. SM shall obtain the permission of SCOR before performing such shunting.
3. Following the train traveling away from the station, T / 806 is issued to the Loco Pilot of the shunting train, clearly mentioning that 'Shunting is being done following a train traveling away from the station'. The number and departure time of the train traveling away from the station along with the Private Number of block forward, if necessary, is mentioned on the authority.

Marshalling Yards and Freight Terminals

I. Introduction and definition:

A yard can be defined by the functions it performs. It is the place or the activity centre on a Railway system, where the trains or rolling stock or group of rolling stocks are received, reformed into trains or loads after marshalling and are dispatched to their destinations. A yard is, thus, a classifying and distributing machine with facilities for receiving, sorting and dispatching the wagons to their various destinations, after the prescribed attention. This necessarily involves detention to trains and wagons, but it is inherent in railway working to have Marshalling yards.

A yard is a specified area laid out with a network of tracks divided into several grids for receiving sorting, forming and dispatching of trains.

II. Necessity and significance of Marshalling yards:

Though yards perform very important functions, yet the work done in a Marshalling Yard is only indirectly productive. Yards are operational necessity and are even considered as necessary evils. The ingenuity of the operating man consists in putting in the minimum number of the wagons into the minimum possible number of Marshalling Yards by forming trains for the farthest common points subject to rules and regulations. If the control is analogous to brain of the operating system, a large Marshalling Yard is a kin to the heart and its working to be planned and monitored with considerable care. Constant vigilance and intelligent and efficient work in day-to-day functions is required as it is one of the important factors governing the capacity and the output of a section. A Marshalling Yard affects not only the traffic it deals with, but also the entire train running on the section, in particular and the working of Railway system in general. The yard gets easily congested if treated as a holding yard and if more trains are put in than taken out.

III. Classification of yards:

Yards can be classified as:

1. Terminal Yard
2. Marshalling yard

IV. Terminal yard: Terminal yard means the yard attached to terminal goods sheds where large number of wagons are loaded and / or unloaded. This term is also used for every goods yard, where a goods train terminates.

V. Marshalling yard: Yards are nominated as Marshalling yards on the basis of the work done and wagons dealt with. The yard which receive and despatch trains without any shunting on them are classified as Transit yard. In such yards generally change of Crew, Engine or C&W examination etc. only take place in addition to formations of a few loads. During the last 50 years such yards have become obsolete and have given way to modern freight terminals the world over. Therefore, this description has value (1) as a historical document, (2) as also as guidelines for efficient working of modern freight terminals, described at the end of this chapter.

i) Objectives of Marshalling yards:

1. Quick transit viz.
 - a. Accepting trains without detention at adjacent station outside the yard.
 - b. Minimising the detention to wagons in the yard.

- c. Timely supply and placement/removal of wagons to the goods shed, transshipment shed, repacking shed, sidings, carriage and wagons depots etc. served by the yards.
 - d. Forming block loads for the farthest destination.
 - e. Ensuring convenient Marshalling of wagons from the operational efficiency point of view.
 - f. Ensuring right time start to outgoing trains.
2. Economy:
- a. Maximising productivity of resources and minimizing the detention to train engine / light engine, shunting engine, crew and other connected staff.
 - b. Optimising the trailing load of the trains.
 - c. Optimising shunting engine utility.
3. Safety:
- a. Ensuring minimum damage to wagons and consignments loaded on the wagons during shunting operations.
 - b. Ensuring safe Marshalling and C&W pattern of examination.
 - c. Elimination of yard accidents.

ii) Kinds of yards:

Marshalling yard can be classified under three groups on the basis of the method of sorting out trains:

1. Flat yard: Flat yards are generally laid on flat or level land where shunting operations are carried out with the help of engine by push and pull method. Such yard is economical in space but slow in working and wasteful in shunting engine hours.
2. Hump yard: Hump yards are constructed by providing gradients between reception and the sorting and dispatch lines and the grids. The gradients are created by constructing an artificial hump suitable for the purpose. The gradient of the hump is constructed in such a manner that the wagons roll down of their own to specified sorting lines from the summit (apex) of the hump after having been pushed up by the shunting engine. The load is pushed up by engine towards the hump from one side of the hump so that the uncoupled portion of the load rolls away towards another side or the hump in sorting/dispatching line. There are generally two humps one for 'Down' one for 'Up' yard. These yards are economical in shunting engine hours as compared to flat yards.
3. Gravity yard: Gravity yards are constructed where the natural contour of land permits a suitable falling gradient stretched over a sufficient

length. The falling gradient makes it possible to use the yard to the fullest extent in marshalling wagons / trains thus minimizing the use of engine power. Therefore gravity yards are more economical than flat yards but the layout of it dependent on the availability of plenty of land with the required topography which is seldom possible.

iii) Some terms concerning marshalling yards and its components:

Some of the components of Marshalling Yards are explained below:

1. **Reception yard:** Reception yard comprises of the lines on which the incoming trains are received and stand clear of other running lines while waiting their turn to be dealt with. Incoming trains may be composed of wagons which are to go through after changing of power, Crew and Guard or of wagons requiring sorting and Marshalling. Separate grids may be provided in the reception yard one for through trains and another for terminating trains. Separate reception yards may be provided for trains coming from different directions. The grids for through trains by pass the hump. Blocking of lines in the reception yard leads to section congestion. So SCOR shall keep a continuous watch over this component.
2. **Sorting yards:** It is a yard in which the trains are broken up on the different sorting lines for various directions or specified destinations, as per Marshalling order so as to form them into trains and prepare them for correct marshalling. The capacity of the lines in the sorting yard is much more than the reception yard.
3. **Marshaling lines:** The lines in which sorted wagons are separated first, if necessary, according to commodity, type of vehicle, Marshalling order, direction and secondly reformed into trains in special order to meet the requirements of the section ahead or any other special transportation requirement.
4. **Departure yard:** In which load can be held ready for departing trains. Separate departure yards for trains for different directions are provided in large marshalling yards.
5. **Shunting neck:** It is a line in a yard leading to sorting lines on which the actual shunting of the trains may be done clear of any running lines.
6. **Gathering lines:** It is a line on which the turn outs to other lines are arranged.
7. **Transfer lines:** These lines are mean for transferring wagons, generally from up yard to down yard or vice versa, in case of two separate

marshaling or hump yards. In practice, this is also called as ‘Cross’ load.

8. **By pass or avoiding lines:** It is a line, which skirts the hump, and its object is to avoid engine going over the hump. It joins the shunting neck at one end and the main hump line short of the king point at the other. It is also used for vehicles, which cannot be passed over the hump into the sorting yard due to various reasons.
9. **Engine run round line:** It is the line reserved for movements of incoming and outgoing train engines to and from the yard or the loco shed, or for independent movement of shunting engines.
10. **Engine escape line:** It is the line meant for engine movements to and from the loco shed, from and to yard so that engine returning to loco sheds do not interfere with engines going out of the loco shed or with any other movements in the yard.
11. **King points:** The first pair of points a wagon meets with after passing over the hump are called ‘King points’. They divide the sorting yard into two portions.
12. **Queen points:** The second pair of points a wagon meets with on its way downwards are called Queen Points, which further divide the sorting yards into four portions.
13. **Jack points:** The third pair of points a wagon meets are called the jack points and these serve to divert the rolling wagons into the different grids of the sorting yard. Points beyond jack points called ‘Ten points’. Note: In a hump yard there are usually a pair of ‘King points’ two pairs of ‘Queen points’ and four pairs of ‘Jack points’.
14. **Retarders:** One of the main problems in the working of a hump yard is to adjust suitably the speed of the humped wagons rolling down so that they may not cause damage by humping down against wagons already standing on the same line. The speed of the humped wagons varies according to the force of the push given by the engine, the height of the hump, the weight, the nature of the axle box (viz. roller bearing or plain bearing) as also on the weather prevailing.
In mechanized yards, retarders or rail brakes are installed to reduce and keep the speed of the humped vehicles under control. The retarders may be automatic or manually operated.
15. **Skids:** At yards, where mechanical retarders are not provided skids are placed on the sorting lines to control the speed of the humped wagons. These skids are placed by skid porters and the skids automatically come

out of runways, where provided, or/and are removed after the wagon has come to stop.

16. **Brake van siding:** In this siding, brake-van of incoming terminating trains etc. may be detached for subsequent attachment to originating trains.
17. **Special stock siding:** These are provided for keeping for Special type stock, Cattle wagons, ODC, Crane, Escort, Containers and Wagons containing commodities like Explosives which cannot be humped.
18. **Stabling lines:** In large yards, ballast, material or POH special, empty military special trains are sometimes required to be stabled. Moreover there are heavy accumulations of certain classes of stock for various reasons. The stabling accommodation in the yard should, therefore be ample so that the yard may retain its mobility in-spite of any accumulation of wagons or other set backs.
19. **Sick lines:** Normally sick wagons are sorted out in the sorting yard, and then sent in the sick line. As the time taken in placing wagons into and withdrawing them from a sick line is usually several times the time spent in actual repairs. Provisions should be made to carry out whatever repairs are possible in the sorting yard itself by providing sick lines.
20. **Transshipment lines:** On this line, transshipment of consignments is done either for Commercial or for C & W purposes. Repacking, re-sealing and untraced, unconnected wagons also kept on these lines.
21. **Weighment line:** On this line, wagons are weighed for finding out the actual capacity.

iv) Telecom equipment of marshalling yards:

A marshalling yard should necessarily have the best possible telecom facility for proper functioning and efficient supervision of work:

1. **Telecommunication arrangement:** Since a marshalling yard covers a considerably big area, the distance between its different points and portions becomes naturally long. Therefore extensive telecom network, through an electronic exchange and intercoms between all-important points in the yard, is imperative so that instructions to the supervisory staff can be conveyed quickly over telephone. The yard should also have direct dialing trunk facilities and control telephones, so that instructions to the supervisory staff can be communicated properly and promptly.

2. **Paging and talk-back arrangement:** Major marshalling yards are provided with paging and talk-back sets, through which orders and instructions are issued to the staff concerned, working in different spheres in the yard, from one central point. Similarly, the staff can also convey any information to the central points. This helps coordination between different spheres of the yard.
 3. Loud speakers are also provided at convenient points so that instructions can be conveyed to different staff working in the same area. For example, loudspeakers are provided in the sorting yard, so that the in-charge of the hump can convey instructions relating to the Hump cabin and the skid porters regarding the line on to which wagons are being shunted. Similarly, arrival and despatch of trains can be monitored.
 4. Extensive use of goods walkie-talkies will also go a long way in improving the efficiency of the yards.
 5. Bell is also provided in the cabin of yard to quickly stop the ongoing movement.
- v) Signals in Yard: Apart from the signals that are regularly used, special hump signals are provided in the hump yard. These signals show Red to stop, Yellow to go slowly, Blinking yellow to go upward, and Green for go down with normal speed.
- vi) Yard organization:
Yard working is controlled by a Chief Yard Master, though small yards may be controlled by Yard Master. Bigger Yards may be under the control of Area Officer.

Marshalling

Marshalling is attaching of vehicles on a train in a pre-determined manner to ensure train safety, provide operational expediency and to maximize customer convenience.

For block rake composition and marshalling order, 'Normal composition and marshalling order and Rake link of passenger trains' are issued by COMs of respective Railways from time to time.

General principles kept in view while marshalling are –

- a. Passenger coaches are marshaled in middle.

- b. Non-passenger carrying stock shall preferably be scrutinize next to engine or in the rear of the train.

Safety Marshalling of SLR and Anti-telescopic / Steel bodied Coaches on Passenger trains:

- a. Marshalling of Mail express trains –
 1. In case of SLRs having passenger portion on one side, luggage cum brake portion on the other, it should be scrutinize in such a way that luggage cum brake portion is trailing outermost or next to engine.
 2. Passenger portion of SLR should be locked if scrutinize next to engine or trailing outermost.
 3. In case of new design of SLR with passenger portion in the middle, these can be positioned in either way.
 4. In case of shortage of SLRs, suitable other coaching vehicle or VPU may be provided and in case of coaching vehicle, its doors should be locked to ensure that passengers can't occupy it.
 5. Two anti-telescopic / steel bodied coaches should be scrutinize inside the anti-telescopic or steel bodied SLRs at both ends.
 6. After providing for Mail Express trains, all available anti-telescopic / steel bodied SLRs should be used on main line passenger trains and passenger trains.
- b. Marshalling of short service trains – Railway Board has permitted marshalling of three coaches in front and in rear of SLR on short trains, provided they have working brakes and subject to two end coaches at either side is anti-telescopic. An inspection carriage may be attached as 4th trailer coach on such trains. [IROM 2008]
- c. VPs, LRs WLRRMs, OCVs which do not carry passengers and occupied or empty inspection carriage may be scrutinize as operationally convenient.
- d. Reserved bogies and saloons occupied by passengers and VIPs should be treated as a passenger coach and scrutinize accordingly.
- e. Anti-telescopic / steel bodied coaches may be scrutinize as operationally convenient.
- f. POH / sick wagons returning to shops shall be properly locked and secured to prevent entry of passengers and can be scrutinize as operationally convenient. If not locked and secured for any reason, these shall be treated as passenger coaches and marshaled accordingly.

Marshalling of passenger and mixed trains:

1. The composition and marshalling of passenger, mail express and mixed trains is prescribed by COM under special instructions issued from time to time.
2. At least one Second class Luggage Rake must be in rear.

3. Not more than two bogies or four four-wheelers can be attached behind the SLR. One inspection carriage can be attached in addition to two bogies.
4. Mixed train shall be arranged as Engine, Goods wagon, Passenger vehicle, SLR/LR, vehicles fitted with vacuum / air brake.
5. One four wheeler must not be scrutinize between two bogies.
6. Speed shall not exceed 75 km/h if four-wheeler attached.
7. Goods stock shall be certified 'Safe to Run' by TXR before attaching.
8. Piped vehicles in a mixed train are attached inside the rear brake van without causing interference to the train lighting connections.
9. TXR at maintenance stations shall examine the safety to run goods stock.
10. BPC is given by the C&W staff at originating station for both onward and inward journey, where there is no C&W staff at the terminal station.

Marshalling of goods trains:

1. There shall be at least one goods brake van in rear.
2. ODC wagon shall not be attached without the sanction of COM.
3. One four-wheeler must not be attached between two bogies except to avoid shunting enroute.
4. One empty four wheeler must not be attached between two loaded wagons in ghat section.
5. One damaged / sick vehicle / wagon / engine 'fit to run' may be attached in rear of brake van in day light hours only.
6. A dead loco can be attached to a train only if it is certified fit to run, escorted by assistant Loco Pilot, speed is similar to that of train, has applicable brakes, and permitted in that section.
7. A maximum of three locomotives (2 working + 1 dead) with the load is permissible.
8. An unbalanced locomotive sent for POH should be hauled by a light engine at a speed not exceeding 15 km/h.

Ghat marshalling:

1. Information on ghat sections is mentioned in the working time table of the division. The following are the ghat sections on Central Railway.
 Igatpuri – Kasara (Thull ghat) – Mumbai division

 Lonavala – Karjat (Bhor ghat) – Mumbai division

 Dharakoh – Maramjhari – Nagpur division

Tigaon – Chichanda – Nagpur division.

2. Working instructions and marshalling of trains to be run in ghat sections is also mentioned in the WTT.
3. One empty wagon shall not be scrutinize between two loaded wagons.
4. All the loaded and empty stock shall be grouped in separate blocks and loaded stock shall be scrutinize next to engine followed by the empty stock.

Yard Structure of a Big Marshalling Yard:

Area Manager
Chief Yard Master
Area Controller
Movement Inspector
Deputy Chief Yard Master

Reception and dispatch of trains	Operations	Despatching yard	Documentation / Statistics		
Cabin ASM	Reception yard	Marshalling / Classification Yard	AYM	OPTG	Comml
Leverman / Cabinman	AYM	AYM	Shunting Jamadar / Mukaddam	CTNC	CGSR
Pointsman	Shunting Jamadar / Mukaddam	Shunting Jamadar / Mukaddam	Train starter	HTNC	GSR
	Pointsman	Pointsman / Skid Porter	Pointsman	Sr. TNC	Sr. Goods clerk
				TNC	Goods clerk Porter

The Yard in-charge has two organizations under him.

1. **Field staff:** It includes the Chief Yard Master, who is over all in charge of the yard and Yard Masters in each shift are responsible for operation work. In dual yard system, there may be more than one Yard Masters, e.g. one for Down Yard and another for Up Yard. On the other hand, where the traffic is comparatively low, Yard Masters may be replaced

by Assistant Yard Masters. The next level of supervision is generally related to the shunting engines. Each shunting engine may have an Assistant Yard Master/Shunting Master, attached to it, who controls the movements of the shunting engine. Shunting Jamadar may be included in the organisation to assist them for dealing with the shunting work allotted to each engine. Where the shunting work is not heavy or comparatively unimportant, the Shunting Jamadar may be in charge instead of Yard Master. Each shunting engine generally has a batch of three or four Points men, whose duties are usually as under:

- a. For uncoupling the wagons
- b. For braking of wagons
- c. For relaying of signals
- d. For operating the points
- e. For Piloting engine

The above staff from the organisation for sorting work besides other staff is also required for various auxiliary functions – cabin staff, call boys, box boys (brake or skid porters in hump yards) etc. apart from the staff of other departments.

2. **Trains Branch:** CTNC or Head TNC has over all responsibility for the efficient working of the trains' branch. Below them, there are Head TNCs/ Sr. TNCs/ TNCs, who may be on shift duties or during day duty only, depending on the work load of the yard. These Trains Clerks are entrusted with comparatively important work in the trains' branch like preparation of Marshalling Yard statistics, maintenance of the Yard Balance Register, Daily Stock Taking etc. The TNCs in shift duties take stock of trains in Reception and Despatching Yard. They also maintain Wagon Exchange Registers, Phase-wise Detention Register i.e. 72 hours detention register, Floating Balance Register and Stock on line position. The number of TNCs in a yard will depend on the number of wagons, trains dealt with in a yard.
3. **Yard working instructions:** For proper and efficient working of each yard, general directions for working in each shift should be laid down in the yard working instructions. The instructions should deal with all important aspects of working in detail other than the procedure for reception and despatch of trains, etc., which are required to be given in the Station Working Rules to be useful for the general guidance of staff working in the yard as well as to the new and the relieving staff. The

yard working instructions should be prepared generally under the following heads:

- a. Full description of the yard including number of lines with their holding capacity etc.
- b. Strength of the yard staff in each shift.
- c. Quantum of inward, outward and internal traffic required to be dealt with by the Yard and their timings.
- d. Marshalling Orders in force.
- e. Shunting engines available in each shift and their utilization, generally.
- f. Procedure of work to be carried out, generally in each shift.
- g. Directions to Shunting Jamadars and Yard Masters on arrival on duty, in general, in regard to advance planning of the work during their shift.
- h. Directions to Shunting Jamadars and Yard Masters in regard to position of the Yard at the time of handing over the charge.
- i. Important safety precautions
- j. Miscellaneous instructions.

4. **Main works required to be performed by yards:** Generally a large yard is required to perform the following work with due regard to efficiency, reliability, economy and safety:

- a. To pass through trains after changing of engine and carriage examination and detaching sick wagons, if any, and adjusting load of the train if necessary.
- b. To break up and sort out terminating trains and loads and the local loads originating in the yard.
- c. To form originating through trains for the farthest point possible in accordance with long distance Marshalling orders laid down by the HQ office.
- d. To form shunting and van trains for the different sections served by the yard.
- e. To hold back trains and wagons until they are able to go out.
- f. To keep wagon detention to the minimum while planning item No. (a) to (e).
- g. To move train engines and pilots between the yard/Loco Shed and sidings.
- h. Placement and removal of inward loaded wagons for the goods shed, loco shed, private sidings etc. served by the Marshalling yard.

- i. Placement and removal of wagons from the repacking shed to the yard.
 - j. Placement and removal of sick/fit wagons from the sick lines.
 - k. Assessment of room by the nominated shunting trains for roadside stations.
 - l. Arrangements for supply of stock as per Indent Register and ODR required by the road side station in accordance with the orders received from the CTNL (Stock).
 - m. Weighment of wagons in certain nominated yards as and when required.
 - n. Maintenance of the correct tally of the daily output of the yard.
 - o. Maintenance of record of detentions to other kinds of stock such as local loaded, sick wagons, empties and special stock etc.
5. Some factors affecting working of the yards:
- a. Lack of proper advance planning and co-ordination between the Control and the yards, and want of proper co-operation between the yard staff, loco shed staff and carriage and wagon staff, affects yard working adversely. For efficient yard working it is necessary that the yard staff must plan their work in advance in consultation with control and adjacent yards, if necessary the different members of the yard staff should extend co-operation in the efficient working of the yard as a matter of team spirit.
 - b. Sometimes, while breaking up the terminating trains, local wagons are not properly collected in specified lines and they remain scattered in the sorting and Marshalling lines or other parts of the yards thereby causing undue delay in the yard operations. Endeavour should always be made to collect these wagons in lines specified for the purpose.
 - c. Late or irregular removal of loads from local areas affecting timely placement of wagons in their appropriate sidings is often a chronic cause of trouble in the working of the Yard. Therefore endeavor must always be to adhere to the schedules for placement and removal of wagons in the different areas of the Yard in accordance with Yard working instruction.
 - d. Empty stock should not be allowed to lie scattered all over the Yard. As far as possible empties should be sorted out in the groups in which they are generally required to be worked out, keeping as far as possible special type of stock separately from general wagons. All

empties stock so grouped preferably is kept separate in specified lines.

- e. Sick wagons and wagons for adjustment of loads and transshipment of contents often lie scattered through out the Yard thus hampering the Yard operations. Even if the number of sick wagons exceeds the repair capacity, these must invariably be kept collected in the specified lines and sick lines placement and removal should be done strictly according to the schedule. Wagons required adjustments of loads can possible be done in the Yard itself, this must be resorted to.
- f. Any tendency on the part of shunting engine Loco pilots to waste time on loco requirements should be curbed. Shunting engine must not be allowed more than the specified time for loco requirements at fixed intervals.
- g. Higher wagons balance in a Yard affects its mobility. It is therefore very necessary that proper analysis of the highest wagon balance beyond which mobility of the Yard is seriously affected, should be worked out and proper co-ordination between the Yard Master, Assistant Station Master, Control and adjacent Yard should be maintained all the time. To prevent excessive inflow of wagons, which seriously affects mobility of the Yard, an eternal watch should be kept on the Yard Balance and steps taken to keep within the working capacity of the Yard.
- h. Efficiency of the Yard shunting engine is one of the most important factors on which the working of the Yard depends. Requirement of a better shunting engine or an additional shunting engine during the busy periods may therefore be found necessary for better working of a Yard. In big Yards, efficiency and sufficiency of the Yard shunting engines should be periodically examined and if frequent engine trouble is reported, supervisors of loco should be posted temporarily with them until the cause of the trouble is removed.
- i. **Yard lay out:** The shunting Jamadar and the Yard Master should carefully watch if any particular feature of the layout, such as wrongly placed cross over or a short shunting neck of isolation of two busy groups of lines is a restrictive factor in the efficient working of the Yard and if any minor additions and alterations, such as providing an additional crossovers, positioning an existing cross-over correctly, lengthening of a particular line, etc. are likely to improve the working of a Yard, necessary proposals should be forwarded to the DRM(O).
- j. Sometimes delay in the release of the wagons by public and departmental consignees cause heavy accumulation of local wagons

thus affecting the working of the Yard. Advance intimation given to rake handling parties on the telephone and the departmental supervisors in the local area about the number of wagons awaiting unloading would enable them to make necessary arrangements in time for releasing the wagons.

- k. Sometimes identification of any particular traffic, which affects the mobility of the yard, is required so as to advise to control to restrict the inflow.
- l. In case of heavy congestions requiring block back on the neighboring sections, neighboring yard should be called upon or directed by Sr. DOM / CTNL by taking upon them some of the sorting and marshalling work, the congested yard would normally have done. If necessary a competent officer or inspector should sit in the yard and direct operation until the congestions is cleared.
- m. In the event of an accident temporarily reducing working capacity, steps should be taken to regulate the inflow of trains into the yard for a day or two, or such a long period as may be absolutely necessary until the emergency is over and the yard has regained its normal working capacity. The work load on the yard must be suitable reduced to avoid serious repercussions on the yard itself and on the neighbouring sections. Accidents should preferably be attended to personally by officers, as far as possible so that re-railing / restoration and clearance work may be done in the best possible manner.
- n. Late start of train from the Yard: Whatever may be the cause of late start of trains from a Yard, this apart from reducing available capacity of the section, in turn, affects the working of the Yard itself by delaying subsequent formations of train.
- o. Bans and restrictions imposed from time to time.
- p. **Yard facilities:** Ordinarily a Yard should be adequate enough for its requirements of sorting, handling of local traffic, and formation of train and for holding back stock until it can go out on the sections or to various installation in the local area. If shunting or train movements in one part interferes with similar movement in the other part, or if simultaneous reception and dispatch of train from and to different direction is not possible, or the Yard, starting a train from or carrying on shunting in one group of lines while a train is being received in the other group if prevented, it requires careful attention of Supervisor Inspectors and Divisional Officers for necessary remodeling. If frequent congestion takes place in a Yard or a Yard show poor performance, the entire working should be thoroughly examined to determine the root cause of congestion. The causes of strained working may be a generally increase in traffic, large increase of traffic from one or two sections or stations bad

working of some installations served by the Yard, small or obsolete shunting engines or their inadequacy etc. all these call for suitable action.

- q. Sometime want of proper working facilities, such as adequate lighting, communication between the different key-points in the Yard and Yard Master and The Assistant Station Master requiring a number of messenger to run about in the Yard for this purpose, affects the working of the Yard adversely.

6 Some of the other factors affecting the Yard working:

- (a) Non – rectification of hump gradients.
- (b) Hump shunting not useful enough for the loads which require pushing of loads.
- (c) Under load running of outward train.
- (d) Trains received mis-marshalled.
- (e) Congestion/interruption on the section or in the intermediate or terminal Yards.
- (f) Heavy receipts of local wagons.
- (g) Shortage of engines.
- (h) Train Crew shortage.
- (i) Heavy shortage of Yard working staff including C&W staff.
- (j) Mixing of loads with CBC and ordinary couplings.
- (k) Non-transfer of X-loads regularly.

7 Operation Considerations Governing Design of a Yard :

- i) The lay-out of the Yard should be such that as far as possible movements of wagons in their several Marshalling operations would be continuous and progressive in the direction of the destination of the wagons because reverse or zig-zag movement reduces efficiency. The reception lines, sorting lines, shunting necks, Marshalling lines and departure lines should, wherever possible, be arranged with this object in view.
- ii) The layout should also satisfy the basic principles of maximum flexibility in movements which are required to be performed may be carried out. At one and the same time it should be possible to perform all the different movement which is to take place at the same time.

The following independent movements within one and the same area should be planned as far as possible.

- (a) Simultaneous reception of train from different directions.
- (b) There should be separate Up and Down yards.
- (c) Simultaneous dispatch of the trains to different directions

- (d) Two or more shunting engines working, not to interfere with one another, by provision of separate shunting necks.
- (e) Reception of one train not to interfere with the departure of another train and vice-versa.
- (f) Reception of train in one part of the Yard should not interfere with shunting in another part.
- (g) In large Yards, there should be separate lines for Reception, Marshalling and Despatch. Bye-Pass Running lines may be provided if possible, when only crew change is required.
- (h) There must be adequate facility of light and communication in the different parts of Yard. Yard should be so designed as to permit future extensions in each important section like reception lines, sorting lines /marshalling group etc. In the next 25 years though on consideration of economy, requirement of the next 5 years only may the first instance be provided.

8 Marshalling Yard Statistics (Manual of Statistical Instructions Volume-1) (Railway Board has decided that statistics shall be maintained in the terms of 8-wheeler units. Same be incorporated by the railway.)

General Instructions:

- a. The Marshalling Yard statistics should be prepared for selected Yards generally dealing with 8000 eight wheeler wagons and over per month in respect of BG Yards and 5000 eight wheeler wagons and over per month in respect of MG Yards, prior approval of the Railway Board should however, be obtained for addition or deletion of any Yard.
- b. Brake vans are to be included.
- c. The area of each Marshalling Yard is to be carefully defined and no extra allowance is to be made for any work done within that area. A diagram showing the Marshalling Yard area clearly demarcated should be prepared for the Yards for which statistics are required to be compiled by the Railway for the Board. This diagram should be readily available at the stations to enable any inspecting officer to obtain a clear indication of the extent of the Marshalling Yard.
- d. Sick lines and repacking sheds, transshipment points, goods shed, departmental sidings and the industrial sidings etc. may as a general rule, be treated as lying outside Marshalling Yards for purpose of calculation of Marshalling Yard statistics.
- e. At places, where there are points like the goods terminal station and/or Break –of gauge transshipment points etc., continuous to the Marshalling Yard , and the detention statistics of each of these Yard are compiled

separately either for submission to the Railway Board or for inclusion in the Railway's own Domestic Statistics. The sum total of detention in each Yard should accord with the total detention from arrival of a wagon till its final dispatch from that station. To ensure this the Supervisory staff in charge should exercise a check, at least once in a month on a random sampling basis. This check should be broad based covering not only the important categories of wagons e.g. four wheelers, BOX wagons, oil tanks etc., but also the main stream of movement of wagons to and from different direction . This exercise should cover at least 10 % of the total no. of local wagons dealt with in the Marshalling Yard during the previous month and the records of such check should be properly maintained to be available for scrutiny by inspecting personnel.

- f. In the case of wagon whose detention or dispatch particulars are not available their detention should not be omitted but reckoned on the basis of the average detention during the month for similar type of stock while working out the average detention per wagon. The number of such wagon should be indicated separately under through loaded and all wagons for each Yard in a foot-note to the statement.
- g. Yards provided with humps are to be denoted by a star and terminal Yards should be specified by a note to that effect.
- h. Except where otherwise stated all results are to be worked out correct to the place of decimal, but those which are less than 10 should be worked out correct to two places of decimal.

9 Procedure for Working Out Marshalling Yard Statistics:

i) Wagons despatched:

Items 1.01 and 1.02 are self explanatory. A wagon should be included under item 1.02 as many times as it leaves the Marshalling Yard.

Wagons on 'by passing' trains (i.e. through goods trains, as defined in note under item 1 of statement will not be included under item 1.01)

Item No. 1.03 – item1.01 + 1.02

ii) Daily average number of wagons dispatched:

Item2 = Item1.03 /No. of days in the month

(iii & iv) No. of trains received and dispatched:

(a) A trains for this purpose is a set of wagons or vehicles worked by locomotive, or any other self propelled unit, or rail–motor vehicles, empty or

conveying traffic when running under a particular number or a distinct name from a fixed point of departure to a fixed point of destination.

(b) All trains, both terminating and bye-passing (i.e. through goods trains) are to be included, “Bye passing trains” should be accounted both under the number received and dispatched.

v) Number of wagons dealt with per shunting engine hour:

Item 5.06 = item 1.03

Items 5.03+5.04

Note (i) while compiling shunting engine hours under item 5.3 and 5.4 the following instruction should be kept in view

a. Shunting engine hours are to include the shunting hours of regular shunting engines and train engines before and after working a train or during its run when employed in shunting goods wagons only in the Marshalling Yard area. The shunting time within the Marshalling Yard area should only be taken into account and not the time spent outside its limits.

b. Shunting engine hours are to be reckoned from the time of arrival of the shunting engines in the Marshalling Yard up to the time of their departure from the yard on the basis of shunting vouchers. The time spent on locomotive duties whether in the Yard itself or outside the Yard is to be included. However, any extra time taken over the normal time prescribed for carrying out legitimate locomotive duties should be excluded the normal time being determined by the individual railway taking into account the local conditions and indicated in the operating manual. If shunting engine is required to be repaired in the Yard itself, the extra time beyond 30 minutes spent on such repairs in a shift should also be excluded.

c. The time spent in the Marshalling Yard for change of crew and or fuelling should be accounted for in the same manner as on locomotive duties referred to in Note (1)(b) above.

d. Since shunting engines shunt both coaching and goods vehicles, the allocation of shunting engine hours to goods and coaching stock may be fixed for each Yard on a percentage basis after an examination of the work done. This percentage is to be rechecked at least once a year and also when any change occurs in the type of traffic passing through that Yard. Where daily records are kept of the working of shunting engines according to hours spent (i) inside the Marshalling Yard (ii) outside the Marshalling Yard and (iii) in shunting coaching vehicles, it will not be necessary to fix a percentage, as the actual hours spent in the Marshalling

Yard in shunting goods vehicles will be available. Time taken by shunting engine in placing wagons in such lines is to be included in shunting hours when such lines form the part of the Marshalling Yard area.

Note (ii) Time spent for locomotive duties recorded separately under items 5.5 will include under 5.3 also. Item 5.5 will include the time taken by shunting locomotive for locomotive duties and minor repairs upto 30 minutes per shift as per Note (i) (b) under item 5.

vii) Average detention per wagon:

- a) The detention time should have reference only to the detention within the Marshalling Yard territory as defined in para (iv) of General Instructions and the incoming and outgoing wagons from and to the local outlying sheds, sidings etc., should be counted as many times as they enter the Yard. This will include detention to sick wagons in the Marshalling Yard although their detention is separately shown against item 6.6.
- b) The average detention is to be obtained by recording in the wagon exchange register or similar record, the hours of detention to each wagon that is the interval between its arrival and departure. At the end of the month under different types must be totaled, and both detentions and number of wagons for each type must be multiplied by the factor of equivalence to four wheeler and then consolidated to work out the average detention per wagon, the following example will illustrate the method of calculation of the average detention per wagons.

Example: Suppose Yard 'A' has dispatched 100 four wheelers with a total detention of 400 hours, 20 bogie wagons (Equivalent to 40 four wheelers) with a total detention of 200 hours and 10 Box wagons (equivalent to twenty five four wheelers) with a total detention of 150 hours. Average detention per wagon will be

$$\frac{400 \times 1 + 200 \times 2 + 150 \times 2.5}{100 \times 1 + 20 \times 2 + 10 \times 2.5} = 7.1 \text{ hours}$$

The detention of wagons arriving in one month and despatched in the next will be shown in the month in which they are despatched but the time must be reckoned from the date of arrival. Station which maintains

a wagon card index may obtain the figures therefore instead of from the wagon exchange register. The number and detention of Brake vans will be excluded for the purpose of this item.

- c) The target detention hours will be fixed by the Railway Board from time to time having regard to the past performance of each Yard and also materialization of different streams of traffic, Marshalling commitments and the facilities available. A pointer to the correct level of a target would be the best result achieved in the past one or two years, assuming that there has been no noticeable improvement or deterioration in the operating conditions and methods. The target should be somewhat better than the actual recorded performance so that it may call for better effort on the part of the staff concerned to achieve the margin of improvement remaining between the actual and the target.

Item 6.1 All wagons – The term ‘all wagons’ includes through loaded, through empty, local loaded, local empty and departmental wagons, wagons on ‘through trains’(as defined in item 1.02 & 1.02) sick and damage wagons will be excluded. Sick and damaged wagons will be included wherever the sick lines form part of the Marshalling yard area.

In respect of the yards which may as well be depots for holding empties, such empties should not be included for the purpose of this item. These yards should, however, be denoted by a suitable footnote specifying therein the average daily holding of the depot.

The ‘exit’ and ‘re-entrance’ timings may be fixed on the basis of sample observations made once a year. These fixed timings may be rechecked annually and also when any major change occurs in the working of the Marshalling yard.

Item 6.2 Through loaded wagons – The term ‘loaded wagons’ mean loaded wagons which neither originate nor terminate at the station, but which are dealt within the yard and are not on ‘bye passing’ trains (as defined in item 1.01 and 1.02).

Item 6.3 Through empty wagons – The term ‘empty wagons’ means empty wagons which neither originate nor terminate at the station, but which are dealt within the yard and are not on ‘bye passing’ trains (as defined in items 1.01 and 1.02)

Item 6.4 Outward Local – This item will include detention to local wagons despatched by trains from the Marshalling yard i.e. from the time of their entry into the marshalling yard from the outlying sheds and sidings till their despatch by trains.

Item 6.5 Inward Local – This will include the detention to local wagons from the time of their arrival in the Marshalling yard till their placement into the local sidings.

Item 6.6 Sick Wagons – Detention to sick wagons in the marshalling yard will be included under this item as also under ‘all wagons’. In case the sick lines form part of the Marshalling yard the detention in the sick lines will also be included under this item. If the sick lines are outside the yard, such detention will be excluded.

viii) Present status and the road ahead:

Closure of conventional marshalling yards was an outcome of –

- a. Unit train movement
- b. Advent of containers

The container revolution ensured that a universal flat rail car could move all description of traffic of varying cargo size – train load, full container load or less than container load. It can quickly eliminate shunting operations, which was replaced by gantry or road mobile trains; picking up containers and repositioning them – the equivalent of tortuous shunting as detailed above. It ensured that freight customer does not have to register wagons or rake; he has to ask for simply a given number of containers which are sent to his premises for loading / unloading and are brought back to modern freight terminals. The exorbitant cost involved in taking freight consignments to railway goods shed and unloading in inward consignment there and carting them to customers’ premises are totally eliminated and inter modal operation ensures door to door service, which till now was the hallmark of road transport, which had captured nearly 80% of making Indian Railways the second largest mode of transit movement.

Rightly enough the era of modern freight terminals has began. These are world class facilities and include:

- i) An ICD for export / import cargo with customs clearance facility
- ii) Appointed warehouse to facilitate custom duty being paid as and when the cargo is needed.
- iii) Large warehouses where cargo can be stuffed / re-stuffed/ stored and moved as per customers’ instructions.
- iv) Road, rail and air transport connectivity on demand.
- v) Cold chain for refrigerated cargo.
- vi) Banks.
- vii) Fax, Telex & Telephone Internet connectivity.
- viii) Continuous cargo tracking globally.

Freight terminal operating company and some of the railroad companies who have a customer services centre working round the clock to receive customers instructions for change of destinations, rebooking of cargo etc. and this new environment the freight customer may visits the commercial office to execute agreements or long term contracts. The freight terminal is like a factory where the cargo goes and goes out. Process for bringing about this business like cause is already on way with private operators managing their terminals, running their own trains, serving their customers in an entirely business like environment. In this scenario the erstwhile marshalling yard are in the following areas:

- i) Providing rail substitute to road
- ii) Serving large production units like steel plants & refineries
- iii) Major customers like thermal powerhouse, fertilizer plants, cement plants, ensuring availability of inputs and clearance of their outward cargo
- iv) Major carriage wagon depots for freight rolling stock
- v) Crew and loco changing locations
- vi) ICDs of IR's subsidiary CONCOR

The transition from conventional, goods shed and marshalling yards of freight terminals have equipped railway system worldwide to win back high profit yielding, finished production from road to rail cum road system which reduces cost to the economy and the customers, substantially reducing the adverse environment impacts of road transport, paving the way for sustainable transport.

The future manifestation of railway yards is likely to be as Logistics Park as railway strives to become a logistics provider rather than a mere transporter.

Marshalling Yard Statistics

Targets and Statistics

To utilise fully and efficiently the existing carrying capacity of a Railway it is important to set measurable and specific targets for various performance after taking into consideration all local conditions. Once targets are laid down all possible efforts must be made to attain them.

Targets should be set sufficiently high and reviewed constantly with a view to improve performance further. Where targets are not attained within a reasonable period causes shall be analysed and remedial actions shall be taken. If necessary revised targets shall be laid down.

Marshalling Yard Statistics

Marshalling Yard Statistics shall be prepared for select yards generally dealing with 8000 or more 8 wheeler wagons per month in BG or 5000 or more wagons per month in case of MG. However prior approval of Railway Board to add/delete any Marshalling Yard in the list.

Marshalling Yard Statistics shall has to be maintained in terms of 8 wheeler wagons.

Break Vans to be included.

Area of Marshalling Yard is to be carefully defined. A diagram showing the extent of Marshalling yard should be prepared and kept in Yard office.

Sick lines, repacking sheds, Trashingment points, goods shed, departmental sidings, industrial sidings etc. may be treated as lying outside Marshalling Yard for the purpose of Marshalling Yard Statistics.

In case of wagons whose detention or despatch particulars are not available their detention should not be omitted but reckoned on the basis of average detention during the month for similar type of stock. Number of such wagons shall be indicated separately.

Yards provided with a hump are to be denoted by a star and terminal yards should be specified by a note to that effect.

Results are to be corrected to one place of decimal. Those which are less than 10 should be worked out correct to two places of decimal.

*Marshalling Yard Statistics can be divided into two: **Quantitative and Qualitative.***

Quantitative

- Average number of trains received per day
- Average number of trains despatched per day
- Average number of wagons received per day
- Average number of wagons despatched per day
- Average number of wagons detached per day
- Average number of trains dealt per day

Qualitative

- Average detention to through loaded wagons
- Average detention to local wagons
- Average detention to empty wagons
- Average detention to all wagons
- Number of wagons dealt with per shunting engine hour
- Average detention to trains for reception in yard
- Percentage of right time starts
- Total average cost per wagon dealt

Marshalling Yard Statistics by Railway Board

Railway Board publishes monthly operating Statistics of Marshalling Yards, terminal Goods Sheds, Trashingment Points once in every six months. Following are included:

1. Number of wagons dealt with per month
2. Daily average number of wagons detached
3. Daily average number of wagons dispatched
4. Number of trains received per month

5. Number of trains despatched per month
6. Number of wagons dealt with per shunting engine hour
7. Average detention to all wagons
8. Average detention to through loaded wagons

Calculating Marshalling Yard Statistics (Monthly)

- 1.01 Number of wagons despatched – Despatched by trains during the month
- 1.02 Number of wagons placed from Marshalling Yard outside the Yard by pilots in goods sheds, transshipment/repacking sheds, departmental sidings or Yards, military sidings, assisted sidings, etc. A wagon should be included as many times as it leaves the Marshalling Yard.
- 1.03 No. of wagons dealt with during the month (Item 1.01 + 1.02)
- 2 Daily average number of wagons despatched. (Item 1.03/No. of days in the month)
3. Number of trains received (All trains, both terminating and by-passing (i.e. through goods trains) are to be included. “By passing trains” should be accounted both under the number received and despatched.)
 - 3.01 a) Number of by passing trains
 - b) Number of terminating trains
 - c) Total (a+b)
- 3.02 Average detention to by passing trains:

Target-

Actual –
- 3.03 Number of wagons carried by –

By passing trains included in items 3.01(a)
4. Number of trains despatched (All trains, both terminating and by-passing (i.e. through goods trains) are to be included. “By passing trains” should be accounted both under the number received and despatched.)
 - 4.1 No. of by passing trains
 - 4.2 No. of originating trains
 - 4.3 Total
5. No. of wagons dealt with per shunting engine hour -
 - 5.1 No. of pilots working in the station
 - (a) Number of pilots
 - (b) Number of shifts per day
 - 5.2 Total shunting engine hours outside Marshalling Yards
 - 5.3 Total shunting engine hours of regular shunting engines employed for work inside Marshalling Yard
 - 5.4 Total shunting hours by train engine employed for work in Marshalling Yard.
 - 5.5 Total time taken for locomotive duties and minor repairs
 - 5.6 No. of wagons dealt with per shunting engine hour (Item 1.03/(Items 5.03 + 5.04))
6. Average detention per wagon (Hours)
 - 6.1 All Wagons-

Target

Actual

6.2 Through loaded wagons –

Target

Actual

6.3 Through empties

6.4 Outward Local

6.5 Inward Local

6.6 Sick wagons

Instructions for Calculating Marshalling Yard Statistics

A train for this purpose is a set of wagons or vehicles worked by locomotive, or any other self-propelled unit, or rail-motor vehicles, empty or conveying traffic when running, under a particular number or a distinct name, from a fixed point of departure to a fixed point of destination.

Note: (i) While compiling shunting engine hours under item 5.3 and 5.4 the following instructions should be kept in view.

(a) Shunting engine hours are to include the shunting hours of regular shunting engines and train engines before and after working a train or during its run when employed in shunting goods wagons only in the Marshalling Yard area. The shunting time within the Marshalling Yard area should only be taken into account and not the time spent outside its limits.

(b) Shunting engine hours are to be reckoned from the time of arrival of the shunting engines in the Marshalling Yard upto the time of their departure from the Yard on the basis of shunting vouchers. The time spent on locomotive duties whether in the Yard itself or outside the Yard is to be included. However, any extra time taken over the normal time prescribed for carrying out legitimate locomotive duties should be excluded, the normal time being determined by the individual railway taking into account the local conditions and indicated in the operating manuals.

If shunting engine is required to be repaired in the Yard itself, the extra time beyond 30 minutes spent on such repairs in a shift should also be excluded.

(c) The time spent in the Marshalling Yard for change of crew and/or fuelling, should be accounted for in the same manner as on locomotive duties referred to in Note (1)(b) above.

(d) Since shunting engines shunt both coaching and goods vehicles, the allocation of shunting engine hours to goods and coaching stock may be fixed for each Yard on a percentage basis after an examination of the work done. This percentage is to be rechecked at least once a year and also when any change occurs in the type of traffic passing through that Yard. Where daily records are kept of the working of shunting engines according to hours spent (i) inside the Marshalling Yard (ii) outside the Marshalling Yard and (iii) in shunting coaching vehicles, it will not be necessary to fix a percentage, as the actual hours spent in the Marshalling Yard in shunting goods vehicles will be available. Time taken by shunting engine in placing wagons in such lines is to be included in shunting hours when such lines form the part of the Marshalling Yard area.

Note: (ii) Time spent for locomotive duties recorded separately under item 5.5 will include under 5.3 also. Item 5.5 will include the time taken by shunting locomotive for locomotives duties and minor repairs upto 30 minutes per shift as per Note (i)(b) under item 5.

vi). Average detention per wagon:

(a) The detention time should have reference only to the detention within the Marshalling Yard territory as defined in para (iv) of General Instructions and the incoming and outgoing wagons from and to the local outlying sheds, sidings, etc. should be counted as many times as they enter the Yard. This will include detention to sick wagons in the Marshalling Yard although their detention is separately shown against item 6.6.

(b) The average detention is to be obtained by recording in the wagon exchange register or similar record, the hours of detention to each wagon, that is the interval between its arrival and departure. At the end of the month under different types must be totalled, and both detentions and number of wagons for each type must be multiplied by the factor of equivalence to four wheeler and then consolidated to work out the average detention per wagon, the following example will illustrate the method of calculation of the average detention per wagons.

Example: Suppose Yard A has despatched 100 four wheelers with a total detention of 400 hours, 20 bogie wagons (Equivalent to 40 four wheelers) with a total detention of 200 hours and 10 Box wagons (equivalent to twenty five four-wheelers) with a total detention of 150 hours. Average detention per wagon will be – $(400 \times 1 + 200 \times 2 + 150 \times 2.5) / (100 \times 1 + 20 \times 2 + 10 \times 2.5) = 7.1$ hours

The detention of wagons arriving in one month and despatched in the next will be shown in the month in which they are despatched, but the time must be reckoned from the date of arrival. Stations which maintain a wagon card index may obtain the figures therefore instead of from the wagon exchange register. The number and detention of Brakevans will be excluded for the purpose of this item.

(c) The ‘target’ detention hours will be fixed by the Railway Board from time to time having regard to the past performance of each Yard and also materialisation of different streams of traffic, Marshalling commitments and the facilities available. A pointer to the correct level of a target would be the best result achieved in the past one or two years, assuming that there has been no noticeable improvement or deterioration in the operating conditions and methods. The target should be somewhat better than the actual recorded performance so that it may call for better effort on the part of the staff concerned to achieve the margin of improvement remaining between the actual and the target.

Item 6.1 – All wagons – The term ‘all wagons’ includes through loaded, through empty, local loaded, local empty and departmental wagons, wagons on ‘through trains’ (as defined in item 1.01 & 1.02) sick and damage wagons will be excluded. Sick and damaged wagons will be included wherever the sick lines form part of the Marshalling Yard area.

In respect of the Yards which may as well be depots for holding empties, such empties should not be included for the purpose of this item. These Yards should, however, be denoted by a suitable footnote specifying therein the average daily holding of the depot.

The “exit” and “re-entrance” timings may be fixed on the basis of sample observations made once a year.

These fixed timings may be rechecked annually and also when any major change occurs in the working of the Marshalling Yard.

Item 6.2 - Through loaded wagons – The term “loaded wagons” mean loaded wagons which neither originate nor terminate at the station, but which are dealt within the Yard and are not on “by-passing” trains (as defined in item 1.01. and 1.02).

Item 6.3 – Through empty wagons – The terms “empty wagons” means empty wagons which neither originate nor terminate at the stations, but which are dealt in the Yard and are not on “by-passing” trains (as defined in items 1.01 and 1.02).

Item 6.4 - Outward Local - This item will include detention to local wagons despatched by trains from the Marshalling Yard i.e. from the time of their entry into the Marshalling Yard from the outlying sheds and sidings till their despatch by trains.

Item 6.5 – Inward Local - This will include the detention to local wagons from the time of their arrival in the Marshalling Yard till their placement into the local sidings.

Item 6.6 – Sick Wagons - Detention to sick wagons in the Marshalling Yard will be included under this item as also under “all wagons”. In case the sick lines form part of the Marshalling Yard the detention in the sick lines will also be included under this item. If the sick lines are outside the Yard, such detention will be excluded

* * *

PREFERENTIAL TRAFFIC ORDER

Movement of wagon load traffic, is regulated by what is known as the Schedule of Preferential Traffic, laid down by the Central Government (Railway Board) under Section 71 Of The Railways Act, 1989 and is designed to ensure that certain essential commodities and urgent movements are accorded necessary preference at a time when the available transport is not adequate to meet with all the demands.

Traffic is classified into 4 categories viz., A, B, C, and D. Commodities registered in the lower categories cannot have preference over those registered in the higher categories although the former may have been registered much earlier.

1. This Priority Schedule is decided by Traffic Transportation Directorate of Railway Board.
2. It lists the Sponsoring Authority and Accepting Authority for programmed traffic.

Section 71 of the Railways Act, 1989 the Central Government hereby directs that all Railway Administrations shall give special facilities for or preference to the transport of goods/class of goods at a station/siding as per priority/preference in the following order:

Priority ‘A’- Military traffic, when sponsored by MILRAIL and approved by Railway Board.

Priority ‘B’- a) Goods for emergency work for victims of natural calamities, like floods, drought, earthquake etc. b) Programmed traffic like food grains and levy sugar for public distribution system.

Priority ‘C’- All Programmed traffic, commodities when sponsored and accepted by authority.

Priority ‘D’- All traffic not included in priority ‘A’ to ‘C’.

GENERAL INSTRUCTIONS:

1. Traffic will have preference over other traffic within the same class of priority in the following order:
 - a) Traffic covered by contractual obligations and/or guaranteed under specific schemes like Wagon Investment Scheme, Freight Forwarder Scheme, Terminal Incentive –cum-Engine-On-Load scheme (TIELS) etc.
 - b) Traffic in rakes loaded from a Siding/Good shed having round the clock working.
 - c) Traffic in rakes a full rake handling siding having mechanized system of loading.
2. Traffic offered for distance of more than 800 kms will have preference over other traffic within the same classification and priority.
3. Traffic offered in block rakes, including clubbed indents constituting a block rake will be given preference over traffic in piecemeal irrespective of the class of priority and date of registration.
4. Traffic offered in single point block rakes will be given preference over two point/multi-points block rakes and mini rakes within the same class of priority.
5. Any traffic can be accorded preferential loading and movement under a higher priority under special orders issued by the Ministry of Railways, Railway Board/Zonal Railways.
6. Two days in a week shall be reserved and notified for allotment of rakes as per the date of registration irrespective of the class of priority.

Importance of Freight Operation:

The freight business is the major source of revenue for the Indian Railway. Main activity centers of freight operation include terminals, yards, control office and stations.

I. Broad Classification of Goods Trains:

1. End to End:

Trains, generally run from the train-originating Terminal to the final destination. This is an express stream of freight trains and does not require any stoppage en route, except for crew change.

Such trains will normally include container trains, air braked block rakes for single destination. These trains are planned to run like non-stop Rajdhani trains

and may have a fixed timetable and guaranteed transit time. This group may include trains of private freight operators.

Other through trains -Are also block rakes or may have two or more destinations on the same or, adjacent section. These may have conventional bogie stock

2. Work Trains, Shunting Trains, Pilots etc.:

These train movements are for short distances for clearance of damaged wagons made fit or for supply/removal of rakes to and from the sidings or important terminals served by a yard.

3. Departmental trains:

These include Material Trains, Track maintenance trains, Ballast trains, Relief Trains, Wiring Special, Crane Specials etc. are known as departmental trains.

II. Complexity of Freight operations:

Freight operation is generally more complex than passenger train operations for the following reasons:

- a. The changing pattern and fluctuations in demand for rakes/wagons due to changes in the level of production, changes in the pattern of distribution and changed consumption centers.
- b. The variety of commodities to be moved, with different characteristics & type of wagons required
- c. Preferential traffic schedules, rationalization schemes other public policy regulations
 - i) Seasonal variations in demand
 - ii) Time taken in loading/unloading-whether manual or mechanical
 - iii) Train examination Systems
 - End to End/Intensive Examination
 - Premium end to end
 - C.C. rake

This in turn results in Sick Wagon detachments & attachment of fit wagons for completing the rake composition.

4. Following is the series of operations for empty rakes being offered for loading:-

- Examination
- Supply/placement
- Loading
- Despatch

5. For inward loaded trains which after placement and release have to be back loaded at the same terminal or at other location, withdrawal from loading points may require an outward examination unless the rake is fit for round trip or for a prescribed distance.

Once the train is fit in all respects and commercial formalities have been complete a set of activities are initiated these include

- Preparation of train documents
- Train ordering,
- Arranging train crew & locomotive
- Monitoring train movement
- Arrival at the destination

This cyclic operation requires constant monitoring and co-ordination.

III. Ordering of Goods Train:

- i. Each freight Train is required to be ordered to run under a unique number /name or Train ID for monitoring its movement through intermediate divisions, zones etc as also to facilitate all processes at control offices, yards, C&W depots , station and Crew/Guard booking Lobby Power Controller/Traction Loco Controller.
- ii. The message from Divisional Control that a train is scheduled to leave from a Station' or Yard at a certain time, is known as the Train Notice. The message is, in turn further conveyed to all concerned. The availability of suitable (i) Load (ii) Locomotive (iii) Crew/Guard and (iv) Path has to be kept in view for ordering of goods trains.
- iii. Co-ordination between the Traffic Controller/and the Power Controller (the shed, if fresh power is required) ; the Yard/Station, C&W staff and the Crew/Guard booking lobby is thus required.
- iv. Regular conference with yards, terminals, and the adjoining Division is held by the Control and for exchange of information regarding forecast of trains in yards; completion of loading/unloading at sidings etc. and interchange with adjoining Divisions. This monitoring should be enforced through FOIS so that time of staff spent on phone is reduced and more productive work is done by better planning.
- v. Constant monitoring for expediting loading/unloading at major sidings/goods sheds is also done by Control and the Station Staff for ensuring the availability of load.

IV. Planning of Locomotives:

a) Power Plan:

The power plan indicates the daily average number of locos required and planned for freight services section wise for each division. This bare requirement of Locos for Traffic use is calculated on the basis of the traffic turn round and average number of trains run on each section. This represents the average number of locos needed on the Division.

b) Loco Outage and Loco Utilisation:

Loco Outage means the average number of locos available to traffic use in a day (24 hours). Since the Diesel and Electric Locos have long extended runs and may cover many divisions in a day, the position may be maintained graphically for the

entire duration (0 to 24 hours) the loco is on line on the Division. Different colour graphic representation on Bar Chart can represent the time spent by each Loco to serve as a good Management Information System e.g. (a) time taken by running train (b) time taken for Crew Changing (c) time for Fuelling (Diesel Locos) (d) time taken for Loco inspection (e) time for repairs on line (f) time for Light Engine running (g) time taken for Shunting (h) time spent at terminal/ destination (i) en-route detention.

Thus, the total hours for which the various Locos were available for Traffic use divided by 24 (number of hours in a day) would give the Loco outage.

$$\text{Loco outage} = \frac{\text{Engine Hours for traffic use}}{24}$$

Loco outage can be prepared service-wise/shed-wise/railway-wise, traction wise etc. The actual Loco outage should generally be around the target fixed for each Division.

However, it should be appreciated that while the target is based on average, the actual requirement of Locos may fluctuate due to bunching of trains, increase in traffic or due to bottlenecks on account of operational reasons, equipment failure or after effect of interruption to traffic.

c) Control of Operating Department on Loco running :

Electric and Diesel Locos are maintained by the respective loco sheds and locos once turned out of shed are available for utilisation for a number of days till prescribed Maintenance /inspection schedule is due in the shed or the locos require out of course repairs. Thus, while the operating staff has the operational control over utilisation of Loco as well as flexibility of using the Locos and send the locos to the shed well in time. Overdue running of locos should be avoided by suitably planning the train running. Similarly, all out efforts should be made to send the dead locos or locos requiring attention in the home shed. The hauling capacity of the locos and special restrictions as jointly agreed to by the officers of operations and loco department should also be adhered to.

While operating department has to optimise the work done by each the work done by each Loco i.e. moving maximum traffic with the minimum number of locos by adoption of operational strategies and improving the efficiency, the shed and loco organisation should provide optimum number of locos in good fettle, keeping in view the traffic needs as shortage of locos can lead to transport bottlenecks and inability to move the existing and potential traffic.

Along with the availability, reliability, safety and predictability have to be aimed. Loco failures, loco troubles en-route and ineffective locos should be kept to the bare minimum.

Balancing of locos is also required to be done i.e. Locos without loads may be sent to other Divisions where they are required.

Reduction in terminal detentions and increasing average speed of goods trains would substantially improve engine utilisation.

d) Availability of Engine Crew and Guard:

Running staff for Goods operations are generally booked on the principle of first in and first out; Balancing of Crews/Guards by sending staff spare is also required to be done in case the running of trains is not even in both directions on a section.

e) Availability of path:

Theoretically, on a double line section, a Goods Train can always be run when load, power and crew are available and the next block section is clear.

On single line sections dispatching a train out of path, will be counterproductive, due to Mail/Express Blocks, Peak timings of Suburban or Commuter traffic. Readiness of the interchange point of the terminal to accept the trains are to be kept in view before pushing a goods train ahead. It is better to have directional flow if possible.

Master Chart:

Master Charts incorporating all passenger carrying trains and realistic goods train paths are prepared in consultation with Operating Officers, Controllers, Yard Staff, Power Controller, Station Masters of important stations etc. in order to:

- i. Find out line capacity of the section.
- ii. To highlight the set of suitable paths for guidance of Control, which can be used for, goods train ordering also.
- iii. To prepare tentative goods train time table for selected express stream of trains.

V. Role of Various Agencies in Freight Operation:

Large number of agencies play important role in freight operation. Marshalling Yards, Train Examination, loco motives and lobbies have been discussed elsewhere in this manual. Role of few agencies is discussed below the special reference to freight operations.

Control Office:

The main function of control office is planning, execution and review with all the three activities going on simultaneously.

a. Planning:

Planning is aimed at forecasting and optimising the following :

1. Interchange
2. Trains to be run section wise

3. Supply of rake/for bulk loading
4. Release of inward loaded rake placed for unloading.

Information regarding the following items is generally required for these purposes

- a) Analysis of divisional wagon holding
- b) Power availability
- c) Availability of loads
- d) Disposal of empty rakes
- e) Demands for loading

The plan is made by control in the yearly hours of morning and reviewed by Operating Officers. Changes in the plan, as deemed necessary are made at various stages on the basis of updated information received from the activity centers, adjacent divisions and instructions received from the Head Quarters

b. Execution:

The goods operation plan is executed on the basis of actual materialisation of the forecast with suitable adjustment made for short falls/excesses Yards loco sheds stations terminals lobbies & TXR depots are actively involved in execution of the plan.

c) Review:

The trend of the day's position is reviewed by the CHC and Officers in the afternoon. Detailed review of the previous day's performance is carried out early in the morning by the operating officers with the following objectives

1. Analysing short falls of previous days to take remedial measures and pin point weak spots
2. Provide data for planning for the current day

The main features of performances which can be reviewed include:

- interchange failures
- divisional wagon balance (wagons on divisions)
- train running
- disposition of empties
- loading at important terminals – and in the case of short falls reason for the same
- reviews of unusual occurrence
- examination of control chart
- particulars of stable loads
- yard performance
- unloading on divisions
- registration & loading
- power position, utilisation of locos and terminal detentions
- sick line working
- spl type of stock
- clearance of piecemeal wagons(sick or otherwise) from road side stations

VI. HEADQUARTERS ROLL IN FRIEGHT OPERATIONS

The divisions freight operations generally required close co-ordination and assistance from other divisions & railways. While direct contact these also maintained by the control & operating officers of various divisions the zonal head quarters play a pivotal role in this respect. Some of the functions performed by the head quarters are summarized below

VII. MANAGEMENT INFORMATION SYSTEM

1. Important information concerning the position freight operations on various divisions of railways in obtained through line and stock report daily telephonically and or through FOIS or tele-printer or FAX to the head quarters(central control) from divisional control, now more & more zones & Railway Board are sitting to FOIS generated reports.

This includes, loading and stock position particulars of old out standing and fresh registrations of indents , categories wise position of unloading , transshipment, yard balance important yards and wagons on divisions , train running on each section, average speed, interchange position, loco motive position and loco motive utilization etc.

The position is reviewed and analyzed by the COM/CFTM/DY.COM GOODS/STM GOODS/CMPE(R&L) & CELE. The important position pertain to various department is conveys to the department to the concerned as well as the G.M. the head quarters office also obtained the statement at the end of each month or whenever required and the performance is compared with (i) the targets, (ii) the figures of the previous months (iii) the figures of the corresponding months of the previous years and (iv) the best ever record etc.

In addition the statistical branch also provides the data to the general manager and the department concerned with operation for detains analysis and review.

2. Head quarters and important part in planning and coordination fright operations after detailed conference with the operation officers and in terms of Railway Board current operating directives head quarters issue direction and instruction the regarding the following items
 - a) Interchange tractions(categories wise)
 - b) Loading & unloading
 - c) Traffics in sight from other Railway/division this information is now available on FOIS terminal where a pipe line can be seen from end to end and expected arrival of trains at destination is also estimated by FOIS system.
 - d) Convey priority for the day & set quantified objectives to be achieved
 - e) Reviewing the work done at the important activity centre by yard terminals etc

- f) Train in traffic regulation in case of accident etc
- g) Certain items of goods operations are directly control by Head Quarters e.g. Coordination & directions regarding rake loading of programmed and committed traffic movement of special type of stock movement of O.D.C.s out of turn allotments and allotment despite restrictions etc.

VIII. RLY BOARD CONTROL ON FRIGHT OPERATIONS

The Railway Board provides unity of control & direction of the freight operations. It also has the important role of supervisions and coordination which is very much essential for a big network like Indian Railways. the Railway Boards Control office also remains in contact with the head quarters (central control) of the zonal head quarters and watches loading and movement of important extremes of traffics , like coal, raw material for steel plant (iron ore), food grains, cement, fertilizers, POL, sugar export ores, contained traffic etc it also watches loading interchange power position, goods train running important section etc to ensure that each Railway fulfills its obligation and optimises the use of various assets , the items watched are or lays the same as those watched by the zonal h.q. in respect of the divisions, but the prospective is wider. Railway Board placed and important coordinating role in various Railway and others central government department and vital sectors of economy connected with Railway, policy formulation and planning which have important bearing on fright operation is also on the measure function of the Railway Board.

IX. Role of some other departments:

The commercial department plays an important role in canvassing for traffic, improving marketing, customer relations, in general booking of traffic, expediting loading / unloading of wagons, quick disposal of unconnected wagons and transshipment of wagons detached out of course for hot axle etc. The various the departments like Mechanical, Electrical, Civil Engineering and S&T provide and maintain various assets and infrastructure (Track, Wagons, Engines, S&T network etc.). These departments also ensure sufficient availability, reliability, predictability, safety and reduction in equipment failures, promptness in restoration in case of breakdowns and accidents should also be ensured. They also endeavor for the achievements in technology up-gradation along with the operating strategies and determine the level of excellence in railway operations to a great extent in nutshell, all the functionaries have to work a dedicated team.

X. Some indices of freight operation and efficiency:

The important operating statistics, most of which are indices of operating efficiency, have been discussed in detail later in this manual (Operating

Statistics). Some indices of freight operations and efficiency are highlighted below.

i. Wagon holding:

For a given amount of originating loading and receipts of loaded wagons from other railways and making an allowance for percentage of staff out of commission for repairs etc., there is an optimum number of wagons that a railway and separately its constituent divisions should hold to maintain the fluidity of transport system. More wagons than the optimum number might lead to increase in the repairs and maintenance percentage heavier detentions to wagons and trains and transport bottle necks that is more congestion in siding yards and section without a proportionate increase in the tons lifted, or in the efficiency of operations. Similarly excessive shortage of wagons may lead to loss of traffic. Proper estimation and projection of requirement, proper planning and working at various stages of freight operation is necessary for keeping wagon holding low “ ineffective stock” percentage should also be kept minimum.

ii. Interchange balance :

Maintenance of the interchanged target is an indication of railways overall operating performance and its effort to meet inter railway obligations hence interchanged balanced should be very high, even when maximum trains are inter changed. However, attempts should be made to see that on busy sections, inter change is not only confined to few hours of the day but uniformly distributed.

iii. Load of trains:

A train is a unit of transport. Depending upon the load a suitable loco is provided for its haulage in order to get the optimum use of motive power and to increase the capacity utilization and throughput, each locomotive is given a load approximately to the maximum hauling capacity, unless operating necessity requires utilization of a loco for lesser load. The stations should also ensure that wagons are loaded to the carrying capacity or the minimum weight prescribed for some commodities

iv. Loading and unloading:

To optimize the loading is one of the most important items in the freight operation

because it is through loading that Railway earns the maximum revenue. Similarly, unloading is necessary so that wagon becomes available for the next loading. Reducing the time taken for loading / unloading by technology up gradation and other strategies in coordination with the customers has to be endeavourer.

v. Empty Running:

Ideally it is waste of transport capacity to run a wagon empty or with light load, but much of empty running is inescapable on account of the unbalanced nature and quantity of outward and inward traffic at terminals and necessity of supplying empty wagons. Certain special type of wagons for POL, steel Coal, Natural Gas, Ammonia, LPG etc. have to be generally run empty to the loading points. Operating skill lies in avoiding or reducing the extent of empty haulage and cross movements of similar type of empty stock.

vi. Dispatch in block rakes:

Dispatching of wagons in small numbers always means transit delay while a block load can go direct to the farthest destination skipping many yards, thereby eliminating detention that the wagons might have suffered in the intermediate yards. Piecemeal wagons passing through a number of marshalling yards, where they have to be combined with other wagons to form train loads, cause huge amount of work for the staff and the result in loss of efficiency, avoidable delay, anxiety and uncertainty regarding their arrival at destination. Unit train movement, i.e. a train load consigned by single consignee to single consignor, is ideal. Consignees can also be motivated to club indents to get train load and block rakes.

Also two points loading on same engine run can improve wagon usage. Close circuit rake movement can also be resorted to between selected pair of stations or rakes. Maintaining the purity of freight rakes has also to be ensured.

vii. Long distance trains:

It is an age – old principle of operation that full train loads should be formed at the earliest point for the longest possible distance. Long distance trains should have least stoppages like long distance passenger trains. Trains can also be run as “crack trains” or “Link trains”.

A crack train / link train is a train when the same crew (and engine if possible) instead of ‘signing off’ at the intermediate crew changing point works a train to farther junction. Thus, a train running from Ujjain to Godhra or vice versa without crew / Guard change at Ratlam can be run as X ‘Crack’. The crew can also be utilized on ‘crack’ basis when the same crew perform a round trip without ‘signing off’ at the outstation and is promptly provided a load so that crew returns to its head quarters within normal duty hours.

viii. Wagon Turn Round: captive

The interval between two successive loadings calculated from the time a wagon is placed for loading till the time it again becomes available for loading is the actual turn round. As the calculations for individual wagons

in the manner stated above are not practicable, the following statistical formula is generally used.

$$\text{Wagon Turn Round (T)} = \frac{S}{L + R}$$

Where 'S' stand for the effective daily wagon holding or midnight wagon balance of a day (excluding sick, POH wagons in or waiting for shops, like departmental wagons, wagons lent for departmental use, and the wagons used for coaching traffic). 'L' stands for the total number of wagons loaded on the Division / Railways plus the wagons loaded at Transshipment Point, 'R' stands for the total number of loaded wagons received from other Railway / Divisions. Thus, for example, if a Division load 350 Wagons on BG (including 50 BG wagons loaded through transshipment of MG wagons), 150 inward loaded wagons are received from other Divisions and its effective wagon holding at the end of the day (midnight) is 2250 wagons, the Divisional Wagon Turn Round will be 4.5 days.

$$\text{i.e. } \frac{2250}{350+150} = \frac{2250}{500} = 4.5 \text{ days WTR (Wagon Turn Round)}$$

ix. Detention to Trains and Wagons:

a. Detention to trains:

A check on the detention to trains (1) outside signals or at stations adjacent to Goods terminals, (2) in shunting operations at road side stations and (3) enroute detentions for various reasons should be exercised regularly.

b. Detention to wagons:

Close watch should be kept on the areas, e.g. Marshalling yards, goods terminals, stabling points etc., where wagons are likely to suffer avoidable detention during various phases. Although this is watched through periodical data, special attention should be paid to pockets, where piecemeal wagons suffer prolonged detention and often remain out of sight.

x. Engine Utilisation:

Engines being costly resources their utilization have to be carefully monitored. Some of the measures for improving engine utilization are as under:

- (a) Running of the Goods Trains on proper path: For this, the Master Charts have to be properly framed and consolidated.
- (b) Proper co-ordination between Control and Line Staff.

- (c) Reduction in Terminal detention of Locos by proper monitoring co-ordination and working of Yard Staff, C&W Staff etc.
- (d) Judicious ordering of Trains and Right time starts of Goods Trains.
- (e) Proper controlling, judicious crossings and preferences.
- (f) Loop Lines on critical block sections should not be generally blocked.
- (g) Stabling and picking up of load should be judicious and properly planned.
- (h) Loco pilot should run at maximum permissible speed subject to restrictions.
- (i) Light Engines can be coupled or attached to trains in order to save path and energy.
- (j) Light Engines (Single or Couple) should run at maximum permissible speed, for which they are fit, subject to speed restrictions
- (k) Signals must be taken off promptly at Stations. Distant/Warner Signals must always be taken off promptly.
- (l) Tangible authority to proceed should be handed over at the appointed place instead of getting the train slowed down in front of the Station for handing over the Authority from the Platform.
- (m) Trains should be run through Main Line (as far as possible) since looping results in extra time on run.
- (n) Locomotives should be in good working order and staff should be well versed in Loco operations and trouble shooting.
- (o) Hauling capacity of the Locomotives should be properly utilised.
- (p) Engineering speed restrictions should be regularly reviewed and reduced by maximising the output of the Engineering staff and machines. Due care and foresight in offering blocks for track maintenance should be exercised.
- (q) Regular foot plating by officers and staff involved in operations, motivates train crew and alerts the line staff.
- (r) Effective control over traffic yards to reduce other engine hours, detention to locos at important loading/unloading points and industrial sidings.
- (s) The factors adversely affecting the Locomotive utilisation, speed of goods train, terminal detention etc. should be got analysed by suitable multi departmental teams and remedial measures taken.
- (t) Incentive schemes for motivation of staff connected with Goods Operation, so as to improve Engine utilisation Special watch on Loco pilots loosing time on run and not running on maximum permissible speed.

xi) Average speed of goods trains:

If we want to determine the average speed of various goods trains running over a section during a particular period. There are two methods of

calculating the speed of goods trains. For day to day review the speed of goods train is calculated from the control charts. It is generally calculated section wise and for up and down directions separately. It may be calculated for each train, the total time taken by all the trains in the section is added up, and the distance of the section multiplied by the number of trains divided by the total time taken will give the average speed for all trains on the section.

Statistical Method:-

$$\text{Average speed of goods trains} = \frac{\text{Total Train Kilometers}}{\text{Total Train Engine hours}}$$

Following factors affect the speed of goods trains:

- i. Bad planning
- ii. Improper ordering of trains
- iii. Late start from yards / stations
- iv. Improper crossing and precedence of trains by SCOR

Measures for improving average speed of good trains could broadly be classified into the following two categories:-

- a) Long term measures.
- b) Organisational Measures

a) Long term measures for increasing speeds as follows-

1. Improvements in Locomotives.
2. Improvements in Wagons
3. Improvements in Track
4. Improvements in Signalling and interlocking
5. Increase in section capacity

b) Organisational measures to improve average speed of goods trains-

1. Time table improvements.
2. Review of running times
3. Bunching of trains with similar speeds.
4. Reducing dissimilarity in speeds to minimum
5. Running of Link, Crack and Jet trains.
6. Improving staff efficiency-such as controllers, station staff, Loco Pilots and guards.
7. Proper working of Yards and terminals
8. Proper planning of remodeling works.
9. Simplification of rules for trains working.
10. Monitoring of goods trains by officers and inspectors.

Average speed of goods train as an index of operating efficiency:

Average speed of goods trains have a marked influence on the turn round of engine and crews and also on the utilization of section capacities. Lower average speeds of goods trains generally result in congestions of sections which are saturated which further reduces the speeds. Thus, a very harmful cycle is created leading to lower availability of powers and crews, lesser clearance from yards and further congestions. Many times the only way to break the harmful cycle is to impose restrictions, regulate traffic and thus cause loss to railway revenues.

XI. Staff Supervisions:

Excellence in freight operations requires that the staff offer their willing co-operation. To achieve this proper training for constantly developing the knowledge, skills and commitment is essential.

XII. Targets and Statistics:

One of the important means to utilise fully and efficiently the existing carrying capacity of a railway is to set measurable and specific targets for the various performances after taking into consideration all the local conditions. Once the targets are laid down, all possible efforts must be made to attain them.

The targets should be set sufficiently high and reviewed constantly with a view to improving the performance further. Details regarding Statistics pertaining to Railway Operations are given in chapter on Operating Statistics where targets are not attained within a reasonable period, the causes must be traced and effective remedial action taken, if necessary, revised targets should be laid down.

ROLL ON - ROLL OFF:

The Ro - Ro scheme was first introduced in Konkan Railway in 1999. This enables carrying the loaded trucks directly on the railway wagons, thus reducing the expenditure on diesel, wear and tear of tyres and maintenance of trucks for truck operators.

This is providing faster turn round and higher profits to the transporters. This service ensures timely and safe delivery free of any risk factor and without multiple handling of consignments.

This is a regular service between Mangalore to Bombay on Western Ghats cutting down nearly 10 hours transit time. On finding the success, arrangements are made to run such trains between Bombay and Howrah on nominated days.

Advantages :

- i) Less transit time

- ii) Reduction in multiple handling.
- iii) door to Door delivery
- iv) Wear and tear of Road vehicles reduced.
- v) Less Pollution.
- vi) Savings in Patrol / Diesel Costs.
- vii) More revenue to Railways.
- viii) Improved wagon utilisation.

Development of rail-side warehouses:

With a view to provide seamless door to door transportation, IR and Central Warehousing Corporation (CWC) initiated a pilot project at Whitefield Satellite Goods Terminal at Bangalore.

Under this project, CWC built a state of the art go down with a capacity of 15000 tonnes, along the railway track in a goods yard. It also provides ancillary facilities in the integrated goods shed complex.

A road has also been provided on the other side of the track for unloading of consignment from the wagon directly into the trucks.

The unloading of goods is the responsibility of the CWC who are also providing facilities for delivery of goods at the doorstep of the consignees. The value addition in freight services has resulted in additional traffic to Railways.

Encouraged by the customers' response to the facilities at the Whitefield terminal, IR has entered into a MOU with CWC as its strategic partner for the development of similar rail-side warehouse complexes at many other locations in the country. The facility has already become functional at some locations.

The above concept is also being launched through PPP (Public Private Partnership) model. Under the scheme, private entrepreneurs will be encouraged to develop rail-side warehousing complex / logistic park / ICDs (Inland Container Depot)/ Agri-chains with modern loading and unloading and customer facilities on Railway land on a revenue sharing basis.

This will facilitate a single window service in providing value added service to the customer in the form of distribution, handling warehousing and road-bridging. It will also aggregate piece-meal (wagon-load) traffic to train load traffic and help IR in improving its market share.

TRANSPORT PRODUCTS: These are various transportation options differentiated primarily by the volume of traffic and include following services:-

(a) Block Rake:-It is a train carrying wagons for a single destination. Composition of Block rakes composed of different types of wagons are notified by Railway board will be booked at Train Load rate.

(b) Mini Rake:-This is a short rake with a composition shorter than the specified number of wagons required for a block rake. Mini rake can be loaded at TLR under the following conditions:

1. It will have a minimum composition of 20 wagons.
2. It can be booked to or from any notified full rake or half rake terminal.
3. Free time for loading/unloading will be 5 hours.
4. It can be loaded only up to 400 kms.
5. Permitted only in covered wagons

(c) Two Point Rake:-It is a train carrying wagons for two terminals. Two point Rake can be loaded at Train Load Rate under the following conditions:-

- (a) Originating terminal should be notified full or half rake terminal.
- (ii) Destination terminal should not be more than 200 kms apart in busy season 400 kms apart in lean season.
- (iii) Minimum 10 wagons should be loaded for each destination.

(d) Multi Point Rake:- This is a train carrying wagons for more than two destinations. Multi point rake can be booked at TLR under the following conditions:

- (i) Originating terminal and each destination terminal should be notified full rake or half Terminal.
- (ii) No two destination terminals can be more than 200 kms apart.
- (iii) Minimum 10 wagons should be loaded for each destination.

(e) Two and Multi Point Rake:- (Other than covered wagons) Such type of rake can be loaded at LR under the following conditions:

- (i) Both the station should be notified full rake/half rake terminals.
- (ii) Minimum 10 wagons should be loaded for each station.

(f) Rakes from Two Originating Terminals (covered wagons):- Rakes from two originating terminals Covered wagons can be loaded at TLR under the following conditions:

- (i) Two point combinations from which loading is permitted, will be notified by the Zonal Railway.
- (ii) Each notified terminal should be a notified full/half rake terminals.

- (iii) Destination terminal should be notified full/half rake terminals.
- (iv) Two loading terminals must be less than 200 kms. Apart.
- (v) Minimum 10 wagons should be loaded from each terminal.

(g) Rakes from two Originating Terminals (Other than covered wagons):

Booking at TLR will be allowed under the following conditions:-

- (i) Each terminal should be notified full/half rake terminal.
- (ii) Destination terminal should also be open for full/half rake.
- (iii) Minimum 10 wagons should be loaded from each terminal.
- (iv) Indent should be for complete Block rake.

(h) Multi Commodity Block Rake:- Block Rake of multi commodity will be booked according to following conditions:-

1. Both the originating and destination should be notified full rake/half rake points.
2. The total number of wagons indented and loaded should be according to the number of Block Rake.
3. Each wagon will contain one commodity. But different wagons can contain different commodities.
4. The customer will have to pay season surcharge or congestion surcharge also.

FREIGHT INCENTIVE SCHEMES:-

Following schemes are included in this category:-

- 1) Incentive scheme for incremental scheme.
- 2) Long term Special Incentive Scheme.
- 3) Incentive Scheme for Traditional Empty Flow Direction.
- 4) Incentive scheme for Freight forwarders
- 5) Incentive scheme for Freight forwarders in Traditional Empty Flow Directions.
- 6) Incentive scheme for Two-leg Traffic
- 7) Incentive scheme for Loading Bagged Consignment in BOXN
- 8) Incentive scheme for lump sum special Rates and SLA
- 9) Incentive scheme for Green field projects
- 10) Incentive scheme for Traffic on MG and NG system
- 11) Incentive scheme for Private Investment in Wagons
- 12) Incentive scheme for Underutilized Routes

Rationalization Order

Under section 71 of Indian Railways Act 1989, Railway Board has been empowered to charge freight over route, which may not be the shortest between alighting point and destination. The Rationalization order indicating the route through which the freight is to be charged is issued by traffic transportation branch, Railway Board.

Revised rule 125 of IRCA Goods Tariff Part I (Volume-I) vide Board's letter No. ECR 1125/94/3 dated 6/10/94 through which it has been that directed unless there is specific instruction in writing from the center or his authorized agent to the contrary, goods will be despatched by the route optionally feasible and freight charges will be levied by the shortest route. However, charging of freight by shortest route is subject to any instructions issued under rationalities order issued from time to time.

Wagon Pool:

Wagon pool is an arrangement by which all wagons, except exempted by DWI, shall be made available for loading to any station. Individual railways own wagons in IR and thus wagon pool requires pooling of wagons of all the Zonal Railways. The utilization of wagons involves inter-railway movement and hence utilization of wagon pool is controlled and supervised by the DWI.

POOLED AND NON-POOLED WAGONS:

As various railway companies had evolved their own wagon designs, a wagon of one railway system might not be considered safe or up to the standard by another railway company. To get over this difficulty, the IRCA evolved a system of examination of wagons at inter-change points by its own train examination staff, which system came to be known as "**neutral train examination**". Such wagons as conformed to a standard design and were considered fit to move freely between one railway and another were taken into the common "**wagon pool**". Special types of wagon meant to carry special cargo on a particular railway or wagons not conforming to the standard design were called "**non pooled**" and when loaded to an adjacent railway, were required to be returned immediately to the owning railway by the shortest route. Gradually the vast majority of wagons came to be "**pooled**". There is another category of wagons which might be of low capacity or of very old construction and maintenance. There was yet another category of wagons which might be of low capacity or of very old construction and maintenance not up to accepted standard which could only be used for specific

internal movement within each railway and were known as "**local traffic wagons**". Such wagons were not acceptable in interchange.

The exchange of wagons at terminal junctions between one railway and another enables free movement of goods through to destination irrespective of the jurisdiction on which the originating and terminating stations might lie. With the nationalisation of railways, the coordinating role of the IRCA has gradually been taken over by the Railway Board.

The working of the wagon pool may be compared to a bank advancing capital to a business. Each Railway contributes its own wagons to the pool which might be considered as equivalent to depositors keeping their money in bank accounts. In turn, each railway is authorised to draw out of the pool up to a certain number of wagons, depending upon its loading targets and the '**turn round time**'; somewhat like the limit up to which a bank may allow an advance to a business firm. For this reason, as with the business firm's advance from the bank, the receipt of additional wagons from other railways through interchange, which adds to the wagon balance of the railways, is considered an additional loan from the pool and is accounted as a debit transaction, while the handing over or making over of wagons to another railway, which reduces the wagon balance, is considered as return of loan to the pool and is a credit transaction. Wagon holding beyond the target may be considered as so much not borrowing of wagons from the pool, and the objective must, therefore, be to achieve the targeted loading with as little borrowing as possible.

The Railway Board, by watching the wagon balance and the movement of broad streams of traffic through important interchange points can readily feel the pulse of operation and regulate it as necessary. That is why the fulfillment of interchange quotas between Railways is considered one of the most important operating performance indices. In a similar manner, interchange targets and wagon balance targets are set and monitored for each division.

Pooled target is set for the distribution of wagon resources among the railways on the basis of the level of loading, WTR and the requirement. Relative requirement and urgency of existing traffic also considered for distribution of wagon resources. Debit target is fixed if requirement of wagons is more and Credit target is fixed if excess wagons are owned called as Pooled Wagon Target.

WAGON CENSUS ON BROAD GAUGE:

There are nearly 2,25,000 wagons exist in the Indian Railways spread over 16 zones duly allotted to various divisions according to their requirements. It becomes very difficult to ascertain the performance of them if we don't monitor their movements. Monitoring the movement of wagons is done by stations and control

offices and through the FOIS net work. These exercises are done on a daily basis and periodically also. Due to adjustments in loading in interchanges of trains, powers, empties and loads the link in constantly maintaining the physical availability of rolling stock becomes inaccurate. Hence an exercise called WAGON CENSUS is conducted every year for coaching and goods stock. It is separately conducted for coaching and goods, separately for BG and MG.

Broad Gauge Census:

1. BG census generally conducted on 31st October at 12 Hrs.
2. The division is divided into Blocks, Circles, and Districts.
3. A block may be a roadside station or a part of a large yard, a siding or a running train
4. In each block a maximum of 50 vehicles to be enumerated. In any case it should not exceed 99 vehicles.
5. A circle is a collection of Blocks.
6. A District is a collection of circles.
7. Numerical codes have been given for every division for identification.

A census meeting will be held prior to the official census day. CFTM holds the census meeting for goods wagon which will be attended by the divisional officers and inspectors. Census in charge is nominated and their names and instructions are published. Generally CTNCs, SMs, GDs, CYMs are nominated for looking after the proper enumeration of wagons.

Tally sheets are supplied to the required extent. Three copies of tally sheets have to be carefully filled in, the third copy "TRIPLICATE" should be retained in the District office. Duplicate and Triplicate copies should be copies from the original and compared for correctness of the entries by 'Checked with the original and found correct. Circle summary and district summaries are to be prepared by the district officers in duplicate marking original and duplicate on the top of each front page. A final summary has to be prepared in a proforma summarising the information contained in the district summaries. It is essential that all duplicate copies are carefully checked with originals in all cases before submission to the office.

The following particulars should be enumerated while conducting Census on the nominated day.

1. Running trains of all descriptions
2. Wagons standing or stabled on any line including sidings or yards.
3. Wagons on ballast and on construction, work trains
4. Wagons in shops and in sick lines.

5. Vehicles employed temporarily for housing staff
6. In case a damaged loaded vehicle is being loaded upon another vehicle both vehicle numbers are to be enumerated.
7. Vehicle already condemned has to be entered in a separate tally sheet.
8. Port trust railway wagons should be recorded separately.
9. Wagons kept off the track on account of accident are accounted for
10. The outlying sidings, sheds, private siding, colliery, port areas etc, are specially checked for any vehicle.

All the staff involved in the census duties are to be briefed about their responsibilities. A mock census has to be conducted on the nominated day prior to the official census. The lacunae in the mock drill are to be identified and corrected. During the enumeration each vehicle should be stenciled by a census symbol of equilateral of six inches each side in white colour at extreme left of the vehicles on both sides. A representative of mechanical branch also involved to identify the mechanical code of the wagons. Each railway should update the list of the condemned vehicles after the last census was held, with necessary details, well before the census. The census timings are to be followed strictly. Shunting movements in the yard has to be stopped before the commencement of census.

Wagon codes

Vehicle codes for goods stock:- The following code letters must be used to designate the various designations of goods stock in use:

Definition of stock	Transportation Codes
OPENS	
1. Four wheeled, low sided truck	KL
2. Bogie low sided truck	BKL
3. Four wheeled, low sided truck with falling ends	KF
4. Bogie low sided with falling ends	BKF
5. Four wheeled high sided truck	KC
6. Bogie high sided truck	BKC
7. Four wheeled high sided truck	KCA
8. Bogie high sided truck	BKCA
9. Four wheeled, platform truck	KU
10.– do – high sided special for coal	KCC
11.– do – open truck, Military	KM
12.– do – weight bridge testing	KV
13.– do – – do – ballast wagons	KW
14. Bogie – do – hopper wagons	KH
15. Bogie truck hopper	BKH

- | | |
|---|-----|
| 16. Four wheeled, open truck, sugarcane | KK |
| 17. Four wheeled, open truck for fire wood and timber traffic | KKF |

COVEREDS

- | | |
|---|-------|
| 18. Bogie open wagon | BOX |
| 19. Bogie hopper wagon | BOB |
| 20. Four wheeled, covered wagon | C |
| 21. – do – for jute | CJ |
| 22. Bogie covered wagon | BC |
| 23. Four wheeled wagon for live stock | CA |
| 24. Bogie wagon for live stock | BCA |
| 25. – do – explosive van | X |
| 26. – do – goods brake van | V |
| 27. Brake cum rest van 4 wheeler | VB |
| 28. Four wheeled heavy brake van (ghat) goods brake van | VH |
| 29. Bogie covered wagon | BCXT |
| 30. 27 tonnes covered four wheeler wagon | CRT |
| 31. Six wheeled creosote oil tank | TC |
| 32. Four wheeled kerosene oil tank | TK |
| 33. Bogie kerosene oil tank | BTK |
| 34. Four wheeled liquid fuel oil tank i.e. heavy oil | TL |
| 35. – do – Molasses tank | TM |
| 36. – do – Petrol oil tank | TP |
| 37. Bogie petrol tank | BTP |
| 38. Four wheeled vegetable oil tanks | TV |
| 39. Bogie vegetable oil tank | BTV |
| 40. Four wheeled lubricating oil tank | TZ |
| 41. – do – Turpentine oil tank | TT |
| 42. – do – Water tank | TW |
| 43. Bogie water tank | BTW |
| 44. Four wheeled water tank converted from engine | TW(L) |
| 45. Tank acid 4 wheeler | TA |

FLATS

- | | |
|--|-------|
| 46. Four wheeled dummy or relief truck | FD |
| 47. Bogie dummy or relief truck | BFD |
| 48. Bogie well wagon | BFU |
| 49. – do – well wagon (for military use) | MBFU |
| 50. Four wheeled rail and timber truck | FR |
| 51. Ramp wagon 4 wheeler (Military use) | MFR |
| 52. Bogie rail and timber truck | BFR |
| 53. Traveling cranes | Crane |
-

Note:- (i) The code initials of each description of goods stock are marked on the right hand top corner of the vehicle. The staff must refer to these initials in case of doubt.

(ii) If vacuum fitted goods stock is required this must be specially mentioned in the stock order the exception of some departmental vehicles, all goods stock is either fitted with train pipe or vacuum brake.

CREW LINKS, LOCO LINKS AND POWER PLAN

PROCEDURE FOR CALCULATING CREW REQUIREMENT OF A DIVISION

1. Running staff (Loco Pilots) review should be carried out every six months; i.e 1st April and 1st October by the Power Officers i.e. Sr.DME/Sr.DEE of the division. After obtaining associate finance vetting and DRM's approval these proposals are sent to HQRs for further scrutiny by the JA Grade Officers Evaluation Committee.
2. **Review of Loco Pilot (Goods):** For calculating the requirement of Loco Pilot (Goods) the total number of working hours logged by Loco Pilot (Goods) is calculated and then the following formula is applied.

2 a) FORMULA FOR GOODS CREW REVIEW BASED ON CREW HOURS

SN	Description	Calculation	Legend
1	Average fortnightly working hours of last six months (working hours on running goods trains)	--	=A
2	Fortnightly duty hours per goods driver =104	-	=B
3	Bare requirement of goods	A/B	=C
4	Additional requirement for traffic fluctuation at 10%	0.10 X C	=D
5	Total bare requirement	C + D	=E
6	Leave reserve @ 30%	0.3 X E	=F
7	Bare requirement + LR	E + F	=G
8	Trainee reserve @ as revised divisionwise	As per rev. X G	=H
9	Total crew requirement	G + H	=I

2 b) TRAINEE RESERVE FOR VARIOUS CATEGORIES OF RUNNING STAFF

SN	Division	Trainee reserve %age
1	Mumbai	6 (Six)
2	Bhusawal	5 (Five)
3	Nagpur	5 (Five)
4	Pune	3 (Three)
5	Solapur	3 (Three)

3. Review of Loco Pilot (Mail/Express/Passenger):

- a) Mail/Express/Passenger Loco Pilot requirement is worked out on the basis of crew links.
- b) Before preparation of crew links, these links should be vetted by HOER section of the Personnel Branch.
- c) 30% Leave Reserve and Trainee Reserve as per table shown in 2 (b) is also added to the requirement.

4. Review of Shunters:

- a) Requirement of shunter is calculated on the basis of one for every 8 hours shift.
- b) Rest giver is calculated at one for every 6 shunters.
- c) 16% Leave reserve and Trainee reserve as per table shown in 2 (b) is also added to the requirement .

5. Review of ALPs:

- a) Requirement of ALPs is the same as that of Loco Pilots as detailed above.
- b) No ALPs are provided for motormen.
- c) 30% Leave reserve and Trainee reserve as per table shown in 2(B) is also added to the requirement.

6. Review of Loco Inspectors:

- a) One Loco Inspector for every 25 drivers/50 shunters is included in the crew review.
- b) Similarly two Loco Inspectors for every 50 locomotives holding in the diesel sheds are also considered.
- c) Separate requirement of Loco Inspectors is worked out for Fuelling installations and for working as safety counselors with the safety department.
- d) No Rest-giver or Trainee reserve is given for this category.
- e) 16% Leave reserve is included in the requirement.

7. After the evaluation of the proposals by the JA Grade committee as detailed above, these proposals after necessary corrections are sent for the approval of COM, CPO, FA&CAO & then put up to GM for sanction.

POINTS TO BE KEPT IN VIEW WHILE PREPARING DRIVER'S LINKS

1. Driver/Crew links are prepared by the divisional Power Officers and got verified by the HOER section of Personnel Branch. Objective of crew links is to ensure optimum utilisation of crews.
2. Train timings to be checked from the latest time-table.
3. Links to be prepared before promulgation of new time table.
4. Max. duty hours in anyone trip should not exceed 10 hours.
5. Avg. duty hours in a fortnight should not exceed 104 hours.
6. Minimum number of rests in a month should be 5 of 22 hrs. or 4 of 30 hours including night in bed from 22 hrs. to 6 hrs. from sign off to sign on.
7. Efforts should be made to include all the sections in the link to avoid giving road learning again and again.
8. Minimum out of station rest in case less than 8 hrs duty in the previous trip should be 6 hrs. from sign off to sign on. In case duty is 8 hrs or more, then 8 hrs rest to be given. In case of short trips of less than or equal to 5 hrs. then duty performed plus 1hr rest will be sufficient.
9. Minimum home station rest should be :-
 - a) If duty performed in the last trip is less than 8 hours, then 12 hours.
 - b) If duty is 8 hours or more, then 16 hrs.
 - c) If staff is required to work train with less than stipulated rest then breach of rest allowance is payable to running staff.
10. Link having the max. earning kilometerage should be worked by senior most drivers and so on.
11. Separate links should be prepared for super-fast trains such as Rajdhani/Shatabdi Express. Chronic late running trains should be kept in view to avoid link failures.

POINTS TO BE KEPT IN VIEW WHILE PREPARING LOCOMOTIVE LINKS :

1. Loco/Power links are prepared by HQRs Office and circulated to the divisions. The objective of power links is to ensure optimum utilisation of powers.
2. Train timings should be checked from latest time table.
3. Links to be prepared before commencement of new time table.
4. Efforts should be made to send the loco to home shed for servicing within the stipulated schedule time.
5. The maximum mileage of each home shed servicing should not exceed 4000-5000 kms.
6. Minimum possible out station halt should be provided.
7. Ensure loco is permitted to run on the sections at the maximum permissible speed of the train.

POWER REQUIREMENT (POWER PLAN)

1. To be prepared once in a year.
2. Avg. no. of trains run on each section per day for last year duly signed by the Power Officer and Sr.DOM to be prepared.
3. The power plans are formulated by taking into account the trains actually run section-wise. An additional 5 % engine kms. are added for anticipated traffic growth.
4. Loco requirement for ART, ARME and other locos which remain in outage but not added in POL for the purpose of calculation of average kilometers to be added in the bare requirement.
5. Mail/Exp/Passenger Loco requirement to be worked out on the basis of loco link. add 10% for major repair allowance.
6. For shunting services, work out number of points for 8 hours shunting. Add 10% for major repairs.

10-Hour Rule for Train Crew:

1. Overall duty of running staff from 'sign-on' to 'sign-off' should not generally exceed 12 hours.
2. Running duty at a stretch should not ordinarily exceed 10 hours from the departure of the train. Staff shall be entitled to claim relief thereafter.
3. In operational exigencies, running duty may be extended beyond 10 hours within overall limit of 12 hours provided due notice has been given to the staff by SCOR, before the completion of 8 hours duty.
4. If a train doesn't reach its normal crew changing point / destination within a overall limit of 12 hours, and the crew changing point is approximately 1 hours journey, the staff should be required to work the train up to the crew changing point.
5. In exceptional, extreme emergencies like accident, flood, agitation, lightening, equipment failures etc, the staff may be required to work beyond the prescribed limits of working hours and SCOR should advise the staff accordingly.
6. In order that running staff are aware of their beat, at every crew HQ stations and normal crew changing point, the beat of staff of Mail Express, passenger, goods trains etc should be prominently displayed on the notice board. Such type of notices also be put on lobby, loco shed, where the running staff is required to sign on and sign off.

LOCO MAINTENANCE SCHEDULE

(I) & (II) Conventional Locos

Coaching Locos (Railway Board Letter No.92/Elect (TRS)/138/5 Pt. I, dated 18.01.2001

& Railway Board Letter No.9/Elect (TRS)/138/5 Pt.II, dated 21.12.001)

Maintenance schedule	Periodicity	Duration
Trip Inspection(TI)	After 3000 kms or one trip, whichever is later	2hrs
IA	40 ± 3days.	4hrs
IB	80 ± 3days	6hrs
IC	120 + 3days	8hrs
AOH	1.2 months +_15 days	6 days
IOH	36 months + 1 month earlier or 4 lakh kms (6 lakh for WAP-1/4 loco) whichever is earlier	9 days
POH	6 years± 3 months or earlier. 8 lakh kms. (12 lakh for WAP-1/4 loco) whichever is earlier	28 days

Freight Locos

Railway Board Letter No. 92/Elect (TRS) 138/5 Pt. I, dtd. 18.01.2001)

Maintenance Schedule	Periodicity	Duration
Trip Inspection (TI)	15 days (fitted with TAO TMs) 20 days (fitted with Hitachi TMs)	2 hrs.
IA	45 ± 3 days	4 hrs.
IB	90 ± 3 days	6 hrs.
IC	135 ± 3 days	8 hrs.
AOH	18 months ± 10 days	6 working days
IOH	54 months ± 1 month or 6 lakh kms whichever is earlier	9 working days
POH	9 years ± 3 months or 12 lakhs kms whichever earlier	28 working days

(iii) 3-Ph. ABB Locomotives (Rly. Board Letter No. 97/Elect (TRS) /440/18/44
(3Ph. Dtd. 23.02.2007)

Coaching Locos (WAP5/WAP7 Locos)

Maintenance Schedule	Periodicity	Duration
Trip Inspection (TI)	3000 kms. Or one trip, whichever is later	2 hrs.
IA	90 days	6 hrs.
IB	180 days	6 hrs.
IC	270 days	8 hrs.
MOH	18 months	6 working days
IOH	4.5 years \pm 6 months or 12 lakhs kms. Whichever is earlier	11 working days
POH	9 years \pm 6 months or 24 lakh kms. Whichever is earlier	28 working days

Freight Locos (WAG9/WAG9H Locos)

Maintenance Schedule	Periodicity	Duration
Trip Inspection (TI)	45 days	4 hrs.
IA	90 days	6 hrs.
IB	180 days	6 hrs.
IC	270 days	8 hrs.
MOH	18 months	2 nd MOH
IOH	6 years \pm 6 months or 12 lakh kms. Whichever is earlier	11 working days
POH	12 years \pm 6 months or 24 lakh kms. Whichever is earlier	28 working days

DIESEL LOCO SCHEDULE & DURATION

Schedule	WDM 2	WDM3 A/B/C/D	WDM3A/ B/C/D (30 Days)	WDG3 A	WDG3 A (30 Days)	WDP1/ 3A	Duratio n
T-1	15 days	20 days	Trip – 30 days	20 days	Trip – 30 days	As per link	4 hrs.
T-2	30 days	40 days		40 days		30 days	6 hrs
M-2	2 Month s	2 Months	2 Months	2 Months	2 Month s	2 Months	8 hrs.
M-4	4 month s	4 months	4 months	4 months	4 months	4 months	16 hrs.
M-12	12 month s	12 months	12 months	12 months	12 months	12 months	4 days
M-24 (MOH)	24 month s	24 months	24 months	24 months	24 months	24 months	16 days
M-48 (IOH)	48 month s	48 months	48 months	48 months	48 months	48 months	21 days
M-96 (POH)	96 month s	96 months	96 months	96 months	96 months	96 months	30 days

ODC

ODC / ISMD: Over Dimensional Consignment / Loads Infringing Standard Moving Dimensions: SR 4.28 – 1 to 3.

Loads which infringe standard moving dimensions will not be dispatched without the sanction of the COM (Chief Operations Manager), who will, if necessary

obtain the sanction of CRS (Commissioner of Railway Safety) through CE (Chief Engineer).

When Guard wagons are attached due to projections beyond the ends of a wagon, Guard must see that they are not separated from the wagons in which the projected load is placed.

Standard moving dimensions are prescribed to each gauge for safe conveyance of loads so that the load should not come into contact with the fixed structures like Platforms, Signal posts, OHE masts, Bridges and Tunnels etc.

The standard moving dimensions on BG are:

1. Width	10' 6"
2. Rail level to top side	11' 3"
3. Rail level to top centre	13' 6"

A load can be declared ODC / ISMD depending on its height and width. Any load which exceeds the permissible height / width is called as Over Dimensional Consignment / Infringing Standard Moving Dimensions.

Except under approver special instructions issued by CRS (Commissioner of Railway Safety), no vehicle shall be loaded to exceed standard moving dimensions.

Types: ODC are classified into three types.

1. A' class	Also called as Permitted out of gauge load
2. B' class	Also called as Exceptionally out of gauge load
3. C' class	Also called as Extraordinarily out of gauge load.

ODC Chart:

Class	Net Clearance	Gross Clearance	Day / Night	Escort staff	Speed kmph	Sanctioning Authority
A	More than 6"	More than 9"	Day and Night	Not required	75	COM
B	3" – 6"	6" – 9"	Day and Night	TXR during night	40	CBE COM CE
C	Less than 4"	Less than 6"	Day only	PWI, TI, TXR,	25	CBE COM CE CRS

Precautions for the movement of loads with ODC:

1. For the movement of ODC, consignor shall submit the particulars of the consignment like – complete measurement, weight, booking and destination stations, mode of loading and unloading, and sketch of the consignment.
2. Proper sanction will be obtained as per extant rules.
3. Such loads shall be carried only on the specified route.
4. Loco yards, goods sheds, transshipment (TP) sheds and high level platform lines are to be avoided.
5. Passenger trains do not carry these ODC consignments.
6. On D/L section, C class ODC shall not be crossed.
7. Unusual consignments that require specially manufactured rolling stock are dealt with separately.
8. Additional precautions are taken for the movement of ODC in electrified section where the minimum clearance required shall be 100 mm between the contact wire and the consignment.
 - a. 100 mm to 340 mm – Power ‘Off’ and speed 15 km/h; OHE supervisor shall accompany.
 - b. 340 mm to 390 mm – Power on and speed 15 km/h; and OHE supervisor shall accompany.
 - c. More than 390 mm – Power on and speed as per rules for classification of ODC.
9. TI, TXR with fitter and 2 khalasis must accompany 132 ton Broad gauge well wagon (BWL) carried by a special train with 6 Guard wagons on either side.
10. The speed of the special train with BWL wagon will be 30 km/h and it shall not be loose or fly shunted and it must not be booked beyond the Indian Territory.

FREIGHT OPERATIONS INFORMATION SYSTEM (FOIS)

I. INTRODUCTION

In keeping with global trend, there has been a long outstanding demand of the industry and trade for transparency in sharing of information to give the customers an up-to date business like environment. Railways in this millennium have decided not only to perform the traditional tasks of carrying passengers and goods efficiently, but also to change the mindset of working as a closed system. The great concern to improve on its market share has prompted Railways to have a multi pronged approach to its freight policy.

Continuous Cargo Visibility has always been a critical component of the Supply Chain Distribution Management System.

To achieve this, out of the stated multi pronged new freight policy, a lot of emphasis has been laid on establishing a computerized FREIGHT OPERATIONS INFORMATIONS SYSTEMS (FOIS). The system indigenously developed is fully functional in the B.G. system of Indian Railways being the first of its kind in South East Asia.

1. Freight Operations Information Systems Mission – FOIS

To give a total transparent system with continuous Cargo visibility and an up-to date business environment to the Customers with instant access to information regarding their consignments in transit for just in time inventory.

FOIS is an On-Line Real-Time system based on absolute current State of Art Technology and efficient Communication system.

A management tool to optimize utilization of costly assets and resources by improving the distribution of Rakes/Wagons & Locos, and also scheduling and Routing Traffic in an optimized cost effective manner.

Provides Continuous Cargo Visibility and enables the Freight customers to have instant access to information regarding the current status of their consignments in transit for just in time inventory.

2. Strategic Advantages Derived From the FOIS System

- Extension of the current business practice from bulk movement of freight traffic in train load formations to piecemeal traffic by clubbing and moving together similar type of stock in ‘Hub & Spoke’ arrangement to increase its market share by re- diverting high profit yielding piecemeal cargo from road to rail.
- Global tracking of consignments in real time Rakes or individual wagons.
- The insight and pipeline of consignments thus captured on the entire BG network is made available for timely planning and just in time inventory management on a time span cargo movement which may extend to 2 to 5 days from origin to destination.
- Facilitate acceptance (customer’s Orders), billing and cash accountal of freight traffic from identified nodal customer centers which may not necessarily be the handling terminals.
- Extension of such facilities to customer’s premises and introduction of e-commerce, benefiting both IR and trade & industry, by eliminating manual transactions which necessarily add to the burden of logistics management.
- Providing requisite Foundation for a total logistics system furnishing real time information of the chain of physical distribution, an essential element in reducing inventory costs.

3. **Scope of FOIS Systems**

Presently two subsystems of FOIS are already in use after extensive field trials and validation.

RMS

TMS

a) **Rake Management Systems – RMS**

- Rake based consignment tracking and pipeline
- Train / Rake operation
- Stock Holding in terms of summary of wagon types
- Train and Stock Interchange
- Terminal Handling performance
- Loco holding, outage and power on-line
- Reporting to take care of Train/Load on summary basis.
- Invoice based consignment tracking
- Wagon wise Stock Holding
- Reporting of consist Wagon wise
- Invoice based loading originating tonnage and revenues
- Wagon wise Interchange
- Statement of missing Wagons/wrongly delivered

b) **Terminal Management Systems – TMS**

- Computerized booking and delivery of consignment
- Station Accounting
- RR generation / Transmission
- Improved Customer Interface

4. Crew Management has been developed & is under implementation. Control charting of trains currently being done manually will also be integrated with FOIS.

The above two sub systems have been fully developed and tested and are ready for implementation.

5. FOIS Design Architecture

FOIS is designed and developed in conformity with the state of art technology which is scaleable, maintainable, with open systems architecture and is based on the Indian Railways Organizational hierarchy, its present and future requirements. Based on the business processes that are being adopted, the business model developed in the FOIS – IT architecture is based on the assumptions:-

The current business practice of bulk movement in rake formation is the accepted norm for future also. Around 85% traffic already moves in Rake, majority of which comprises similar type of rolling stock.

Global perception is more important, with respect of tracking of consignment and Rakes rather than of individual wagon, locomotive and train. The insight and pipeline of consignment and rakes should be seamlessly available. Railway would like to share information on booking and movement of consignments with individual customers also.

The operations and data capturing, will remain control centric for train, rake, locomotive and stock management and terminal centric for booking, loading, unloading, and delivery. Taking into account the spatial distribution of activities, which need to be captured.

Integrity of Operation and Commercial data is an absolute necessity. RMS and TMS application are conceptualized, to provide the integration with the other subsystems as and when these are developed.

FOIS ultimately expects an even driven integrated reporting in real time, beginning with the tendering of Forwarding note to loading and generation of invoice, followed by load consists, train ordering and departure/arrival of load destination, unloading and delivery. The data thus captured is used for generating associated managerial reports on-line information (MIS). The data will also be used for expanding the scope to cover other functional areas of the remaining modules and can easily integrate with RMS/TMS using appropriate middle ware Technology for sharing information locally. Therefore, a strategic approach has been adopted to computerize IR operations by implementing RMS/TMS systems in a phased manner using modular approach.

6. FOIS System Architecture

Key components of the System Architecture

Intelligent terminals will be placed at the field locations to capture the data from the place of activity namely control offices, yards, goods sheds, C &W depot, Loco sheds etc., and connected to the identified Application Server through reliable communication links for transaction processing.

Application servers are centrally placed at CRIS office. These servers are connected to the Zonal Hd. Qtrs., Divisional Control Offices, Yards, interchange points and goods sheds etc., with a reliable and integrated network. The servers are networked amongst themselves and to the Central server for global level transactions.

The central server provides management Reports at board level and acts as repository of all the global data and also provides global services to maintain referential integrity of the databases including master files.

7. **Network Topology**

In view of the Centralized application architecture, a star based network topology has been designed. However, in order to provide alternate paths (to meet the up time requirement of 99.9%) from reporting locations, a mesh has been created with in each zone so that every location has at least two paths to reach CRIS. Each zonal HQ has been connected to central location (CRIS) on high bandwidth pipes. In addition to this, another zonal location has been connected to CRIS using high capacity link, hence these two high bandwidth links shall cater to the entire transaction load generated by a zone. Railway communication media has been provided for reliable and fast means of data transfer.

8. **Phased Implementation – Approach**

- i) In case implementation is attempted for events of all the functions to be reported in real time, concurrently from day one, then the reporting sites to be readied, the associated communication requirements and the number of staff to be trained assume enormous proportions. To ensure that the implementation effort is within manageable limits, one way is to take up, one by one, only limited portions of geographical territory for computerization at any given time. On the other hand, if the territory is small, instances of repetitive data entry increase; resulting in redundant expenditure on reporting infrastructure that will have no use as the territory expands. At the same time, if the MIS requirements are to be met in totality, the territorial expansion must ensure that a function is implemented on an end to end basis as quickly as possible, otherwise only a truncated picture will be

available to various levels of users and the benefits of computerization remain postponed till the entire Indian Railways have been covered.

- ii) The FOIS comprises several subsets of functions each meeting a distinct set of objectives. Certain FOIS subsets presuppose others to be operational before they can be implemented. Loco and wagon based functions presuppose load/train/rake functions to be operational. Goods shed functions expect wagon-based functions to be in place before they can be implemented. With these assumptions the FOIS / RMS systems have been designed in a modular structure which could be taken up for implementation in a phased manner.

For example:-

Phase I (PI module)

Provides facility for reporting load summary with only wagon type and number of units.

Phase II (PII module)

Provides facility for reporting the consists with details of wagon numbers.

Phase III (PIII module)

TMS provides facility for goods shed functions and generation of RR.

9. **Implementation Strategy**

Realizing that functional phasing is the only way to keep the implementation effort within manageable limit and yet remain meaningful at every stage, FOIS software has been developed as above in three modules such that functions of global utility are implemented faster from fewer sites. It also takes into account that the beginning is made from the control offices where computer awareness is of a high order. The implementation can grow on need basis driven by the Railways themselves.

For timely completion of field implementation, the total involvement and commitment of Railways is very essential from day one. Therefore, COMs of Railways have been given the total responsibility and charge of implementation of FOIS, to provide for the following:-

- Railways to get staff identified and train them to work on PCs
- Railways to prepare the sites for installation of hardware including provision of electrical and civil facilities.

- Maintenance of channels & data come equipment has been given to CSR of the zones.
- CRIS would provide specifications for the same.

For facilitating this process the organization of CAO/FOIS has been strengthened and made responsible for coordination, implementation on All – India – basis.

The software implementation and maintenance shall remain the responsibility of CRIS. Pre implementation training of the required number of staff (consisting of Core Implementers and Telecom Inspectors from each of the divisions.), in RMS – phase 1 has been completed by CRIS for all the zonal railways and their divisions. However, Railways will be required to make arrangements through the Zonal Training Schools to train the remaining staff of the concerned categories.

10. **Benefits**

i) Continuous Cargo Visibility

- Rake based consignment tracking and pipeline
- Invoice based loading – originating tonnage and revenues
- Information on trains on the run, the ETA at next point and the work to be performed.
- Vehicle guidance of all trains on run
- Daily report describing the performance of all through trains operated in a controlled territory for the day
- Actual / estimated arrival and departure particulars for a particular train at any or all the reporting points.
- Yard or on the run delay information.
- Train and stock interchange
- Wagon wise interchange

ii) Optimised asset utilization

- Improved locomotive utilization by reduction in light engine running and reduced ineffective
- Statement of missing or wrongly delivered wagons and finally its elimination
- Elimination of un connected wagons
- Increased availability of repair capacity
- Stock holding
- Loco holding

iii) Increased revenue

Savings in wagon fleet would result in corresponding saving in the recurring cost of maintenance of wagons.

- Reduced locomotive power and rolling stock maintenance cost
- Savings in time and cost of handling in yards, cost of empty haulage
- Ensures optimal crew management and monitors statutory limits for running duty and overtime payments.
- Reduction in staff cost per unit of transportation due to improved productivity of the available manpower.

iv) Improved productivity per man year.

Accuracy of reporting in the head and hand system collecting data on telephones results in sizeable error levels, which need to be reconciled and corrected periodically. FOIS data with built in validation systems has zero errors.

- Drudgery of manual processes like maintenance of registers etc. is eliminated
- Particulars of crew on train with hours spent on duty
- Re deployment of major portion of staff involved in wagon tracing and accounts checking activities.
- Improved customer service and satisfaction.
- Facilitation of acceptance (customers order) billing and cash accountals from identified nodal customer services centres and not necessarily at the handling terminals
- E-Commerce will facilitate the customers to operate from their premises for the above requirement of the above billing and cash accountal and thus reduced the burden of logistic management, and in addition drastically bring down the inventory costs in the entire chain of physical distribution system.
- Quick settlement of claims.
- Just in time inventory

v) Goods Shed Operations.

- Arrival particulars of wagons
- Placement and Release Particulars
- Information on demands registered and pending Indents
- Preparation of Railway Receipts
- Information on Demurrage and wharfage
- Loading particulars
- Goods Shed Earning

- Information on delayed wagons and Wagons awaiting Placement / Release.

II. Application/Software

RMS module has been developed with GUI interface which is highly interactive, very user friendly. The software is totally menu driven and navigation is through logically linked tasks. The application and front end forms for reporting events has been developed in Visual Basic and resides in the client machine located at the reporting location. Data is stored in the central server located at CRIS.

1. General Concepts

A Rake is a much generalized term, which refers to any set of wagons moving together and has been identified in the system as rake. Wagons can be attached/detached to a Rake. A rake is identified by a unique defined ID number, which remains unchanged through various Load/Empty cycles & movements. A Rake when given a destination is known as a Load. A Load when given a loco is known as a Train. Thus, there can be no Train without a Load & no Load without a Rake (except where a load is mixed and is not identified in the system as a rake). With a clear understanding of these terms, you enter data through clearly defined “tasks”.

The RMS software has two identifiable cycles-

Train cycle: It starts the moment a load is identified as a train and the following tasks are used for online reporting:-

Train Ordering: TO/Call between two crew-changing points.

Train Departure: reports departure.

Train Arrival: reports arrival.

Train Run-through: reports through runs

Train rerouting

Yard Cycle: It starts as soon as a terminating load arrives at its destination or a train is cancelled. (i.e. the load is sent to load planning) and the following tasks are used for various online reporting:-

Load Related Tasks

Inward Number Taking: destination validates consist.

Load Planning: initial activity, following rake assignment.

Load Stabling: run/ordering termination is reported through this.

Load Diversion/Termination/Extension: reports changes in planned load destinations

Load Yarding: takes a load-to-load planning screen, but will not reflect in stabled position.

Vehicle Guidance Related Tasks

Consist Reporting: originating station reports summary details. (Guidance is also called as Consist).

Rake Related Tasks

Rake Formation Details: from/modify rake consist.
Movement order: facility to give advance assignments to rake

Rake Placement/Release: reporting Load/Empty cycle.

Rake Dissipation: for generating piecemeal out of rake or for doing away with a rake which has no wagons left.

After a load is made ready, loco attached and train ordered

Again the train cycle begins.

Loco Related Tasks

Attachment/Detachment of locos.

Loco Reporting: reporting shed activities of loco.

Light Engine: reports light engine movements

Given above is the list of tasks that are to be performed on real-time basis i.e. as soon as the event takes place.

Demand: This function is to be reported at station where the party/consigner registers his Demand for supply of Rake/Piecemeal wagon for loading of goods. The following tasks are used for reporting this activity:-

New demand

Modify demand

Add/delete demand

Fulfilling demand

Forfeiture /Withdrawal of demand

Interchange forecast: In the system as the trains are planned, a pipeline is generated from Originating Station to destination and the position can be viewed at any point in its route. Forecast can be reported by selecting trains from the pipeline shown at the interchange point. The task used is interchange forecast reporting task.

Given below is a summarized list of entity related tasks:-

Rake related tasks

Rake Formation Details: form/modify rake consist

Movement order: facility to give advance assignments to rake.

Rake Placement/Release: reporting Load/Empty cycle

Rake Merging: moving wagons from one to another rake.

Rake Dissipation: for generating piecemeal out of rake or for doing away with a rake which has no wagons left.

Load Related Tasks

Load Planning: initial activity, following rake assignment

Load Stabling: run/ordering termination is reported through this

Inward Number Taking: destination validates consist.

Load Diversion/Termination/Extension: reports changes in planned load destinations

Load Yarding: similar to stabling, but will not reflect in stabled position.

Cut-in by Arrival/Departure: was useful when there were non-computerized territories also.

Train Related Tasks

Train Ordering: To/Call between two crew-changing points.

Train Departure: reports departure.

Train Arrival: reports arrival.

Train Run-through: reports through runs

Loco Related Tasks

Attachment/detachment of Loco: reporting loco failure on run.

Loco Reporting: reporting shed activities of loco.

Light Engine: reports light engine movements.

Roadside/Piecemeal Wagons Related Tasks:

Attachment/Detachment of Wagons en route: load & consist are automatically modified in this task.

Piecemeal Placement/Release: reports piecemeal activities.

Piecemeal Sick/Fit Reporting: reports sick/fit.

Clearance of Detached Wagons: clears detached wagons.

Demand: reports indents for a good shed type of loading.

Vehicle Guidance Related Tasks

Consist Reporting: originating station reports summary details. (Guidance is also called as consist)

Detentions Related Tasks

Train Detention en route: reports unscheduled stoppages.

Pre departure Detentions: reports detentions suffered by loads/trains at yards/stations.

Other Tasks

Interchange Forecast: reports daily targets, which should be frozen by noon.

BPC & Crew details: reports these details.

Modify ETA: changes ETA for a train.

Re-routing : changes path of a train while on run

As you realize these are all routine tasks. Besides this the divisions have to carry out some systemic tasks which help in generating MIS reports (name for reports which are not generated on online data) and some time specific reports.

DETAILS OF BRAKE POWER CERTIFICATE

Sr No.	Type of train	Validity	Brake Power %age		Conditions for invalid BPC & other instructions
			Originating station	En-route station	
1.	Ordinary End to End rakes vacuum brake rake, Air brake rake other than Premium	Examination- Loading- Unloading- Examination. i.e. One time loading.	85- Vacuum brake stock 90-Air brake stock	75	The BPC will become invalid if- i) No destination mentioned on the BPC of loaded train. ii) Empty rake does not reach loading point within 04 days (for vacuum brake stock) iii) Train composition is changed by 10 FWUs or Four 8 wheeled wagons or more iv) Train is stabled more than 24 hrs. in examination yard.
2.	Premium Air brake rakes BOXN, BCN, BRN, BOBRN etc.	12 days or multiple loading. i.e. loading to be done within 12 days + 3 days grace period in loaded condition	Minimum 95	Not mentioned	The BPC will become invalid if- i) Rake integrity is disturbed by more than Four 8-wheeled wagons. ii) Train is stabled more than 24 hrs. in examination yard Instructions for Premium End to

Sr No.	Type of train	Validity	Brake Power %age		Conditions for invalid BPC & other instructions
			Originating station	En-route station	
					<p>End rakes:</p> <p>i) After lapse of 12 days, rake to be offered for examination at the first nominated intensive examination point in the direction of movement.</p> <p>ii) After lapse of 15 days, rake either empty or loaded shall be offered for examination at the first exam point in the direction of movement.</p> <p>iii) Premium BPC shall be issued from nominated "A" category depot.</p> <p>iv) Normal End to End BPC shall be issued if the rake is not offered for examination in empty condition or at nominated "A" category exam point.</p> <p>v) After each loading/unloading, the rake shall be subjected to GDR check.</p>

Sr No.	Type of train	Validity	Brake Power %age		Conditions for invalid BPC & other instructions
			Originating station	En-route station	
3.	Close circuit rakes only Air brake stock	Premium CC rake-7500 kms/35 days whichever is earlier or 6000 kms/30 days whichever is earlier (Some Rly's. have CC rakes of 6000 kms/30 days whichever is earlier. C.Rly. does not have such rake)	100	90	<p>The BPC will become invalid if-</p> <p>i) Rake is not running in nominated circuit.</p> <p>ii) Rake is stabled more than 4 hrs. at examination station.</p> <p>iii) Rake has completed either stipulated kms. Or days.</p> <p>iv) More than 4 wagons are replaced between two Periodical Maintenance Examination i.e. PME</p> <p>Instructions for Premium CC rakes:</p> <p>i) Rake shall be offered at its nominate "A" category base depot</p> <p>ii) Rake shall be formed Off POH/ROH wagons only</p> <p>iii) After each loading/unloading, the rake shall be subjected to GDR check.</p> <p>iv) BPC shall be revalidated by</p>

Sr No.	Type of train	Validity	Brake Power %age		Conditions for invalid BPC & other instructions
			Originating station	En-route station	
					C&W staff wherever TXR staff is provided. v) Wagons to be attached shall be good examined wagons.
4.	Container rakes BLCA+BLCB	6000 kms/20 days circuits – TKD-JNPT-DADRI/TKD-JNPT/TKD/AQ depot run on free circuit basis	100	90	The BPC will become invalid, if- i) Rake has completed either stipulated kms. Or days. ii) Rake is not running in nominated circuit Instructions for Container rakes. i) Rake integrity is to be maintained ii) Revalidation of BPC by TXR staff after every unloading/loading. iii) Rake shall be formed from New wagons or Off POH/ROH wagons. iv) Utilization of wagons in 6000 kms. Rake-New wagons upto 12 months/Off POH/ROH

Sr No.	Type of train	Validity	Brake Power %age		Conditions for invalid BPC & other instructions
			Originating station	En-route station	
					wagons upto 09 months.

BRAKE BINDING/FLAT TYRE:

A) Setting of Empty/Load Device in Wagons-

The Empty/Load device in wagons if not set in correct position will cause brake binding and flat tyre.

1. To avoid cases of flat tyre /poor brake power, it should be ensured at the time of loading/unloading that Empty/Load Box lever should be put in correct position by Operating/Commercial staff i.e.

On Empty Position - When wagon is empty or slightly loaded.

On Loaded Position- When wagon is loaded.

2. This should be super checked by Guard at the time of starting train from originating point, and by TXR at the time of train examination.
3. Before movement of loads from loading/unloading terminals, it should be ensured by the Operating staff that, hand brakes are released.
4. While picking up load from Road side stations, the train crew should ensure release of hand brakes.

B) Rolling out/Rolling in Examination of Passenger carrying Trains-

To detect unusual, especially brake binding/flat tyre, the C&W department has started rolling out and rolling in examination of passenger carrying trains at nominated points. The rolling out/rolling in Gangs deployed in Divisions are as under –

Mumbai Division - CSTM, DR, LTT, IGP

Bhusawal Division- BSL

Nagpur Division - NGP, BPQ

Pune Division - PA, MRJ, KOP

Sholapur Division - DD, SUR

- Guards of all trains should look back frequently at the above stations to see that, no danger hand signal is exhibited by Station staff/TXR staff deployed for rolling out examination and whenever any danger signal is shown the train should be brought to a stop immediately by using VHF communication available with the Driver and Guard by using the brakes available in SLR.
- The staff involved in shunting of coaches attached/detached enroute on Passenger carrying trains should ensure complete releasing of coaches before starting shunting in order to avoid any possibility of developing flat tyre on the coaches. Special attention should be paid at the stations, where regular attaching/detaching of sectional coaches is taking place.
- Shunting staff to ensure complete release of coaches/wagons after shunting, to avoid brake binding/flat tyre.

DETECTION OF LOCOMOTIVE AND ROLLING STOCK WITH FLAT TYRE:

Flat tyre may cause extensive damage to track by causing rail fractures and weld joint failures, resulting into serious accidents. To avoid rail fractures/welded joints failures caused by flat tyres, the staff should be counseled to take necessary precautions as under-

MECHANICAL (C & W) STAFF –

As per Railway Board's guidelines, the permissible flat on wheel tread is limited to 60 mm for Goods stock and 50 mm for the Coaching stock/Locomotives. All C&W Train Examination staff should be counseled to adhere to the provision of para 4.22 "Tyre Defects" of Part –IV IRCA Conference Rules for Coaching stock and Para 4.18 of Part-III of IRCA Conference Rules, for Freight Stock. The TXR staff should be counseled not to allow any wagon/coach having length of flatness more than permitted as above under any circumstances. Such wagons/coaches should be detached immediately after being marked sick. The C&W Train Examination staff in C&W depots/sick lines must check the flatness of wheel tread with the help of Tyre Defect Gauge. The flatness of the wheel tread should invariably be checked during intensive examination.

TLC/DPC/C &W CONTROLLER-

On detection of flat tyre, and after the locomotive/rolling stock involved has been checked by loco shed staff/C&W staff, they should arrange replacement of wheel at site in case of wagon/coach and in case of locomotive, the same should be worked to nearest loco shed having pit wheel/ lathe for attention and a speed restriction of 20 kmph should be observed till the loco is cleared to the concerned loco shed.

DRIVER AND GUARD OF THE TRAIN-

The train crew and shunting staff should be trained to release brakes whenever DV isolating cock is operated by them. The empty/load box device should be kept in the empty/loaded position depending upon empty/loaded condition of the stock to avoid skidding of wheels, resulting into flatness of tyre during the run. The driver and guard should also be vigilant in detection of hammering blows /sounds while on run and on detection of the same should observe a speed restriction of 20 kmph to clear the section upto next station where they should stop the train and advise control office regarding the flat tyre and ask for C&W TXR/Loco shed staff to attend.

OPERATING STAFF-

The station staff should also be counseled to detect the hammering sound if heard on a passing train. They must without fail intimate the approximate position of the wagon/coach to the next station and also to Section Controller to stop the train and get it examined for detecting the locomotive/rolling stock with skidded wheels having flatness of the wheel tread. The train should be inspected by Driver, Guard and ASM and work with restricted speed of 20 kmph if possible, upto the next TXR/Loco examination station. All TIs and Safety Counsellors should counsel SM/ASM, Cabinmen, and Switchmen to keep vigilance check on the hammering sound to detect the flat tyre on a passing train and stop the same before it causes extensive damages.

SECTION CONTROLLER-

The Section Controller should take the advise of flat tyre reported by stations seriously and should not allow running of the train for onward journey without ensuring proper examination by C&W/Loco staff. On advice the train should be stopped at the next station and should not be allowed to cause avoidable damage to track.

ENGINEERING STAFF AND GATEMEN-

The Engineering staff and Supervisors at work sites or while doing trolley or foot inspection should also be counseled to be vigilant towards detection of flat tyre on the passing trains. In case of any such detect noticed on any passing train, the approximate position of the culprit wagon/coach should be immediately advised to the next station through emergency control phone or from the nearest level crossing gate. Similarly, the gatemen should also be counseled to be alert and vigilant in detection of hammering sound on any of the passing train and in case of such detection the gatemen should advise the Station Master to stop the train. Gatemen should also show red flag/danger signal to the crew of the train so that, the train be stopped before causing extensive damage.

ENGINEERING CONTROL-

Engineering Control should organize a special check upto 50 kms in the rear from point of detection of flat tyre to ensure the safety of track subsequent to passage of train having flat tyre.

JOINT SAFETY CIRCULAR ON ACTION TO BE TAKEN ON BRAKE BINDING AND PREVENTION OF FLAT TYRE ON PASSENGER CARRYING & GOODS TRAINS (Ref – Safety Circular No. 25/2000 dated 28.11.2000 jointly signed by –CME, CE, CEE, COM & CSO)-

The brake binding and subsequently flat tyre resulting in safety hazard on account of Rail Fracture/Weld failure/Roller bearing failure etc.

1. Detection of Brake Binding/Flat Tyres on Trains-

Train crew/Station staff/Gatemen will be vigilant to detect any abnormality such as brake binding, unusual sound, smoke emission etc. If any such abnormality is noticed, the above staff shall take immediate steps to stop the affected train.

2. *In case of brake binding on a train enroute, the Driver and Guard must take the prescribed remedial action or releasing the brakes and isolate the brakes of the affected coach/wagon, which should be got examined at the next train examination point. This will ensure that, brake binding will not result in flat tyre.*

3. TXR staff available for Rolling In/Rolling Out examination shall detect brake binding/flat tyre in coaches and initiate action.

4. *It is imperative that, all cases of coach detachment on the Division be duly enquired into by Officers concerned with Loco Operation, C & W and Safety and remedial measures taken to prevent enroute detachments.*

5. Action to be taken by Train Crew after detection of Brake Binding/Flat Tyre-

i) **For air brake coaching stock** – Assistant Driver and Guard will find out location of brake binding/flat tyre. At station the assistance should be given by Station staff to train crew. After detecting the culprit coach, the brakes should be released manually and thereafter, brake system should be isolated by closing isolating cocks of brake cylinders, isolating cocks in between FP and auxiliary Reservoir and isolating the DV by rotating DV handle to horizontal position as per detailed instructions given in the working time table.

ii) **For vacuum brake stock-** Assistant Driver and Guard will find out location of brake binding/flat tyre. At station, the assistance should be given by Station staff to train crew. After detecting, the brake should be

manually released and thereafter, the brake system should be isolated by disconnecting siphon pipe from release valve and providing wooden plug as dummy with hard grease on the loose end of siphon pipe. For this, the dummy plug/hard grease will be supplied to driver and guard as personal store, by the lobby incharges for guards and drivers at the time of sign on. The supply of the wooden plug/hard grease would be taken from C & W department.

- iii) For Superfast trains or other trains on which TXR staff is accompanying, the Driver and Guard will be assisted by the on board TXR staff for activities mentioned in 6(i) & (ii).
6. If as a result of isolation of brake system as per para 6 (i) & (ii) above, the brake power enroute comes down below prescribed 90%, the train should be worked with restricted speed to the next train examination station.
7. **Action to be taken by C&W staff-**
- i) The train on which brake binding/flat tyre is reported should be examined by C&W staff at the first opportunity, investigated and certified FIT for further run.
 - ii) CWI/TXR staff should accompany the train whenever flat tyres are reported. They must ensure proper repair either at the enroute station or at the terminating station as deemed necessary.
8. **Action to be taken by Train Crew at the time of Cattle run over-**
- i) After cattle run over, if BP pressure/vacuum drops suddenly, train crew will check the train for the reason of BP pressure/vacuum drop. If any BP/FP/VAC hose pipe is found uncoupled train crew will couple it and ensure release of train brakes. The train crew will manually release the brakes, if there is brake binding. If manual release is not possible, the particular coach will be isolated as mentioned in par 6 (i) & (ii) above.
 - ii) Guard of the train will give necessary message to Section Controller regarding the affected coach at the next station, who will give details of the coach to C&W Controller.

TXR staff at the first available examination point will check the affected coach for proper functioning of brake equipment.

9. **Action to be taken by Train Crew at the time of ACP-**

- i) The train crew will check the train to find out the coach from which alarm chain has been pulled. After detecting the coach, resetting of ACP apparatus should be done.
- ii) It should be ensured that there is no leakage after resetting the ACP.
- iii) It should also be ensured that, the brakes of the affected coach are in released condition after resetting the ACP.
- iv) If brakes are not released after resetting the ACP, then action should be taken as detailed at 6(i) & (ii) above.

10. **Action to be taken by Train Crew after Emergency Brake Application-**

Before starting the train it should be ensured that, prescribed amount of air pressure/vacuum has been obtained in engine and brakes are in fully released position.

A) G D R CHECK LIST:

1. Rake integrity is not disturbed by more than 10 FWUs or Four 8-Wheeled wagons. Only intensively examined wagons duly certified by train examining staff are attached.
2. All CBCs and air hoses are properly coupled and locked.
3. All the angle cocks are in open condition.
4. The rearmost angle cock of LV is in closed position.
5. Empty load handle is properly placed as per the empty or loaded condition of the wagons.
6. There is no loose fittings/hanging parts like push rod, pull rod, brake beam, safety brackets, brake blocks, CBC operating, handle etc., which may endanger the safe running of train.
7. Hand brake of all the wagons is in released condition i.e., in **OFF position.**
8. Doors of wagons are closed and locked/secured.
9. Correct position of Twist lock.
10. Any other abnormality noticed and action taken.
11. Guard & Loco Pilot shall prepare a memo jointly on a plain sheet in triplicate indicating the brake power and deficiency, if any, and shall append their signatures and both of them shall retain a copy of the same. Guard should obtain SM/YM endorsement on two copies of

joint memo and hand over third copy to SM/YM record. SM/YM will inform the Section Controller after making the endorsement on the joint memo and obtain the clearance for the train to move (GR 4.31).

12. Continuity of the brake pipe pressure is confirmed through VHF/Whistle code i.e., perform the continuity test before starting the train.

B) Post Loading/Post Tippling examination of Freight Trains:

Post loading/Post tippling examination to be carried out either by TXR staff or by Guard and Loco Pilot in case of non provision of TXR staff.

Items to be checked by Guard and Loco Pilot:

1. All the CBCs and Air hoses are properly coupled and locked.
2. All the angle cocks are in open condition.
3. The rearmost angle cock of LV is in closed position.
4. Empty load handle is properly placed as per the empty or loaded condition of the wagons.
5. There is no loose fitting/hanging parts like push rod, pull rod, brake beam, safety brackets, brake blocks, CBC operating handle, etc., which may endanger the safe running of train.
6. Hand brake of all the wagons is in released condition i.e. in **OFF position.**
7. Doors of wagons are closed and locked/secured.
8. Check continuity of BP pressure/Vacuum before starting a train (to perform continuity test).

Proforma for Joint Check by the Loco Pilot and Guard –

1. **Date** :
2. **Train No.** :
3. **Loco No. & EOL** :
4. **Load** :
5. **From** :
6. **To** :
7. **BPC issued by** :
8. **Date of Issue** :
9. **BPC No.** :
10. **Loaded at/Tippled at** :

Signature of Loco Pilot

Loco Pilot's Name:-----

Signature of Guard

Guard's Name:-----

Pune Division : Loni/LNE- Only Tank Wagon
Examination Point
Miraj/MRJ- Only Tank Wagon
Examination Point

WORKING OF CLAMPED WAGON:

- 1) No empty Oil Tank/BCX/BOX wagon will be permitted to move under any circumstances with a broken spring or broken springs with a clamp and shall be detached at the point of detection or the broken spring will be replaced by a good one.
- 2) No loaded Oil Tank/BCX &BOX wagons with a broken or clamped broken spring shall be permitted on train from the originating yard nor shall such wagon be permitted through yards specifically nominated for spring changing.
- 3) Maximum number of broken springs that can be clamped on a loaded Oil Tank/ BOX/BCX wagon will be restricted to one. In case of more than one spring breakage on loaded /Oil Tank/BOX/BCX & Tank wagon the same shall be detached at the point of detection. In case of detection in mid section, the spring shall also be clamped and the train will be permitted to move at cautious speed till the section is cleared.
- 4) Maximum speed at which a loaded Oil Tank wagons/BOX/BCX wagon with one clamped broken spring is permitted to run is 40 Kmph.
- 5) After clamping the broken spring of the loaded BOX/BCX/Tank wagons, the Guard of the train will be required to inform the ASM of the station in writing about the clamped broken spring giving details of the individual wagon No./nos. of the wagon/ wagons having clamped broken springs and also the position of such wagons from the locomotive and the brake van.
- 6) The Guard will obtain the signature of the ASM and the driver on the original copy of the memo and shall retain it in his possession.
- 7) The ASM on receipt of the said memo shall in turn inform the section controller giving details of the train no. and name, wagon no. with clamped broken spring and the position of these wagon/wagons from the loco and the brake van as given in the memo served to him by Guard. The ASM shall be

required to make an entry to this effect in the station diary recording the name of the section controller to whom this information has been given and also the time at which this information was transmitted.

- 8) If due to any reason, the Guard and Driver were unable to clamp a broken spring in mid section, they will be required to work the train at walking speed up to the next station where the guard will issue a memo to the Station Master to either have the broken spring clamped or if he is unable to clamp then he should have the wagon detached. Under all circumstances, before resuming the journey from that station, the guard and the driver will both check whether the broken spring is clamped or the wagon detached. The Guard will also ensure that necessary advice about the broken spring has been conveyed to the Yard Master of the nominated yard ahead by the Station Master.
- 9) Yards on various divisions of C.Rly which are nominated for spring changing work are as under:-

Bhusawal Division: MMR, BSL, KNW

Nagpur Division : WR, AJNI, BPQ

Mumbai Division : IGP, LNL

Solapur Division : WD, SUR, DD

Pune Division : GIT

Section Capacity and Throughput

Section capacity:-

Definition: Line capacity is also known as section capacity. Section capacity is defined as the “Number of train which can be run on the section in 24 hours”. This could be expressed in three different ways:

- a. Maximum line capacity
 - b. Practical line capacity
 - c. Economic line capacity
- a. **Maximum line capacity:** this is represented by the maximum number of trains that can be entered in the master chart so that it is impossible to introduce even a single more train on the section concerned.
- b. **Practical line capacity:** the practical line capacity is represented by the practical number of trains per day which is obtained from the above mentioned maximum line capacity making allowance for such factors as time required for maintenance of permanent way, time margin for scheduling and other operational irregularities. In actual practice the train scheduling is based upon this capacity. When we speak of line capacity in general, we mean practical line capacity also known as effective line capacity.
- c. **Economic line capacity:** When line capacity is under utilized, increase in train services follow the pattern of law of increasing returns due to more intensive utilization of fixed assets. However, as the number of trains to be operated on a section grows larger and larger and the section starts getting saturated, it becomes more and more difficult to increase the train services without increasing the time loss in train operation. As a result, the utilization efficiency of the rolling stock and the train crew decreases and maintenance cost of the track increases. This leads to gradual increase of the transportation cost per train kilometer. The optimum number of trains which can be run on the section economically is the economic line capacity.

Calculation of section capacity: Though various formulae are there, CR follows the Scott’s formula which is as under:

$$C = \frac{1440 \times e}{T + t}$$

Where C = Line capacity

T	=	Running time of the slowest train over critical block section
t	=	Time for block operation
e	=	Efficiency factor

Measures with incurring expenditure:

1. To reduce the block section
2. To improve the speed of trains
3. To provide the automatic signals
4. To provide extra corridor
5. Increase use of modern signaling system
6. Provision of Train describer
7. CTC on double line
8. Improving speed of goods train
9. Use of EMU and DMU for stopping train
10. Provision of AWS
11. Provision of ACD
12. Provision of PI / RRI / Electronic interlocking / SSI
13. By increasing CSL / CSR of all the running lines at all stations and yards.

Measures without incurring expenditure:

1. Proper planning
2. Proper controlling
3. Proper efficiency
4. Time tabling
5. Proper maintenance of instruments
6. To reduce the time in block operation
7. To reduce the crossing and precedence
8. By implementing Management information system
9. By introducing new software through development of IT
10. By using new techniques in the infrastructure
11. By not using separate traction for different sections
12. To run heavy-haul goods trains

Order of priority for increasing line capacity works:

As section capacity works involve huge investments and long gestation periods, planning for such works has to be done with meticulous care to avoid traffic bottlenecks on one hand and uncalled for expenditure on the other hand. So it is necessary to follow the sequence below for considering increase in section capacity-

(a) Organisational and operating measures to ensure optimum utilization of the existing operating assets as follows:

- i. Time table improvements.
- ii. Reducing disparity in inter-sectional running times.
- iii. Review of sectional running times.
- iv. Improving efficiency of staff.
- v. Efficient operation of yards, station and terminals.
- vi. Improved maintenance of equipment.
- vii. Monitoring of trains by Officers and Inspectors.

(b) Technical measures:

- i. Signaling and Interlocking improvements.
- ii. Motive power improvements
- iii. Civil Engineering improvements will include following:
 - (a) Opening additional crossing stations.
 - (b) Strengthening the permanent way and bridges.
 - (c) Improvements in alignment, eliminating surface road crossing, removing speed restrictions, providing 1 in 16 turnouts to permit higher speeds on loop lines.
 - (d) Easing of gradients.
 - (e) Patch doubling (Doubling of a section is not undertaken in one stage but in phases, the Work being called phase doubling or patch doubling)
 - (f) Doubling / Triple line / Quadruple line.

Throughput:

The Throughput of a section is the total quantum of Traffic which can be transported over the section in a period of 24 hours.

The traffic moved includes Passenger Traffic and Freight also. The Passenger Throughput is calculated basing on the number of passengers traveled and the distance they traveled. Passenger Throughput is calculated in terms of Passenger Kilometer (PKM)

Passenger Throughput = No. of Passengers Traveled X Distance they traveled in Kms

The Goods Throughput may be expressed in terms of:

- (a) Number of wagons moved or
- (b) Gross Tonne Kilometers or
- (c) Net Tonne Kilometers carried over a section.

Generally, 'Throughput' in Railways refers to Goods Throughput for day to day Operation & is expressed in terms of number of wagons. But for Commercial

Transactions it is expressed in terms of 'Net Tonne Kilometers'. Because NTKM indicates the ultimate productive work done by Railways, a keen observation and effort required to improve NTKM.

Advantages of higher throughput:

- (1) Wagon Utilisation Increases
- (2) Increase in Railways Revenue.
- (3) Yard / Sectional Congestions Eased.
- (4) Reliability Increases.
- (5) Customer is satisfied and repose confidence on Railways.
- (6) Cost of Transport of Freight Reduces.
- (7) Interchange commitments with adjoining railways fulfilled.

Steps to improve throughput:

- (A) Running more number of Trains:
 - a) Utilise the Section Capacity fully by running trains with CC loads
 - b) Discourage Light Engine Movements by ensuring that every engine carries sufficient Load.
 - c) Adopt vigorous marketing strategies
 - d) Timely ordering of trains.
 - e) Keeping targets periodically and monitoring.
 - f) Offer of incentives to efficient staff (Running Crack Specials, Special Trains)
 - g) Switching over traction from diesel to AC.
 - h) To utilize more HP locos to run trains with high speed.

- (B) Increasing load per Train:
 - a) Increasing loop capacities.
 - b) Provision of High Capacity Wagons.
 - c) Improvement in Track.
 - d) Multiple Loco Operation or Providing more powerful locomotives.
 - e) High capacity bearing track shall be used
 - f) To reduce tare-weight
 - g) Using technology
 - h) Platform low level bogie containers

In order to improve the **throughput**, apart from measures taken for augmentation of line capacity, trailing load has to be increased to improve throughput by-

- a) Inducting High Capacity Diesel and Electrical Locomotives and Multiple Operations of Locomotives.
- b) Improved Rolling Stock with CBC coupling and draw bar capacity of 80 tones or more.

- c) Improved roller bearing on Rolling stock
- d) Increasing carrying capacity of rolling stock without much increase in length or tare weight.
- e) Improved Braking System (Air Brake and Disc Brake System) to maintain desirable 'Braking Distance'.
- f) Increasing Permissible Axle Load and permissible moving dimensions by Civil Engineering Works.
- g) Increasing Loop Capacity and Strengthening the Loop Lines.
- h) Improved system of Communication between Engine crew, Train Staff, Station Master and Controller.
- i) Adequate Terminal Capacity and facility to deal with Heavy Haul Operations.
- j) Re-scheduling and Curtailing running of slow stopping passenger trains on heavy haul routes or on dedicated tracks.
- k) Integrated 'Mega Blocks' to prevent frequent departmental maintenance block.
- l) Up gradation and modernization of techniques and methods of attending to trouble shooting and break downs.
- m) Up gradation in the Skill and Knowledge of 'Train Running' and 'Train Passing' staff.

IV OPERATING STATISTICS

Railway Statistics: Essential for planning prioritizing and exceeding activities connected with operation.

The railway statistics are based on four factors-

- Quantity
- Distance
- Duration and
- Service

In Railway environment these relate to –

1. Primary Units:

- (a) Quantity Expressed as tones and number of passengers carried and earnings derived
- (b) Distance- Expressed in kilometers.
- (c) Duration Expressed in minutes, hours & days
- (d) Service Expressed in terms of trains, vehicles, wagons & Engines.
performed-

2. Fundamental Units: Relationship between primary units, expressed in composite terms is called ‘Fundamental Units’. The fundamental units express two primary ideas in their relationship to one another viz.

- Tonne-Kms,
- Passenger kilometers,
- Train-kilometers,
- Wagon-kilometers,
- Engine hours,
- Wagon days etc.

3. Derived Units:

Expresses the relationship that exists between two sets of primary or fundamental units and the results thus arrived is termed ‘Derived Units.’ The process by which this relationship is ascertained is as illustrated in the following examples.

(a)	Passenger earning (Primary) / Passenger carried (Primary)=Earning per passenger
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(b)	Passenger earning (Primary) / Passenger kilometers (fundamental) = Earning per passenger kilometer.
(c)	Passenger kilometer (fundamental)/ Number of passenger (Primary) = Average distance traveled by a passenger also called lead of passenger traffic.
(d)	Wagon kilometers (fundamental)/ wagon days (fundamental) = Wagon kilometers per wagon day.

These 'Derived Units' highlight special features of transportation output and are useful in evolving suitable management strategies.

Classification of Railway Statistics:

The principal heads under which the railway statistics are generally grouped are indicated below:

Economic and financial statistic:

Under this head are to be included detailed statistics relating to the advance statement of gross earning and traffic handled i.e. the number of passenger booked and tonnage lifted and wagons loaded for current information and the statistic of revenue and expenditure as booked in monthly and yearly accounts.

Operating statistics:

Common terms used in operating statistics:

- 1. Route Kilometer:** Distance of each gauge owned by a Railway including its worked lines, treated as a single line kms of double, triple etc. Tracks crossings at stations and sidings as also the track from the centre of terminal station to the end of the main line buffer stop are to be excluded. If any section of the line is worked entirely by another Railway or by electric power, or is opened for goods traffic, but not for passenger traffic or vice-versa the kilometrage of that section is included.
- 2. Running track kilometer:** In addition to the route kilometrage the extra distance of multiple tracks, i.e. double, triple etc tracks shall be treated as two or three or more tracks, but shall exclude the tracks in sidings, yard and crossings at stations.
- 3. Track Kilometer:** Distance of each gauge owned by a Railway, including its worked lines treated as a single line and extra distance due to double, triple etc. tracks, as also the length of sidings, crossings at stations etc.
- 4. Mean route kilometer:** The length of the Railway calculated according to the definition of route kilometrage allowing for changes in the kilometrage during the period covered. Thus, the mean kilometrage worked during the year, which has had an addition / closing during the year will be as follows:

Route kilometerage at commencement of a year plus / minus number of days the new section / section closed was in use during the year multiplied by the length of the new section / section closed divided by the number of days in the year.

- 5. Equated track kilometerage:** The kilometerage of track equated to a standard unit by giving weightage for factors of traffic density, gradient, formation of soil, curvature, rainfall etc. This is worked out by the following formula:

$$C = L \times U (1 + A + B + C)$$

Where C = Equated track kilometers

L = Running track kilometers

U = Traffic Density

A = Soil factor

B = Curvature

C = Rainfall factor

The figures of equated track kilometers are worked out section-wise and gauge-wise. This formation is utilized by the engineering department for the employment of gangman for the maintenance of track. The number of men required depended mainly on the number of trains run over the section. More wear & tear of the track; more will be the number of men required for maintenance.

Operating statistics are broadly being divided into:

(i) Traffic (ii) Power (iii) Rolling Stock

(ii) The traffic statistics include statistics of wagons loaded, wagon mobility, wagon usage, train loads, train mobility, productive and unproductive services, wagon detention, marshalling yard, terminal goods station and punctuality.

(iii) The power statistics include engine usage, fuel and energy consumption, and engine failure statistics etc.

(iv) Rolling stock holding & availability, repairs maintenance percentage

Commercial statistics: Coaching and freight revenue and volumes and earnings by class of passengers, for different commodities, claims paid for compensation of goods and parcels lost or damaged Rolling stock and workshop repair statistics:

Under this head are grouped statistics dealing with POH of coaches, wagons, locomotives and other information relating to workshop activity.

Administrative Statistics:

These statistics relating the staff matters, numbers, by categories and classes of staff.

Other Statistics

Number of stations by
Class, halt stations,
Standard of interlocking
Medical statistics related to sickness of staff etc.

Engineering statistics give details of track and bridges requiring attention – ultra sonic tests done or overdue, track renewals, distress bridges etc.

Compilation of Railway Statistics:

1. Compilation of statistics of Indian Railways falls broadly under two categories, namely (i) the statistics required to be compiled by the railways for submission to the Railway Board in order to keep the Board generally informed about the different activities of the Indian Railway and (ii) further detailed Railway statistics which individual railway may undertake for their own respective domestic requirements.

2. The statistical compilation work on the Zonal Railways is in the charge of a Statistical Officer working under Finance deptt. The format and the methods of compilation of the monthly Statistical statements and the Annual Statistics required to be submitted to the Board are detailed in the Manual Statistical instructions, Volumes I and II respectively.

Operating Statistics:

1. Operating Statistics for the various Indian Railways are issued in the form of various pamphlets published periodically by the Railway Board. Detailed Statistics relating to each division and gauge are contained in various parts of the 'Domestic' statistics issued quarterly (Parts I, II & II-B & C)

2. Some of the important statistics include.

Operating ratio: The ratio of workings expense (excluding suspense but including appropriation to Depreciation Reserve Fund and Pension Fund) to Gross Earnings. (Expenditure incurred in connection with Administration, Operation, Maintenance and repairs of line open for traffic)

A – Passenger Train performance.

Punctuality:

Punctuality is the main criterion for judging passenger train performance, some of the statistics compiled separately for 'Mail and Express trains', 'Other Passenger Trains', and 'Mixed' trains are:

$$\text{Punctuality} = \frac{\text{RT} + \text{NLT}}{\text{Total no. of Mail/Express trains}} \times 100$$

RT = Trains arriving Right Time

NLT = Trains not losing time

Vehicle kilometers per Vehicles Day:

This figure indicates by the vehicle days which are the product of average number of coaching vehicles on line/in use and number of days in the period under reference.

This figure indicates the extent to which coaching vehicles are kept 'on the move'. The main factors affecting its value are:

- (a) The average speed of trains
- (b) The average length of train run (average load)
- (c) The idle periods provided for in rake links.

3. Since in the short run, train composition is not susceptible to change, it is only by increasing the speeds of trains and tightening up rake links that an improved performance can be achieved.

4. This result is calculated by dividing the coaching vehicles kilometers by the vehicles days which is the product of average number of coaching vehicles on line and the number of days in the period under reference.

$$\text{Vehicle km. per Vehicle day} = \frac{\text{Coaching Vehicle Km}}{\text{Vehicle day}}$$

Average Speeds:

This figure represents the average time tabled speeds of passenger trains. The higher this figure, the better the service to the passengers.

Shunting kilometers per 100 Train Kilometers (Passenger including proportion of mixed):

1. This figure indicates the amount of unproductive service that has to be performed per 100 train kilometers (Passenger including proportion of mixed). Since the amount of shunting to be done on a passenger train depends upon various local factors, the figure will vary from Division to Division and from Railway to Railway, traffic conditions remaining constant, is indicative of wasteful shunting.

2. The figure is arrived at by multiplying by 100 the quotient of shunting kilometers divided by train kilometers (passenger including proportion of mixed). It can be depicted by formula given below:-

$$\frac{\text{Shunting Kms} \times 100}{\text{Trains kms.}}$$

B- Wagon Usage

Average Starting Wagon Load:

1. This figure is compiled separately for coal and coke, heavy merchandise and light merchandise, thus affording an indication of the extent to which wagon space is utilized by stations from which traffic originates. It is extremely important that wagons be given as full a load as possible because this means economy, in wagon usage and hence engine power and less strain on line and yard capacity. Even a slight improvement in the starting wagon load can mean a tremendous saving to the Railway.

2. The result is calculated by dividing the number of tones loaded by the number of wagons loaded (in terms of four wheelers), CR and TR vans as also wagons used for live stock and departmental purposes, however, are excluded.

$$\text{Average Starting Wagon load} = \frac{\text{Tonnes Loaded}}{\text{No. of Wagons Loaded}}$$

Wagon Kilometers per Wagon Day:

1. This figure is a measure of wagon mobility and indicates the average number of kilometers moved by a wagon, on the average, per day, both loaded and empty journeys been included. Delays in marshalling yards, delays at stations when loading or unloading, delays in clearance from roadside stations, decrease in average speed of goods trains, increase in the number of wagons awaiting repairs,

and shorter loads of trains are some of the factors normally responsible for poor mobility.

2. This result is obtained by dividing wagon kilometers by wagon days which is the product of daily average number of wagons on line and number of days in period.

$$\text{Wagon Km. Per wagon day} = \frac{\text{Wagon Kms}}{\text{Wagons Days}}$$

Net Tonne Kilometers per Wagon Day:

1. This unit is a measure of the revenue earning work done by the wagons and reflects both mobility and loading. A decrease in this figure may be due interalia to any of the causes which effect the figure of wagon kilometers per wagon day. The proportion of loaded to total wagon kilometerage, the average loaded wagon and the relative amount of heavy and light merchandise carried, are some of the other factors which may effect this figure.

2. The numerator in this case is the net tonne kilometers (excluding departmental) and the denominator wagon days.

$$\text{Net Tonne km Per wagon day} = \frac{\text{Net Tonne Kms}}{\text{Wagon days}}$$

Wagon Turn Round:

This future expresses the ratio between the total number of serviceable wagons on a Railway and the number of wagons required daily for effective use on the railway for its outward, inward and transshipment traffic. Stated in different way, wagon turn round represents the average period of time in which a particular wagon completes its average loaded trip and after which it again becomes available for loading.

$$\text{Wagon Turn Round} = \frac{\text{No. of effective wagon holding}}{\text{Loaded wagons + Loaded received wagons}}$$

Average Wagon Load during the Run:

1. This unit is a good index of wagon utilization as it refers to the average load of all loaded wagons carried. It suffers from the draw back that it does not directly reflect the performance of the division, gauge or railway to which it applies, as only a proportion of the loaded wagons carried is loaded locally and the balance consists of both received traffic and cross traffic.

2. For obtaining this figure net tonne kilometers are divided by loaded wagon kilometers, (the figure relating to departmental trains are excluded).

$$\text{Average Wagon Load during the run} = \frac{\text{Net Tonnes Kms.}}{\text{Loaded Wagon kms.}}$$

Goods Trains Performance:

Average Speed of Goods Trains:

1. This result is calculated separately for ‘through goods trains’ and all goods trains and is arrived at by dividing the total train kilometers by total train engine hours of the concerned service. Detentions to goods trains at roadside stations enter into the calculations and have therefore the effect of bringing down average speeds.

$$\text{Average Speed of Goods Trains} = \frac{\text{Train kms.}}{\text{Train Engine hours.}}$$

2. Some of the factors on which the average speed of goods trains depends are:
- (a) The proportion of the density of trains to the sectional capacity. The nearer a section is worked to its sectional capacity, the proper the speeds obtained.
 - (b) Hauling power of the engines used, quality of coal and quality and adequacy of water supply standard of maintenance of engines and time taken by loco pilots for loco requirements.
 - (c) Loads of trains.
 - (d) Condition of rolling stock, particularly the brake power available.
 - (e) Standards and maintenance of signalling and interlocking.
 - (f) Facilities at watering stations, facilities at roadside stations to complete shunting in the minimum time and shorter block sections which will increase the sectional capacity.
 - (g) Engineering restrictions – permanent and temporary gradients and curves.

Average Net Train Loads (in tones):

This figure refers to the average freight load carried in tones, i.e., to that portion of load which earns revenue for the railway.

$$\text{Average Net Train Loads} = \frac{\text{Net Tonne kms.}}{\text{Trains Kms.}}$$

Average Gross Train Loads (in tonnes): This figure represents the average overall load of goods trains i.e. the freight load plus the weight of the rolling stock.

$$\text{Average Gross Train Loads} = \frac{\text{Gross Tonne kms.}}{\text{Train kms.}}$$

The principal factors affecting this figure are:

1. The tractive capacity of engine on goods train services.
2. The gradients on various sections of the line.
3. The nature of goods carried.

$$\text{Shunting Engine Kms. Per 100 Train Kms.} = \frac{\text{Shunting Kms.} \times 100}{\text{Train Kms.}}$$

2. However, for the same division or / railway, the pattern of traffic remaining the same, rise in this figure is indicative of wasteful shunting.

Net Tonne kilometers per Engine Hour:

The figure of net tonne kilometers per Engine hour is a very useful index of the efficiency of freight working on a division. Net tonne kilometers indicate the amount of revenue earning work done while engine hour measure the cost of if doing it.

$$\text{Net Tonne Kilometers per Engine Hours} = \frac{\text{Net Tonne kms.}}{\text{Engine hours}}$$

A decrease in net tonne kilometers per engine hour may be due to factors such as:

1. Shunting engine hours not using cut down in proportion to the decrease in traffic offering.
2. Increase in departmental, assistance required, assisting hot required and light engine running.
3. Decreasing in the average train and or the average speed of goods train.

4. Decrease in the average starting wagon load or in the wagon loads of wagons received from other divisions.
5. Increase in the proportion of unbalanced traffic.
6. The type of traffic carried heavy or light.

Average Detention per Wagon:

1. All wagons
2. Through loaded wagons.

Detention suffered by stock in a yard depends, interalia, on the layout of the yard and on the number of trains per day that can be dispatched in various directions. Target figures have been laid down for each yard for detentions to all wagons and through loaded wagons. Such targets take into consideration the condition of work and facilities available in the yard concerned. Detentions in excess of this figure indicate inefficient yard work. Lesser detentions mean lesser cost of handling wagons in yards.

$$\text{Average Detention per Wagon} = \frac{\text{Total Detention Hours}}{\text{No. of Wagons dispatched}}$$

Number of Wagons Dealt with per Shunting Engine Hour:

The number of wagons that a given yard can deal with per shunting hour depends, interalia, on its layout. Accordingly a target figure has been prescribed for each yard to enable the efficiency of yard work to be gauged. As shunting involves cost, the higher this result, greater the efficiency of the yard.

$$\text{No. of wagons dealt with per shunting engine hour} = \frac{\text{No. of Wagons dealt with}}{\text{Shunting Engine hours}}$$

Locomotive Performance

Engine Kilometers per Day per Engine in Use:

This figure is compiled separately for passenger, mixed and goods train services as well as for all services refers to 'engines in use'. This is affected by such factors as:

1. The average run of trains.

2. The average speed of trains.
3. The engine links.
4. The location of engine shed with respects to the stations which they serve.

$$\text{Engine Kms. per day per engine in use} = \frac{\text{Engine Kms.}}{\text{Engine days in use}}$$

Engine Kilometres per Day per Engine on Line:

This figure is also compiled by services and for all services put together. The proportion that this figure bears to the corresponding figure of ‘engine kilometers per engine day per engine in use’ indicates the proportion of available engines ‘on line’ that were put to effective use during the period in question.

$$\text{Engine Kms per day per engine on line} = \frac{\text{Engine Kms.}}{\text{Engine days on line}}$$

Quantity of Fuel Consumed per Engine Kilometers by Services:

This figure indicates the fuel consumption in relation to Engine Kilometers only and does not replace the tonnes hauled. \

$$\text{Quantity of fuel consumed per engine km by service} = \frac{\text{Quantity of Fuel Consumed}}{\text{Engine kms.}}$$

Quantity of Fuel Consumed per 1000 Gross Tonne Kilometres by Services:

This figure indicates the fuel consumption in relation to the work done and is, therefore, a better index of fuel consumption than the quantity of fuel consumed per engine kilometer figure. The main factor that influences this result is the gross load of the train. It is derived by the formula given below:

$$\frac{\text{Quantity of Fuel Consumed} \times 1000}{\text{Gross Tonne kms.}}$$

Traction Energy consumption per engine km and per 1000 gross tonne kms is worked out exactly in the same way, replacing 1000 litres of diesel by kwhs.

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**OPERATING RATIO:**

Operating Ratio is the ratio of the total working expenses excluding suspense but including appropriations to DRF and Pension fund, bear to its gross earnings. In other words, it represents the percentage of Working Expenses to Total Earnings.

$$\text{Operating Ratio} = \frac{\text{Gross Working Expenses} \times 100}{\text{Gross Revenue Receipts}}$$

Operating Ratio has been regarded as one of the most important financial statistics and has frequently been used as an index of the operating efficiency of a Railway. This ratio continues to be worked out from year to year and is reflected in the accounting system. In comparing the ratio of one year with another of the same Railways, great care must be taken to see that the terms “Working expenses” and “Gross earnings” are clearly defined and that the figures have been compiled on the same basis. The object of a Railway Administration is to keep this ratio as low as possible consistent with efficient working and good maintenance; it will tend to fall with efficient working, increase of traffic and fall in expenditure.

#### **Steps to reduce the working expenses:**

1. Downsize the staff (closure of unproductive units, multi skilled labor, computerization etc.)
2. Achieving efficiency in fuel usage (reducing detention to trains, avoiding wastage of fuel, efficiency in train running, detention to a Diesel train for 1 hour incurs nearly Rs. 3000 extra expenditure)
3. Privatization
4. Leasing out the sidings to Private operators.
5. Introduction of ‘Wagon Investment Scheme’
6. Phasing out Vacuum Braked rolling stock.
7. Reducing the incidents of claims.
8. Setting up ‘Power Station’ for Railways in coordination with NTPC.

#### **Steps to Increase the Earnings in Railways:**

##### **I. Freight:**

1. Keep the targets for increased freight movement and achieve it.
2. Vigorous marketing strategy
3. Multi Modal Transport
4. Recapture the lost piecemeal traffic
5. Decentralization of powers
6. Incentive offers to the loaders.

##### **II. Coaching:**

1. Good customer care
2. Run coaching trains with increased capacity
3. Run special trains like summer specials, pilgrimage specials, Mela specials etc.
4. Palace on wheels, village on wheels improved tourism activities.
5. Introduce EMU, DMU rakes for medium distance travel.
6. MMTS, Metro Rail, etc., to cater to the needs of suburban dwellers.

7. Full computerization
8. E-Ticketing and full-fledged operation of IRCTCL
9. Leasing out SLRs
- 10.Reducing the incidents of accident

### **SUNDRY EARNINGS**

Leasing out the railway land, Technology transfer through RITES, IRCON to other countries like Malaysia, Bangladesh, Mexico etc., Leasing out Telecom lines through Rail-tel Corporation. Consultancy and maintenance service for procurement/maintenance in ‘own your wagon scheme’ Supply of quality food and water (Rail Neer) through IRCTCL. Display of private advertisements in Railway area, coaches, etc.

### **OCCUPATION RATIO**

This is the Ratio which the Volume of passenger traffic bears to the carrying capacity of the train or Carriages of a particular class and is expressed as-

$$\frac{\text{Passenger KM x100}}{\text{Seat KM}}$$

It is an Index which gives the incidence of overcrowding in trains:

- a) It gives the trend of passenger traffic class wise and the extent of overcrowding over the different sections of the line or the line as a whole.
- b) It helps the commercial and operating officers to regulate the passenger train service by providing required stock, particularly in these days when the public demands more facilities whereas the Railway has to utilize its stock efficiently and economically. The Commercial Department arranges special trains on fairs and melas.
- c) This information when obtained section wise helps to increase or decrease the load of the train at particular stations by attaching/detaching passenger carriages.

## **LOCO LINK:**

Loco link is an arrangement of locomotive for working a set of trains from one station to other station for Mail/Express/Passenger trains. Loco link gives the requirement of locomotive required to run the given number of trains. Loco link is prepared by HQ office in consultation with **COM**.

Factors to be considered while preparing a loco link:

1) Availability of the Loco.

2) Trip Inspection:

Mail/Express or Passenger locomotives are required to be given trip inspection as under as per AC traction manual:-

After running of 3000 kms or at completion of a trip whichever is later.

Therefore, loco link has to be prepared in such a way that the trip inspection is done

as per the yardstick and no loco runs overdue trip inspection in the link. Loco link should have the provision of the trip inspection at suitable interval.

3) Lie over period at destination station:

When a loco completes its journey after working a train, this loco is sent to yard, trip shed etc. This loco is again attached to the train as per the link. The period for which it remains idle at destination station (i.e. the time period when loco is

detached and again attached to train) is known as lie over period of the locomotive.

given to locomotive. Therefore, lie over period of locomotive is a loco link will depend on the following:-

### **A) Lay out of yard and location of trip shed :**

If the locomotive is to be given trip inspection during the lie over period, the time (T) to be available during the lie over period should be as under:-

$T = \text{Time taken for trip inspection (Tt)} +$

Time required for movement of loco

from station to trip shed and back (Tm)

Generally, the time required for trip inspection is 2 hours to 2 hour 30 minutes.

However, time is also taken to attend the drivers booking regarding loco defects.

On

an average, it is seen that one hour time will be required to attend to various types of

defects booked by drivers. Therefore, for trip inspection, time to be given is about 3'30" to hours considering the practical working in trip shed. Sometime, when loco arrives in trip shed, staff may be busy in dealing with the problem of other loco. In that case, loco has to wait. Therefore, allotting a time of 4 hours for trip shed in case

of trip inspection to be done is quite reasonable and practical.

Similarly, some time will be taken for movement of electric locomotive from station to trip shed. Again this time will vary from one destination to other.

Generally, trip sheds are located in the yard in such a way that loco can be moved

from station to trip shed within 30” time. However, due to variation in yard lay out and other operating condition trip sheds are to be located far away from station where engine is detached. In such situation, the time taken to move the loco from station to trip shed may be as high as two hours.

**B) Whether destination in a terminus :**

Moreover, if the destination of the train is CSTM or HWH or Madras etc. where the railway track terminates, the locomotive at such station cannot be immediately detached and sent to trip shed. Therefore, loco has to remain on station

platform till the rake is backed to washing siding in the yard after about 45” from the

arrival of the train. This aspect should also be taken into account while planning the

loco link.

**Practical example**

Central Railway locomotives are reaching HWH after working the train like 2151 Samrasta Exp. As HWH is a terminus station and also the trip shed is located away from station at Santaragachi S.E. Railway requires a lie over period of 10 to 12 hours

for trip inspection for the reason explained in above paras.

**4) Consultation with other Railways/Divisions :**

While planning the loco link, other Railway or division (where the loco will be detached and attention will be given) should be consulted for requirement of time for

lie over period. Similarly, trip inspection schedule should also be planned and place

should be nominated in the link.

**5) Provision of Schedule Inspection (IA, IB or IC of loco) :**

Loco link should include the withdrawal of loco for monthly schedule after it has worked for 35 to 40 days in the link. Withdrawal of the loco at Homing Shed station should be planned in such a way that it suits the homing shed by way of working hours for carrying out the schedule.

In electric loco sheds, normally locos are placed for schedule inspection at about 2 to

3 hours in (0-8) shift of working. This helps the homing shed in carrying out complete testing of locomotives by 8 hours. The staff in (0-8) shift will give complete

detail of unscheduled work to be carried out along with schedule work.

This will enable the staff in day shift to carry out the work properly. Therefore, withdrawal of loco to be planned by such trains which reaches homing station at about 0 to 1 hour so that loco reaches the homing shed just in time. Therefore, withdrawal of loco to be planned while considering following points:

i. When to withdraw the loco – By suitable train so that it reached homing shed

station at about 0 to 2 hours.

ii. From which train to withdraw the loco -

This should also be decided judiciously after studying the working time table. there are some trains where time allowance and running time is sufficient, such trains can make up the loss of time which takes place while changing the engine for withdrawing the same for such inspection. Generally, for changing the engine 10'' extra is taken for loco movement and vacuum creation.

From this link in fig. (shown Next page) , we find that for running trains between Igatpuri-Nasik, Igatpuri-

#### **Calculation of the requirement of engines:**

The loco link gives the bare minimum requirement of engines. Therefore, the actual engine requirement will be as under:-

The requirement of loco = Bare minimum requirement  
+ repair allowance.

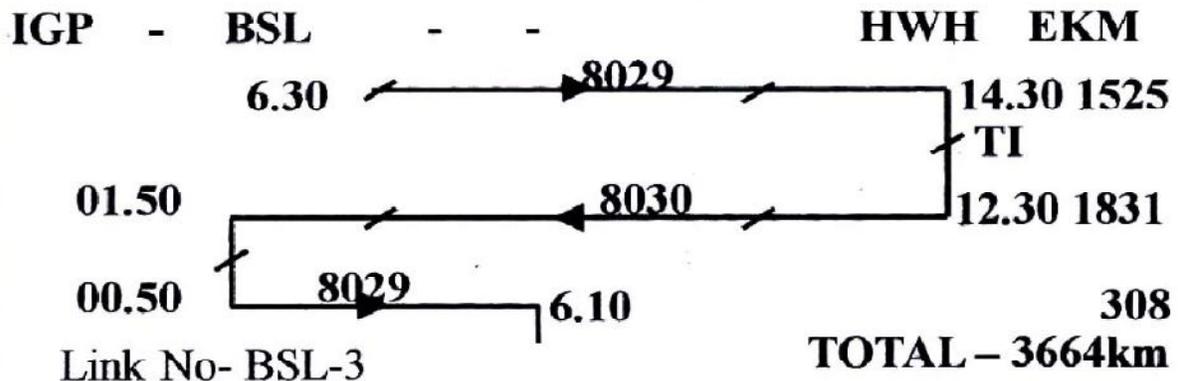
The repair allowance for Mail/Express locomotives is 9.2 statistical. Therefore, requirements of locomotive will be :-

Bare minimum requirement as per loco link  
0.92

#### **CONCLUSION**

In this subject, we have learned to draw loco link and also factors to be considered for drawing a loco link. More practical should be done to draw loco links from the Railway time table for better understanding.

**AC LOCO LINK OF C.RLY – CR-3 LINK NO. BSL-3**  
**Air – brake loco link (WAM4)**



Link No- BSL-3

No. on of loco Reqd .for link = 6

No, on holding Basis = 7

(Since power detached at BSL for schedule Insp.)

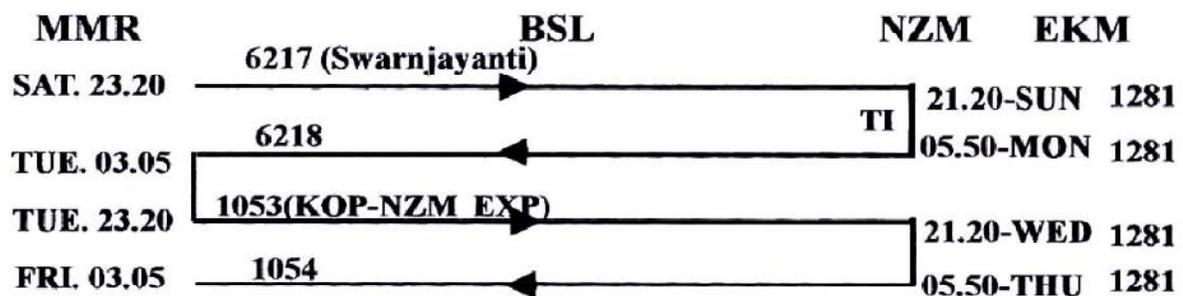
Total link engine Km /day = **3664km**

**Utilization (KM/LOCO/Day) = 3664/6 = 611 km**

**AC LOCO LINK OF C.RLY – CR-5**

**LINK NO. BSL-5, Air – brake loco link (WAM4)**

w-e-f- 01. 09. 2004 ( Weekly Train )



Link No- BSL-5

**TOTAL – 5124 km**

No. on of loco Reqd .for link = 01

No, on holding Basis = 01

Total link engine Km /day = **5124/7 = 732 km**

**Utilization (KM/LOCO/Day) = 732 km**

## AC LOCO LINK OF C.RLY – CR-4

| LINK NO. BSL-4, |                              | Air brake (WAM4) |     |                                                                                                                                                                                                                                |
|-----------------|------------------------------|------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BSL             | MMR                          | IGP              | NGP | G    HWH            EKM                                                                                                                                                                                                        |
| 07.15           | → 1354                       |                  |     | 15.40    308                                                                                                                                                                                                                   |
| 21.10           | ← 1323                       |                  |     | 18.15    124                                                                                                                                                                                                                   |
| 00.45           | ↻ 2129                       |                  |     | 04.50    1707                                                                                                                                                                                                                  |
| 00.35           | ↻ 2130 Azad Hind. Exp.    TI |                  |     | 21.10    1707                                                                                                                                                                                                                  |
| 06.30           | TI                           | → 1039           |     | 19.10    713                                                                                                                                                                                                                   |
| 21.10           | ← 1040 Mah. Exp.             |                  |     | 08.20    713                                                                                                                                                                                                                   |
| 14.50           | ↻ 1324                       |                  |     | 17.30    124                                                                                                                                                                                                                   |
| 18.00           | ↻ 1353                       |                  |     | 09.55    308                                                                                                                                                                                                                   |
|                 | ↻ Link Again after TI        |                  |     |                                                                                                                                                                                                                                |
|                 |                              |                  |     | <u>Link No- BSL-4</u><br>No. of loco Reqd .on link basis    = 08<br>No, on holding Basis(for sch.,cc) = 09<br>Total Km /day                            = 5704<br>Utilization (EKM/LOCO/Day)= $\frac{5704}{8} = 713 \text{ Km}$ |

## **PAPER –II**

### **I WORKING OF TRAINS GENERALLY AND GENERAL AND SUBSIDIARY RULES**

#### **What is the Absolute Block System of train working?**

'Absolute Block' refers to a system where the track is considered to consist of a series of sections, such that when one train is occupying a section of track (the **block section**), no other train is allowed to enter that section. In addition, no train can enter an empty block section without first securing the permission of the station in advance. This is the most widely used system for ordinary train routes.

A station or signalbox controls a block section in one direction (from its rear), and no train may enter that block in that direction without permission from that signalbox (the station or signalbox is said to accept or receive the train). When a train has been accepted, no other trains can be accepted on that block section until it has left that block section.

Obviously the two signalboxes at either end of the block section have to tightly coordinate their actions, especially in the case of block sections that allow bidirectional movement on a single line. The permission to enter the block may be in the form of a physical token carried by the train crew while the train is in the block, or may be implicit in the aspects of signals governing access to the block.

The block section is usually taken to be the section of track from the most advanced signal controlled by the station in the rear (usually the starter or advanced starter signal) , and the rearmost signal controlled by the station ahead (usually the home or outer home signal).

Sometimes a long stretch between two stations may be formed into two or more block sections (intermediate block) to increase track utilization. The same principle applies in receiving a train from one intermediate block section into the next one. The signal controlling entry to an intermediate block section may be operated by staff at one of the stations, or may have a small signalbox (block hut) where the signal is located.

In automatic block territory, however, there may be several block sections between stations; the signals protecting entry to these sections are controlled entirely by the movements of trains on the sections, as detected by track circuits.

The portions of track that lie between the rearmost outer signal controlled by a signalbox of a station to the most advanced starter signal controlled by a signalbox of the same station are said to be within **station limits**, or to form the **station section**. Thus, as one goes along the track, one passes from the station limits of one

station, through one or more block sections, and then enters the station limits of the next station. The act of admitting a train into station limits is termed **reception**, and the act of sending it out of the station is termed **despatch**.

The restriction on more than one train or rake occupying a block section is stringent and can be lifted only in very special circumstances, some shunting operations, for repair and maintenance work, or emergency operations. For instance, a material train may be sent into a block section that already has other departmental vehicles on it. A traffic train may be sent into a section that has an inspection trolley on the tracks. In all such cases, appropriate caution orders are issued to the drivers of the trains involved, and the driver of any vehicle that is proceeding into the block section in contravention of standard block working rules must carry the appropriate authority to proceed.

Within station limits, however, trains may be moved around by the signaller or station master without reference to other stations or signalboxes, and in fact, depending on the rules for **station working** in effect for the station, shunting operations, calling-on signals, etc. may allow more than one train to occupy a section of track within station limits. There are many stations where two full trains are routinely moved to the same track, to use the same platform (see the trivia section).

Station working rules are determined for each station in consideration of its peculiar track layouts and facilities. Movements within station limits are generally restricted to a lower speed (15km/h) except for through trains on the main running line(s). Analogous to station limits, **yard limits** are the regions associated with marshalling yards, sheds, etc. where the requirements of shunting or other activity make it desirable to relax the requirements on the number of trains or vehicles occupying a section of track.

Block working, or the method used to implement the block system, can be of several kinds, noted below.

**Block instruments** (see below for details) control the coordinated movement of trains on the block section; the block instruments of the two stations or signalboxes at either end of the block section are electrically interconnected for this purpose. (Normally a simple audio-frequency modulated code transmitted over trackside or underground wires is used for this purpose; earlier block instruments were connected directly (by DC voltages).) In physical token block areas, the block instrument is also the device that dispenses the tokens, and hence is also known as the **token instrument**.

Block instruments are quite old. However, in some areas with light traffic, block instruments were not used. Instead, magneto-driven telephone communication was

provided between adjacent stations to allow coordination of signals (also known as **telephone block**).

In areas with **track circuits** ([previous page](#)) block working may be accomplished without block instruments by using the information from the track circuit to coordinate the aspects of signals using electric or electronic circuitry.

In [automatic signalling](#) areas, block working is handled by the track circuits connected to the signalling system such that the movement of the trains controls the signals.

Block working can be done with **axle counters** too. Here, the task of deciding whether a train has entered a section without parting can be automated by counting the axles as they pass the last signal from the dispatching station and comparing with the count of the axles at the home signal of the receiving station. If they match ('last vehicle proving') the previous block can be opened for the next train. More often, though, axle counters are used in conjunction with track circuits simply to detect the presence of a train on a section for block working.

Communication between the two signalboxes these days is often by telephone, but in the past telegraph instruments that sounded bell signals were universal, and these are still used a lot today. The bell code used by IR [is described below](#).

IR's classifies stations according to their role in the block system and their rules for issuing Line Clear indications. See the [section on stations](#) for details.

Also see [the extracts of IR General Rules on train working](#).

### **Private Number**

A Private Number is a number, obtained over the telephone or telegraph from the station master of the station granting Line Clear or requesting points to be set or signals to be pulled off. This number is noted on the paper forms such as the Line Clear Ticket or Conditional Line Clear Certificate and can be verified later at the receiving station (the one granting Line Clear) or requesting the signal or points change. This is an additional safety device.

Private numbers are printed or typed up in advance on booklets which are supposed to remain in the custody of the station master or his immediate staff. In theory, it is not possible for anyone outside the station master's office to predict the next private number that will be issued since they are pseudo-random in nature and do not follow any sequence or pattern. Hence, the verification of the private number provides a good confirmation that the action it refers to was performed correctly and not in an unauthorized manner. Under rare circumstances, two

consecutive private numbers may turn out to be the same or nearly so; in this case the second one is cancelled and a new one issued by the station master.

In addition to blocking or clearing trains, private numbers can be used to confirm control messages for rerouting trains, permitting unusual movements such as trains on the wrong line, issuing new speed limits directly through the control office, or exchanging any other messages between section controllers and station masters. For instance, notifications of temporary speed restrictions, temporary line blocks or power blocks, etc. Another case is that of closing the gates for road traffic at non-interlocked level crossings (in this last case, private numbers are generally used only when the level crossing is on a block section and not within station limits).

Security buffs will note that while the possession of a valid private number shows that the action performed by someone was authorized, it is not an entirely fool-proof system. In particular, the system does not guard against impersonation (the person to whom the private number is revealed may not be who he says he is, or the person providing the private number may not be the one authorized), nor does it provide non-repudiation (the person who is given the private number can disown having obtained it) or spoofing (there is no way for the person who receives a number to verify that the number provided is a legitimate private number before acting upon it). Hence, mechanical or other interlocking systems are still used in conjunction with private numbers.

### **Non-block train working**

IR on occasion uses the following systems of train working:

#### Following trains system

In this system, trains are worked between two stations by dispatching them one after the other (all in the same direction) at specific intervals (generally at least 15 minutes). The trains are run at specific speeds (less than 25km/h). This ensures that there should only be one train in every 5km stretch in the section between the stations. The maximum number of trains simultaneously present in the section is restricted to 4.

Trains are dispatched only after the station masters of both stations have been in communication and have agreed upon the number and timing of the trains. The driver of a train being dispatched in this system must carry written authorization (*Authority to Proceed, Following Trains System*) specifying the destination, speed, and details of preceding and following trains on the section.

This system was introduced in many areas as an emergency measure in 1941 in order to cater to the urgent wartime needs of the railways in India. It is still used in

some areas when there is a requirement for large unidirectional movements of many freight trains (also known as the *Corridor System*).

#### Pilot guard system

Here, a *pilot guard*, a specially authorized railway official, accompanies the train (he is said to pilot the train). As above, a train is not dispatched until at least 15 minutes (usually) have elapsed since the preceding train, and speeds are limited to 25km/h.

The pilot carries written authorization (*Pilot Guard Ticket*) with the destination, departure time, and speed of the train, which has to be handed over to the station master at the destination station. Only one pilot guard is allowed to be on duty for a section at any given time, of course. Rarely, the driver or guard of the train may carry the ticket and the pilot may not actually accompany the train. (Usually the case if two or more trains are to leave together from one station under this system, in which case the pilot guard travels on the last one.)

The pilot guard system is used when it has been agreed upon earlier that trains will be dispatched in a specific direction using the system, but the precise times are not known in advance and communication cannot be established with the destination station immediately prior to sending the train out.

#### Train-staff and ticket system

This system is used when it is necessary to send trains in both directions between two stations on a single line. A single *train staff* is used, and trains may only be dispatched from the station which has physical possession of the train staff.

If several trains in one direction are to be dispatched, they are spaced in a manner similar to the Following Trains system, and each driver except that of the last train is handed a *train staff ticket* authorizing him to proceed. (Technically, the driver is also supposed to be shown the train staff before proceeding). The driver of the last train physically carries the train staff along with him in the locomotive. (This is similar to the pilot guard system except that the train-staff replaces the pilot guard's physical presence on board the locomotive). No other train can then be dispatched from that station.

The driver then hands the train staff over at the destination station. From that point onwards that station can start dispatching trains in the other direction in the same manner. Hence the train staff acts as a guarantee that trains are not simultaneously dispatched in opposite directions. E.g., Tilwara - Tilwara Mela (NR).

#### One train only system

In this system, as the name implies, there is only one locomotive being worked at a time in the (single-line) section between two stations, or a single station and a spur section of track with no station at the other end. One of the two stations at either end (or the sole station if there is only one) is designated the *base station* for the section. The loco may be dispatched light or with a vehicle load in either direction at any time.

The driver carries a metal token given to him by the station master of the base station. The token may also be in the form of a wooden baton. The token identifies the section for which it is valid. Of course, only one such token should ever be in use at any time on the section. (Rarely, written authorization is provided instead of the token.) This system is usually employed only for short single-line spurs, and not on through lines. E.g., Batala - Qadian, Nawan Shahr - Rahon, Ratangarh West - Sardar Shahr, Garhi Harsuru - Farukhnagar.

A variant allowing one locomotive at all to be present (no other locomotives are even allowed to be brought into the station limits) called One Engine Only system was in effect between Rajka Ka Sahaspur and Sambhal Hatim Sarai. (All these are on NR.) This system is also used sometimes on new tracks where pointwork or signalling construction is not yet finished.

In Jan. 2004, the second phase of the Chennai MRTS began operation with the One Train Only system between Thiruvanmiyur and Thirumayilai because points for turnouts / sidings were not yet ready across a stretch of 9 stations.

### Section Clear

In this system, permission to approach a station is given to a train only when the line is known (manually verified) to be clear up to the first stop signal of the station. The driver is given written authorization as the authority to proceed.

## **Systems of Working**

### **Systems of Working: GR 7.01**

**(1)** All trains working between stations shall be worked on one of the following systems, namely –

- (a) The Absolute Block System,
- (b) The Automatic Block System,
- (c) The Following Trains System,
- (d) The Pilot Guard System,
- (e) The Train Staff and Ticket System, or

(f) The One Train Only System.

**(2) Systems of working in force on Central Railway: SR 7.01 – 1**

- (a) The absolute block system,
- (b) The automatic block system, or
- (c) The one train only system.

**Essentials of the Absolute Block System: GR 8.01**

(2) Where trains are worked on the Absolute Block System

- (a) no train shall be allowed to leave a block station unless Line Clear has been received from the block station in advance, and
  - (b) on double lines such Line Clear shall not be given unless the line is clear, not only up to the first stop signal at the block station at which such Line Clear is given, but also for an adequate distance beyond it;
  - (c) on single lines such Line Clear shall not be given unless the line is clear of trains running in the same direction, not only up to the first stop signal at the block station at which such Line Clear is given, but also for an adequate distance beyond it, and is clear of trains running in the direction towards the block station to which such Line Clear is given.
- (3) Unless otherwise directed by approved special instructions, the adequate distance referred to in clauses (b) & (c) of sub-rule (1) shall not be less than –
- (a) 400 metres in case of two-aspect lower quadrant signalling or two-aspect colour light signalling, and
  - (b) 180 metres in case of multiple-aspect or modified lower quadrant signalling.

**Essentials of the Lock and Block System: SR 8.01 – 1**

- (a) It shall not be possible to take ‘‘Off’’ last stop signal to permit a train to leave a block station until ‘Line Clear’ has been received from the block station in advance.
- (b) The entry of a train into the block section shall cause the last stop signal to be automatically replaced at ‘On’.
- (c) Line Clear shall not be given by the block station in advance until the preceding train has passed over the section clearing track circuit or it’s equivalent and until stop signal / signals in rear of the train has / have been replaced to ‘On’ position.

## **Essentials of the Automatic Block System on double line: GR 9.01**

- (1) Where trains on a double line are worked on the Automatic Block System –
  - (a) the line shall be provided with continuous track circuiting or axle counters,
  - (b) the line between two adjacent block stations may, when required, be divided into a series of automatic block signalling sections each of which is the portion of the running line between two consecutive stop signals, and the entry into each of which is governed by a stop signal, and
  - (c) the track circuits or axle counters shall so control the stop signal governing the entry into an automatic block signalling section that –
    - (i) the signal shall not assume an ‘‘Off’’ aspect unless the line is clear not only up to the next stop signal in advance but also for an adequate distance beyond it, and
    - (ii) the signal is automatically placed to ‘On’ as soon as it is passed by the train.
- (2) Unless otherwise directed by approved special instructions, the adequate distance referred to in sub-clause (i) of clause I of sub-rule (1) shall not be less than 120 metres.

## **Essentials of the One Train Only System: GR 13.02**

Where trains are worked on the one train only system, only one train shall be on the section on which this system is in force, at one and the same time.

## **Procedure in case of accident or disablement on the one train only system: GR 13.04**

- (1)(a) If the train becomes disabled and requires assistance or if an accident occurs which renders it impossible for the train to proceed, the train shall be protected in accordance with the provisions of Rule 6.03 in the direction from which assistance, if necessary, is being obtained.
- (b) The Guard of the train shall convey advice of the circumstances under which the train has become disabled and is not able to proceed, to the SM of the station from which assistance can best be obtained, and if it is necessary for such Guard to proceed to such station, shall instruct the Loco Pilot in writing to keep the train stationary until his return, and obtain his written acknowledgement.

(2)(a) Such SM, if he is not the SM of the base station, shall communicate this information to the SM of the base station. On receipt of such information, the SM of the base station may allow another engine to enter the line.

The engine so sent shall either be accompanied by the Guard of the disabled train, who shall explain to the Loco Pilot where and under what circumstances the disabled train is situated, or the Loco Pilot of the engine so sent shall be given a written authority, containing such instructions as to where and under what circumstances the disabled train is situated and such other particulars as may be necessary to enter the line unaccompanied by the Guard of the disabled train.

(3) The Guard of the disabled train shall be responsible for the safe and proper working of the line until the disabled train has been moved and any other engine sent to the assistance of the disabled train has been returned to the base station.

(4) If there is no Guard of a disabled train, the Assistant Loco Pilot or Loco Pilot shall perform the duties imposed by this rule on the Guard, provided that the engine is not left unmanned in terms of Rule 4.20.

SR 13.04 – 1 If it is necessary for the Guard to remain with his train, he will send the advice to the nearest station through the Assistant Loco Pilot stating the nature and cause of the breakdown and at once protect the train in accordance with GR 6.03 in the direction from which relief is expected. If assistance has been asked for, he shall not allow the engine or any portion of his train to be moved until such time assistance arrives.

### **TSL working on Double line SR 6.02 – 1**

1. Whenever an accident to a train or track or other obstruction takes place on a double line, the traffic may temporarily worked under the following systems:
  - a. By obtaining 'line clear' on electric speaking instruments,
  - b. By the installation of single line block instruments and SLB demarcating the block section in the wrong direction, if the affected line is likely to remain out of use for a substantial period.
2. On receipt of reliable information in writing that one line is clear, SM, in consultation with SCOR and the SM of the station at the other end of the section shall take steps to introduce TSL working.
3. In case of doubt, Track Safe Certificate shall be obtained by the engineering Official not less than the rank of an Inspector.

4. TSL working shall be introduced between the nearest stations provided with cross-over between Up and Down lines.
5. IBS and C' class stations shall be kept closed and the commutators of the related block instruments shall be locked in 'TOL' position. Caution Indicator shall be hung on the handle of block instruments in case of Daido instruments.
6. SM proposing TSL working shall issue a message, to the SM at the other end of affected section, containing the following information under exchange of Private Numbers.
  - a. Cause of introduction of TSL working.
  - b. The line in which the TSL working is proposed.
  - c. Source of information that the said line is clear.
  - d. Place of obstruction.
  - e. Names of intermediate stations if any, which would be out of use.
  - f. Assurance that the trap points, if any have been spiked or clamped and padlocked.
  - g. Assurance that if the train is running on the right line, the last stop signal shall be kept in the ON position. In case the train is running on the wrong line, all fixed signals shall be kept in the ON position; and
  - h. The number and timings of the last train which arrived or left the block station issuing the message.
7. After exchanging of the above information, line clear shall be obtained through the means of communication.
8. Authority:
  - a. Right line – T / D 602
  - b. Wrong line – T / D 602 and T / 511 / Pilot out memo.
9. Three parts of T / D 602 are as under:
  - a. Line clear ticket;
  - b. Authority to pass signals in ON position; and
  - c. Caution Order in which the following are mentioned –
    1. Line on which the train is going and place of obstruction,
    2. Speed of the first train shall be 25 km/h subject to observance of other speed restrictions in force,
    3. Warning to observe neutral section for the train going on wrong line in electrified section and clamping / spiking of trap points if any, and
    4. Other speed restrictions in force.
10. Loco Pilot of the first train shall inform all Gatemen and Gang men on the way about the introduction of TSL working specifying the road on which the trains will run.
11. The Loco Pilot of the train proceeding on the wrong line shall switch ON the flasher light and sound frequently short whistles.
12. Second and subsequent trains may run at their booked speed subject to observance of other speed restrictions in force.

13. When a train is stopped between stations on account of accident, failure, obstruction or other exceptional cause and the Loco Pilot finds that it cannot proceed, it shall be protected as per GR 6.03.
14. Trains proceeding on the wrong line shall stop opposite the first stop signal of the right line or at the last stop signal of the wrong line whichever comes first. SM shall depute a railway servant with a written authority to stop the train on danger hand signal and thereafter pilot the train into the station.
15. Trains proceeding on the right line shall be received by taking 'Off' the approach stop signals.
16. Resumption of normal working:
  - a. On receipt of a written certificate from a responsible engineering 'Official that the obstructed track is free and safe for passage of trains, SM shall issue a message to the other station / stations under exchange of Private Number and in consultation with the SCOR, normal working shall be resumed.
  - b. Block instruments and all fixed signals including those of IBH which were treated as closed shall be brought into use immediately.
  - c. An entry shall also be made in the TSR of all stations concerned showing the time of suspension of double line working, introduction of single line working and resumption of normal working.
  - d. Loco Pilot of the first train entering the section after resumption of normal working shall inform all Gatemen and Gang men on the way about the resumption of normal working.
17. All the records in connection with the TSL working shall be retained at the station and the TI of the section must scrutinize and submit his report to the DRM within 7 days of the resumption of normal working.

**All Communication Failure on Double line**

(SR 6.02 -3)

1. In the event of total interruption of communication (TIC) occurring between two stations on a double line section, i.e. when Line Clear cannot be obtained by any one of the following means stated in order of preference viz :
  - a. Block instruments; Track circuits or Axle counters;
  - b. Telephones attached to the Block Instruments;
  - c. Station to station fixed telephones wherever available;
  - d. Fixed telephone such as Railway auto phones & BSNL / MTNL phones;
  - e. Control Telephone;
  - f. VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run.
 The following procedure shall be adopted for train passing.
2. Train shall be stopped and the Loco Pilot and the Guard of the train shall be advised of the circumstance by the SM on duty.

3. SM shall issue T / C 602 to the Loco Pilot of each train which shall include –
  - a. Authority to proceed without line clear;
  - b. Authority to pass signals in ON position;
  - c. Caution Order – 25 km/h when the view ahead is clear and 10 km/h when the view ahead is not clear.
4. In the event of a Loco Pilot approaching or passing any portion of the line where the view ahead is not clear, a railway employee with hand signals must be sent in advance to guide the further movement of the train. A sharp look out ahead should be kept and the engine whistle freely used.
5. The train shall be piloted, by a railway employee equipped with hand signals and detonators, through a tunnel only after ascertaining that it is clear. Before entering a tunnel, the head lights, side and tail lights shall be lit.
6. Trains shall be allowed to enter the block section after a clear interval of 30 minutes between each other.
7. Guard shall keep a sharp look out in the rear and be prepared to exhibit a hand danger signal to prevent the approach of a train from the rear and to protect if necessary.
8. When a train is stopped in the block section, on account of accident, failure, obstruction or other exceptional cause and the train cannot proceed, it shall be protected by placing three detonators at a distance of 250 – 250 and 10 meters apart from the train on the way out.
9. No train shall be backed. In unavoidable circumstances, it shall be backed only after placing three detonators at a distance of 250 – 250 and 10 meters apart in the rear of the point up to which the train is to be backed.
10. On approaching the station ahead, Loco Pilot shall stop the train outside the first stop signal and sound continuous long whistle.
11. If the signal is not taken ‘Off’ within 10 minutes and if the detention is likely to exceed 10 minutes, train shall be protected in the rear by placing three detonators at a distance of 250 – 250 and 10 meters apart, and Loco Pilot shall send his assistant to the station / cabin to inform the fact that the train is waiting at the signal for its admission into the station.
12. After the train being admitted into the station by taking ‘Off’ the signals, the Loco Pilot shall make over the authority to the SM.
13. Trains must continue to work on this system until anyone of the means of communications is restored by the competent authority.
14. A record of all trains passed over during the period shall be maintained on the TSRs at both the stations concerned.
15. As soon as anyone of the means of communication has been restored, the SMs must send messages under exchange of Private Numbers and Line clear shall not be obtained or given until both the SMs are satisfied that all trains dispatched from their stations have arrived complete at the other stations. SCOR shall be intimated about this.
16. All the records in connection with the working of trains during the course of TIC shall be inspected by the TI of the section, who shall prepare a report on

the working of trains and shall forward the same along with his report to the DRM within 7 days of communication.

## All Communication Failure on Single line

(SR 6.02 – 4)

1. In the event of total interruption of communication (TIC) occurring between two stations on a single line section, i.e. when Line Clear cannot be obtained by any one of the following means stated in order of preference viz:
  - a. Block instruments; Track circuits or Axle counters;
  - b. Telephones attached to the Block Instruments;
  - c. Station to station fixed telephones wherever available;
  - d. Fixed telephone such as Railway auto phones & BSNL / MTNL phones;
  - e. Control Telephone;
  - f. VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run.The following procedure shall be adopted for train passing.
2. The SM who has a train to dispatch through the affected block section shall open communications by establishing contact with the SM of the block station at the other end by sending an engine or self propelled vehicle or any other vehicle as under in the order of preference viz:
  - (i) Light engine;
  - (ii) Train engine;
  - (iii) Motor trolley / Tower wagon accompanied by a Guard or SM;
  - (iv) Trolley / Cycle Trolley / Moped Trolley accompanied by a Guard or SM;
  - (v) Diesel car / Rail motor car / EMU rake after ensuring that all passengers have detrained.
3. The SM on duty shall advise the circumstances and the purpose of the staff being sent with the above engine / vehicle into the affected block section to open the communication. He must also satisfy himself that the staff thoroughly understand the rules of working of trains during TIC on single line, and obtain their signature on the authority in token of acknowledgement.
2. T/B 602 is issued to the Loco Pilot of the vehicle going to open the communication after explaining the situation. It has the following five parts:
  - a) Authority to proceed without line clear,
  - b) Authority to pass LSS at ON,
  - c) Caution order – 15 /10 /walking pace,
  - d) Line clear enquiry message,
  - e) Conditional line clear message.
3. Duties of Loco Pilot and Guard:
  - a) Loco Pilot shall go through the authority and ensures the correctness of the entries,
  - b) Loco Pilot shall proceed putting on the flasher light,
  - c) Loco Pilot shall observe the speed restriction in force,

- d) Loco Pilot shall sound frequently short whistles,
  - e) Loco Pilot shall stop at an adequate distance if any vehicle is seen coming from the opposite direction and proceed after consultation with the Loco Pilot of the vehicle regarding the importance of the train, distance covered, gradients, catch siding etc.
  - f) Loco Pilot shall stop at the FSS and sound continuous long whistle to attract the attention of SM.
4. On hearing the whistle, SM gets the points set and facing points locked and receives the train by taking 'Off' the signals and collect T/B 602 and make proper entry in TSR.
  5. The following authorities are issued to the Loco Pilot of the returning vehicle –
    - a) T/G 602 or T/H 602 based on the conditional line clear message of T/B 602,
    - b) T/369 (3b) to pass the signals at ON,
    - c) T/409 or T/A 409 to observe the speed restrictions in force,
    - d) T/F 602 – reply to line clear enquiry message,
    - e) T/E 602 – if required to ask line clear.
  6. While returning, the Loco Pilot of the vehicle proceed at normal speed, and SM will receive the train by taking 'Off' signals and obtain T/F 602 and T/E 602.
  7. SM issues the following authorities to the waiting train before dispatching –
    - a) T/G 602 or T/H 602 based on T/F 602.
    - b) T/369(3b) to pass signals at ON.
    - c) T/409 or T/A 409 to observe speed restrictions in force.
    - d) T/F 602 – if T/E 602 is received.
    - e) T/E 602 – if required to ask line clear.

Note: When the number of trains is same at both stations, SM shall issue T/E 602 and T/F 602 to Loco Pilot / Guard of each train.
  8. When more than one train is waiting for line clear, T/E 602 is filled with details of all the trains.
  9. If the other SM is in a position to receive all the trains, he shall give separate private number to all the trains and fill the details in T/F 602.
  10. Under such circumstances, trains are dispatched at an interval of 30 minutes issuing the following authorities –
    - a) T/G 602 or T/H 602,
    - b) T/369(3b),
    - c) T/409 – speed 25 /10 kmph.
  11. On availability of any one of the means of communication, both SMs ensure that the section is clear and exchange private numbers and fill T/I 602.

12. Details of the movement are entered in TSR which are examined by TI and a report will be sent to DRM within seven days.

### **Abnormal Working in Automatic Section**

#### **A. Working of trains during prolonged failure of signals when means of communications are available (S.R.9.12 – 1)**

1. In the event of prolonged failure of all signals the ‘Officials concerned of the Signalling Department shall take immediate steps to inform all concerned.
2. Before any train is allowed to enter the affected section, it shall be brought to a stand and the Loco Pilot, Guard, Controller and the Station Master concerned ahead of the affected section shall be informed.
3. The Station Master shall obtain ‘Line Clear’ for the train by one of the following means of communications, viz.
  - a. Station to station fixed telephones wherever available;
  - b. Fixed telephone such as Railway auto phones & BSNL / MTNL phones;
  - c. Control telephone;
  - d. VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run.
4. The Station Master on duty at the station in advance shall not give such ‘Line Clear’ unless –
  - (i) The whole of the last preceding train has arrived,
  - (ii) The line on which it is intended to receive the incoming train is clear at least 180 meters beyond the Platform Starter or the place at which the trains usually come to a stand, and
  - (iii) All points have been correctly set and all facing points locked for the admission of the train on the said line.
5. Before handing over the ‘Authority to Proceed’ all the points over which the train will pass, shall be correctly set and facing points locked.
6. Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are provided.

7. T/D 912 and T/409 are issued to the Loco Pilot who shall proceed with utmost caution and must not run at a speed exceeding 25 km/h under any circumstances, subject to other speed restrictions in force. He shall continue to look out for any obstruction until he reaches the station ahead.
8. Loco Pilot of all subsequent trains shall also proceed with great caution, subject to other speed restrictions in force and must continue to look out for any possible obstruction.
9. When approaching the next station, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one continuous long whistle.
10. The Station Master shall send a man in uniform to pilot the train from this signal, who shall obey hand signals, if any, relayed from the station platform.
11. Clearance of the section by each train shall be intimated to the station in rear under exchange of Private Numbers.
12. Train Signal Register shall be brought into use and all entries regarding train working recorded there in. The Controller shall be kept advised of all train movements taking place in the affected section, if possible.
13. As soon as signals are put right by competent authority, normal working may be resumed, after exchanging messages with Private Numbers by the Station Masters concerned, assuring that the section is clear. Controller's permission, if possible, should be obtained before resumption of normal working.
14. All the records in connection with train working on this system shall be retained at the station and the Transportation Inspector of the section must scrutinize them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

**B. Working of trains during failure of all signals when no means of communication are available (S.R.9.12 – 2)**

1. In the event of failure of all signals and when trains cannot be worked by any of the following means, viz.,

- a) Station to station fixed telephones wherever available;
- b) Fixed telephone such as Railway auto phones & BSNL / MTNL phones;
- c) Control telephone;
- d) VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run.

The following procedure shall be adopted for train passing:

- 2. The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
- 3. All points over which the trains will pass shall be correctly set and facing points locked.
- 4. Whenever any power operated points have to be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are available.
- 5. Before any train is allowed to leave the station the Loco Pilot/Motorman and the Guard of the train shall be advised of the circumstances by the Station Master.
- 6. The Station Master shall give the Loco Pilot/Motorman of each train T/B 912 which shall consist of three parts:
  - (a) An Authority to Proceed without line clear;
  - (b) A Caution Order restricting the speed to 25 km/h over the straight with clear view and to 10 km/h when approaching or passing any portion of line where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause subject to the observance of other speed restriction imposed and speed over facing points being restricted to 15 km/h.
- I An authority to pass the Automatic signals intervening the two nominated stations at 'On', the Semi-Automatic signals and manually operated signals on being signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and the Gate signals cautiously up to the level crossing where he must ascertain that the gates are locked and the hand signals are displayed by the Gateman before he proceeds further.

7. No train shall be allowed to enter an affected section until there is a clear interval of 15 minutes between the train about to leave and the train which has immediately proceeded, unless a shorter interval has been prescribed under special instructions.
8. Before entering a section where there are tunnels, the Loco Pilot shall light the buffer lamps and the electric head lights. A tunnel shall be entered only after it has been ascertained that it is clear. If there is any doubt on this point, the train shall be piloted by a Assistant Loco Pilot or Guard equipped with hand signal and detonators.
9. The Guard shall keep a sharp lookout in the rear and be prepared to exhibit a danger signal to prevent the approach of a train from the rear and to protect it, if the detention is likely to exceed 5 minutes.
10. When approaching the next station the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one continuous long whistle.
11. The Station Master after satisfying himself that all points have been correctly set and facing points locked, shall arrange for a man in uniform to pilot the train from the signal.
12. The Loco Pilots of all trains shall make over the Authority to the Station Master of the nominated station at the end of the section.
13. A record of all trains passed during the course of total interruption of communications shall be maintained in the Train Signal Registers.
14. Trains must continue to work on this system until either the signals are put right or any one of the means of communications is restored by the competent authority.
15. As soon as the signals are put right, normal working of trains shall be resumed, but where signals continue to remain inoperative and any of the means of communications is restored, trains will be worked as per SR 9.12 – 1.
16. All the records in connection with train working on this system shall be retained at the station and the Transportation Inspector of the section must scrutinize them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

### **C. Temporary Single Line working in Automatic Block System: SR 9.12 – 3**

In the event of obstruction of one line on the double line section and the communications are available, the following procedure shall be adopted –

1. When it is desired to introduce temporary single line working on double line on electric communication instruments, the Station Master at one end of the affected section shall, on receipt of reliable information in writing that one line is clear, take steps to introduce temporary single line working on that line in consultation with the Section Controller and the Station Master of the station at the other end of the section.
2. If there is reason to suspect that the line over which temporary single line working is to be introduced is also fouled or damaged, temporary single line working shall not be introduced until a responsible engineering 'Official not below the rank of an Inspector has inspected that section and certified that the road is safe for the passage of trains.
3. The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
4. After ascertaining that one of the lines is clear for the passage of traffic, the Station Master proposing single line working shall issue a message under exchange of Private Numbers, containing the following information, to the Station Master at the other end of the affected section –
  - (a) Cause of introduction of single line working,
  - (b) Line on which single line working is proposed.
  - (c) Source of information that the said line is clear,
  - (d) Place of obstruction,
  - (e) Restriction of speed, if any, on the line,
  - (f) Number and timings of the last train which arrived/left the station nominated by the Divisional Railway Manager under clause 3 above, and
  - (g) An enquiry about speed restriction in the opposite direction.

5. On receipt of acknowledgment and reply to the enquiry regarding speed restriction in the opposite direction, from the Station Master at the other end confirmed by a Private Number, single line working may be introduced.
6. Line clear shall be obtained on Station to station fixed telephones wherever available or Fixed telephone such as Railway auto phones & BSNL / MTNL phones or Control telephone or VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run, as the case may be, and trains run on the procedure set out above.
7. Line Clear shall not be given unless the line on which the train is to be received is clear at least 180 meters beyond the first Stop signal pertaining to the correct line or the last Stop signal pertaining to the wrong line whichever is earlier.
8. For each first train running in the wrong direction, line clear shall neither be asked for nor given unless the two Station Masters have assured under exchange of Private Numbers that all the trains running in the right direction have already arrived complete at the station in advance.
9. Except for each first train running in the right direction for which the procedure laid down for the trains running in the wrong direction shall be followed, subsequent trains running in the right direction may be allowed to follow each other on Automatic Signal indications, provided the station in rear has intimated the station in advance of the fact that he is permitting particular train/ trains to follow and has ascertained the latter's readiness to receive it/them. Private Numbers shall be exchanged for this transaction.
10. Train Signal Register shall be introduced at the stations on affected section.
11. All the points over which the train will pass shall be correctly set and facing points locked before the movement of any train is authorized over them.
12. Whenever any power operated points have to be operated for diverting trains these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are available.
13. Loco Pilots of all trains, except the first train, running in the right direction must be given T/A 912 to pass the last Stop signal which shall be kept at 'red'. The Loco Pilots of trains running in the wrong direction shall be given T/D 602 and T/A 912 before entering the affected section.

14. The Caution Order part of T/D 602 shall include
  - (i) The line on which the train or light engine is to run,
  - (ii) The kilometers between which the obstruction exists,
  - (iii) Any restriction of speed, and
  - (iv) the instructions that Automatic signals in the wrong direction should be considered as out of use even though they may be showing 'Proceed' or 'Caution' aspect.
15. Loco Pilots of trains running in the wrong direction are instructed to pass the intervening non-governing (i.e. relating to the opposite direction) Semi-Automatic and Manually operated signals on being hand signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and the gate signals cautiously up to the level crossings where he must ascertain that the gates are locked and hand signals are displayed by the Gateman before he proceeds further. He must also ascertain that the points of the outlying sidings are correctly set and locked before passing over them.
16. Loco Pilot of the first train introducing temporary single line working in the wrong direction to stop and inform all Gatemen and Gangman on the way about the introduction of temporary single line working. The road on which the trains shall run is also to be specified.
17. The speed of all trains running in the wrong direction shall not exceed 25 km/h.
18. When approaching the next station Loco Pilot of the train running in the wrong direction shall bring his train to a stand opposite the first Stop signal pertaining to the correct line or the last Stop signal pertaining to the wrong line on which he is running, whichever he comes across first, and sound one continuous long whistle.
19. The Station Master, after satisfying himself that all points have been correctly set and facing points locked, shall arrange for a man in uniform to pilot the train from this signal, who shall obey hand signals, if any, relayed from the station platform. Manual/Semi-Automatic signals, if any, shall, however, be passed on a written authority on the prescribed form to be issued by the Station Master.
20. Resumption of normal working –

- (a) On receipt of written certificate from a responsible engineering official that the obstructed track is free for passage of trains, the Station Master shall issue a message to other station or stations, as the case may be, under exchange of Private Numbers and decide, in consultation with Section Controller, the train after the passage of which the normal working has to be introduced.
- (b) An entry shall also be made in the Train Signal Registers of all stations concerned showing the time double line working was suspended, time single line working was introduced and the time normal working was resumed.

21. All the records in connection with the temporary single line working shall be retained at the station and the Transportation Inspector of the section must scrutinize them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

## **II PASSENGER TRAIN OPERATION**

### **COACHING OPERATIONS**

Marshalling is attaching of vehicles on a train in a predetermined manner to ensure train safety, provide operational expediency and to maximize customers' convenience.

#### **Marshalling of Mail/ Express/Passenger trains:**

The general principles kept in view while marshalling are:

- i) Position of upper class coaches, ladies compartment, dining car, in respect of easy accessibility normally the dining cars or the catering compartments, air conditioned and upper class coaches, shall be marshaled in the middle of the train or as near to it as possible and ladies compartment will be near Guard's SLR.
- ii) Non-passenger carrying stock shall preferably be marshaled next to the engine or in the rear of the train, defining the area for stacking, loading and unloading of parcels packages and mails on platforms.

#### **The Marshalling of SLRs and Anti-Telescopic/Steel-Bodied Coaches on Passenger Carrying Trains:**

(a) Marshalling of mail and Express trains :

- (i) In case of SLRs which have passenger portion on one side, luggage cum brake portion on the other, the SLR should be marshalled in such a way that the luggage and brake portion is trailing outermost or next to engine.
- (ii) In case of new design of SLRs with Passenger portion in the middle, these can be positioned in either way.
- (iii) In case, anti-telescopic / steel bodied SLR is marshalled with passenger portion next to the engine or rear SLR with the passenger portion towards the end of the train "the passenger portion of SLR should be locked.
- (iv) In case of shortage of SLRs, any other suitable coaching vehicle or a VPU may be provided, and in case a coaching vehicle is attached its doors should be locked to ensure that passengers can not occupy it.
- (v) Two anti-telescopic or steel-bodied coaches should be marshalled inside the anti-telescopic or steel – bodied SLRs at both ends.

(vi) After providing anti-telescopic or steel – bodied SLRs for Mail/ Express trains. All the available anti-telescopic or steel-bodied SLRs should be used on main line passenger trains and after meeting this requirement, the rest should be used on Branch Line Passenger Trains. Anti-telescopic or steel-bodied SLR should be marshalled in the same way as in the case of Mail/ Express trains.

(b) Marshalling of short service trains:

The Railway Board has permitted marshalling of three coaches in front and rear of the SLR on short trains, provided they have working brakes and subject to two end coaches at either side are anti-telescopic. An Inspection Carriage may be attached as fourth trailer coach on such trains. (Also refer SR 4.23 – 4)

(c) Non- Passenger coaches:

VPs, LRs, WLRRMs and other coaching vehicles, which do not carry passengers may be marshalled as operationally convenient. Inspection carriage whether anti-telescopic / steel bodied or not occupied or being worked empty may be marshalled as operationally convenient.

(d) Reserved Bogies and Saloons Occupied by VIP:

Reserved bogies occupied by passengers and Inspection Carriages/ Saloons occupied by VIPs should be treated as passenger coach and marshalled accordingly. If they are anti-telescopic or steel-bodied, they can be marshalled anywhere as operationally convenient. If they are wooden-bodied, they should be marshalled inside the required number of anti-telescopic/steel-bodied coaches.

(e) Sectional/Through Service Coaches:

1. Sectional / through service coaches, if they are anti-telescopic or steel-bodied, may be marshaled as operationally convenient. However, wherever feasible, they should be marshaled inside the SLR, LR, and VP etc.
2. (ii) Sectional / through service coaches, other than anti-telescopic/steel-bodied, should be treated like other passenger coaches in the train formation and should, therefore, be marshaled inside the required number of anti telescopic/steel bodied coaches.
3. While determining the position of marshalling of sectional thorough service coaches, the fact that these coaches will be attached/detached en route, leaving the train service coaches exposed as outermost, should be borne in mind and therefore, the marshalling order of sectional / through service coaches and train service coaches decided in accordance with the instructions contained in Para (a) to (e) above.

(f) POH/Sick coaches returning to Shops:

- (i) In the case of POH/sick coaches, which are returned to shops for major repairs and are attached to passenger trains, such coaches should be properly locked and windows secured, so as to prevent entry of any passenger into these coaches. In that case, it is not necessary to attach these coaches according to safety marshalling instructions and can be attached next to the train engine or rearmost as convenient. If for any reason, it is not possible to lock up these coaches, such coaches should be treated like other passenger coaches in the train formation and should, therefore, be marshalled inside the required number of anti-telescopic/steel bodied coaches.
- (ii) It is also desired that the above instruction on safety marshalling of passenger carrying trains should be made known to all the staff and officers concerned and these should be followed strictly.

**Block Rake Composition:**

For block rake composition and marshalling order, 'Normal composition and marshalling order and rake link of passenger trains' are issued by COMs of respective railways from time to time.

**Mixed Trains:**

Classifying a passenger carrying train as a mixed train needs authorization by COM. On such a train, coaching and goods stock shall normally, remain in one block (except where a deviation is permitted) and their marshalling will also be laid down by the COM. Normally goods stock should be attached next to engine and coaching stock inside the rear brake van.

Attaching of Four Wheelers on Passenger, and Mixed Trains:

1. Rules on the subject contained in GR 4.08 and in the current Working Time Table should be followed.
2. On MG and NG the single empty or loaded 4 wheeler must not be marshalled between an engine and bogie vehicle/wagon or between two bogies /wagons.
3. However, on BG the above restrictions do not apply to match trucks along with Break Down trains and whenever under special instructions four-wheeled brake-van is attached next to engine provided that such stock is fitted with center buffer couplers.

**Attaching of Vehicles outside the Rear Brakevan:**

Vehicles outside the rear Brakevan can be attached in accordance with the provision of SRs [4.23-4](#), [4.23-5](#) & [4.29-1](#)

1. Attaching of vehicles in rear of Brakevan in fully vacuum train
2. Attaching of power plant bogies
3. Attaching of damaged vehicles

**Marshalling Chart for Passenger/Mixed/Goods Trains:**

| S. N. | Type of Stock                                                   | Marshalling order                                                                                                                              |
|-------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Empty coaching stock, covered motor trucks etc.                 | As operationally convenient but preferably marshalled as outermost vehicle at either end.                                                      |
| 2     | Motor car etc. loaded in open wagons covered with wagon sheets. | In the rear of the Train either as a last vehicle or inside the rear brake van                                                                 |
| 3     | Banking Engine                                                  | (a) On ascending gradients in rear of train, (b) On descending grades in front, (c) Both gradients in quick succession, if any, then in front. |

## **ATTACHMENT OF DEAD LOCOMOTIVES:**

(Railway Board's letter: 1. No. 99/Safety(A&R)/19/10 dated 10.12.2001 and 2 No.2000/M(L)/466/803 dated 1/9<sup>th</sup> March 2004)

### **I. Conditions for attachment of dead locomotive:-**

- i) Certificate for 'Fit to run' is issued by Section, Engineer/Loco Inspector/Power Controller for Passenger/Goods train.
- ii) Maximum permissible speed of the train shall not be less than maximum permissible speed of the dead locomotive
- iii) Arrangements have been made to ensure that brakes can be applied on dead locomotives in synchronization with working locomotives
- i) Running of double/triple headed is permissible on the section over which the dead locomotive is to be hauled.
- ii) When a dead electric locomotive has to be moved on a non-electrified section, special check shall be made regarding its infringement to the schedule of maximum moving dimensions. In the case of any infringement, the dead locomotive shall be treated as an ODC.
- iii) As a final check, the coupled locos should be run for about 500 meters and the Loco Pilot shall check for any abnormal rise in the temperature of the wheels of the dead locomotive and shall also check it at subsequent stops during the journey.
- iv) In addition to freight/passenger trains, a dead locomotive can also be attached to Mail/Express trains including Superfast trains but excluding Rajdhani and Shatabdi if the locomotive brakes including proportionate brakes are operational and maximum permissible speed of the locomotive is not less than the booked speed of the train in which it is being attached. Locos with inoperative brakes can be attached subject to the brake power of the train being within the permissible limits. Locomotive with defects in under-gear equipment can be attached only in freight trains.

### **II. Attaching/hauling of dead locomotives by Mail/Express/Super fast/Passenger trains:**

- i) Only one dead locomotive (diesel/electric) can be attached.
- ii) Brake power of the train should be 100% excluding dead locomotive
- iii) As far as possible, brake should work on dead locomotive. However, if it is not possible, then in the case of air-braked train, brake pipe and feed pipe of working locomotive shall be connected to brake pipe and feed pipe of trailing stock and dead locomotive will work as piped vehicle.

In the case of vacuum braked train, vacuum pipe of locomotive shall be connected with vacuum train pipe of trailing stock and the dead locomotive shall be treated as a piped vehicle. If the locomotive is fitted with pure air braked system and vacuum pipe is not provided on locomotive then it should be attached with air braked trains only.

### **III. Attaching/Hauling of dead locomotives by goods trains:**

Movement of maximum three locomotives (2 working + 1 dead) with load is permissible subject to observations of all restrictions on operation of double/triple headed working locomotives in the section provided that brakes in dead locomotives are operational.

The above instructions should be strictly followed and it is, therefore, advised that these guidelines be supplemented in the respective Subsidiary Rules also.

### **IV. Escorting of dead Locomotives:-**

Escorting of locomotives (diesel as well as electric) attached to freight and passenger carrying trains is not necessary if the brakes including proportionate are fully operational and the dead locomotive is attached next to the train engine. The dead locomotive will continue to be escorted if attached in the rear of brake van or has defect in under-gear equipment.

**Medical Relief Van:**

Can be run without brake van (Local SR should be followed for Ghat Section)

**Inspection Carriages attached to Light Engine:**

Maximum three inspection carriages occupied by the officers can be attached. In case more than 3 Inspection carriages are attached, rules regarding running of goods trains without brake van will apply.

**Rake Link:**

The overall high-level plan for rake movements is described in a rake link booklet issued for official use only by a Zonal railway, which has details of the planned rake links, composition, marshalling order, permissible loads and accommodation in Mail / Express & Passenger trains handled by the Zone.

The schedule of the train is drawn by the respective Zonal Railway so as to run to the maximum before taken for the regular maintenance. This is published through a booklet by COM and CPTM. The rake link is drawn up keeping in mind asset utilization and maintenance schedules for the stock. The day-to-day operational schedules are then drawn up with this as the basis and used by the operational staff / marshalling yard staff. The rake link is also used by the reservation staff to determine the sizes and distribution of reserved accommodation quotas.

At each station based on the train schedules, a platform and siding occupancy chart is drawn up. This provides, for each day of the week, an indication of which platforms and sidings are occupied by which trains at what times. Introducing a new train at a station (originating or passing through) involves finding an appropriate slot in this chart.

The overall scheduling, traffic planning, and operational aspects of a division are under the control of the Sr. DOM of a division who is ultimately responsible for the performance of the division in terms of punctuality, efficiency etc.

FOIS and COIS help manage the movements, schedules and punctuality of freight and coaching stock respectively in a better way. The FOIS and COIS networks include many 'ARCs' (Activity Reporting Centre) such as goods sheds, sidings, transshipment points, interchange points, wagon repair workshops, C&W locomotive sheds, fuel stations, crew change locations, stations, and locomotive workshops. Data from all of these ARCs is incorporated into the system

**Rake sharing:**

Almost all trains, except special short distance trains, share rakes, for better utilization of the rolling stock, and also to reduce the pressure on stabling sheds which may not have facilities to stable or store many rakes for very long. Two-way rake sharing is very common, where a rake is used for one train and then immediately used for another train going back towards the rake's point of origin, so that the same rake is later available for first train's service on another day.

Sometimes rakes are shared between a pair of trains that do not have the same two endpoints. Often the station that is the point of origin or termination of a train owns the rake for that train, but it is not always so. A rake may also work a service outside its owning railway's jurisdiction.

Trains which are not very frequent (weekly or bi-weekly) will often not share their rakes with any other trains. Trains that cover more than about 2000 km usually have dedicated rakes, because primary maintenance on coaching stock is usually done after every 2500 km.

Rake link has the details of which trains share rakes with which other trains, how and when rakes need to be formed or split up, and many other details as under:

- Composition
- Marshalling order
- Vacuum or air brake
- Permissible load
- Train watering
- Postal accommodation
- Sanction runs
- Locomotive allotment
- Maintenance stations
- Lie-over periods
- Distance in Km. earned in a round trip

Instructions for sending sick / defective coaches / coaches due for POH to shops

#### **Advantages of Rake Links:**

1. More service to the required/needy area.
2. Idling hours of coaches reduced before or after the maintenance schedule.
3. Coaching yard congestion is reduced
4. Utilisation of coaches increases.
5. More Passenger throughput thereby more revenue to railways.
6. More availability of platforms, pit lines and maintenance lines.

#### **Factors to be taken into account while chalking out the rake links:**

- a) Schedule of Train
- b) Time and station where primary and secondary maintenance of rakes are undertaken
- c) Time for shunting placements and removal of coaches at various checking points
- d) Optimum utilisation of coaching stock.

**Number of rakes required for a link = The turn round of the link in days.**

#### **General Instructions:**

1. In order to provide the allotted accommodation on various trains, it is imperative that the different types of coaches earmarked to run on set rakes operating on Mail, Express and Passenger trains are invariably kept intact.
2. Should it become absolutely necessary to detach a coach from a set rake due to sick marking or any other valid operational reason, it should be ensured that the same is replaced on the relevant set rake on the next trip.
3. All concerned will ensure that the authorised composition of all trains is constantly watched and deviation should be rectified at the earliest opportunity. Supervisory officials will also concentrate on proper upkeep of coaches by checking up fittings, equipment, etc frequently.

#### **TIME TABLES – INTRODUCTION:**

Time table is a schedule in a table form, showing details of arrivals and departures at every station of all trains carrying passengers. These time tables are issued by every zonal railway,

generally every six months. However, with effect from 1st July 1991, new time table is issued once a year in July only. On Indian Railways there is another time table, "Trains at a Glance", which is issued by the Railway Board and carries stoppages of important trains at important stations only all over the Indian Railways, as against the Zonal Time Table which indicates stoppages of all scheduled trains at every station on the railways. The objectives of passenger time table are as under:

1. information for intending passengers regarding
  - i. schedules of arrivals and departures;
  - ii. through sectional and suburban trains;
  - iii. connections at various stations;
  - iv. and the amenities and facilities available to the passengers at stations;
2. a guide to the railway staff
  - i. in arranging trains crossings, precedence,
  - ii. receipt and despatch at terminals, and
  - iii. provision of motive power, crew, maintenance and other facilities;
3. a guide to postal services for transmission of mail;
4. a data base for calculating the requirements of rolling stock; locomotives and running staff;
5. To satisfy statutory requirements. Section 65 of the Indian Railway Act lays down that railways must exhibit time tables for the guidance of the public.

The origin of Railway time table is very interesting. Railways in Great Britain, where the railways started first, were hesitant to issue time tables and advertised fixed schedules of trains they were running. With the teething problems galore, they were not sure whether they would be able to live up to the commitments after they tell the public fixed schedules of their trains. At that time, one Mr. Bradshaw used to sell maps. In order to increase his sales of maps, he also started publishing schedules of the trains which could take people to the places of which he used to sell maps. Railway companies consented to his publishing the time tables as it did not involve any commitment on their part. Soon, however, they realised the usefulness of advertisements of the fixed timings as their clientele went up and the companies started issuing the time tables themselves. With the passage of time, teething problems were also taken care of. Today, there is statutory obligation in some of the countries, for the Railway companies to publish their schedules. Indian Railways are required to do so under Section 49 of Indian Railways Act, 1989.

**TYPES OF TIME TABLES:** Time Tables can be divided into two categories:

**(1) For passengers**

(a) Zonal Time Table and Guide - This time table is published annually by each of the zonal railways. In addition to the train timings, there is additional information which is useful for the passengers. This mainly relates to rules regarding reservation, refunds, and cancellations of confirmed booking, fare tables and other facilities which Railway administrations provide for the convenience of passengers. Copies of these time tables are available for sale at the booking offices and book stalls.

(b) Trains at a Glance - This is an abstract form of time table for all Indian Railways. Important trains are shown with time of arrivals and departures at important stations right from the originating station to the terminating station in one table only. Users have, therefore, not to refer to a number of tables to find out the schedule of a particular train. Main points of information for passengers are also given.

(c) Military Time Table - This time table is not made available for general public. Defence is one of very big users of rail infrastructure and a number of special trains for Defence are run by Railways. In order that these trains can be run at short notice, we have detailed timings of such trains worked out, which are also revised along with revision in the public time tables from time to time. These timings are kept secret.

## **(2) For Railway staff**

(a) *Staff copy of public time table* - Train timings portion of zonal time table, without the additional pages for guidance of passengers and advertisements, is bound and copies given to staff dealing with passengers for their guidance.

(b) *Working Time Table* - Large amount of information is required to be conveyed to the railway staff connected with running of trains and maintenance of the infrastructure on the railways. They must not only know the timings of the trains but also a lot of information about the track, signals and other facilities and this information is conveyed to the staff through the working time tables. These time tables are printed division wise, separately for passenger and goods trains. It is desirable for all railway officers to familiarize themselves with these time tables.

(c) *Graphic Time Tables* - These time tables are in the graph form and are prepared for the guidance of the Control staff. These time tables are prepared section wise, indicating over a graph not only Mail, Express and Passenger trains, but also Goods trains that can be run during 24 hours. These are also called 'Master Charts'. These are generally displayed in the front of the Section Controllers in their cabins, so that they can constantly relate actual running of trains to the fixed schedules laid down in the time tables.

**FACTORS INFLUENCING FRAMING OF TIME TABLES:** As seen earlier, time tables are for the benefit of users as well as railways. Factors that influence framing of a time table can also be broadly classified into two categories:

### **(1) Users Requirement**

(a) *Departure and arrivals* - Train journeys in India are generally long and take a lot of time. It is convenient to the passengers to leave originating station in the evening and arrive at the destination in the morning so that they are able to perform the journey without wasting any working time during the day. No wonder, most of the trains from the major cities leave in the evening and arrive in the morning. Passengers performing journeys to and from important stations enroute also like the trains to arrive at convenient timings and not in the middle of the night. All this is always not possible to accommodate, but efforts are made by Railways to adjust timings in such a manner that this requirement of passengers is kept in mind. With the increase in the number of trains, staggering of departures and arrivals become unavoidable, otherwise a lot of additional capacity would be required at the terminals and sections to deal with large number of trains in the evenings and mornings. This would also lead to idling of assets for bulk of the time as no trains would be scheduled to leave or arrive around mid day or mid night. Trains should touch important cities and junctions at convenient time.

(b) *Connections at junctions* - Railway trains run between selected pair of stations. Large number of passengers travel to stations which are not served by direct trains. They have, therefore, to change trains at junction stations. It is, therefore, the requirement of the passengers that the connecting trains should leave the connecting junction station as soon after the arrival of the first train as possible, so that they are not required to waste a lot of time waiting for the next train. It is also necessary that such connections are not so very tight that the passengers miss the previous train. Railways have, therefore, to design their time tables in such a manner that passengers are reasonably assured to connection within about an hour or two of the arrival of the previous train. At certain junctions, staff are authorised to detain connecting trains up to a limit if an earlier train is running late.

(c) *Halts for meals, etc.* - Since railway passengers have to travel long distances and all trains are not equipped with catering facilities, halts at meal timings are provided at stations having facilities for meals, refreshments. These halts are long enough to buy their requirements from the platform.

(d) *Overall speed* - Whatever the requirement of passengers enroute, every long distance passenger desires to complete his journey as early as possible. There is, therefore, need to provide fast, long distance trains to cut down journey time of bulk of the passengers. Railways have, therefore, introduced a large number of super fast trains during the last decade or so.

(e) *Range of travel distance* - From the view point of travel distance, railway passengers can be classified into three categories:

- i. *Short distance* - This category of passengers travel between major industrial commercial centres or capital/district cities and town or villages around such major cities. This group of passengers generally live in surrounding town and villages and commute to the city centre/industrial centres for employment regularly. The travel distance is generally up to about 80 kilometres. In very rare cases, people travel on regular basis for more than 80 kilometres also. These passengers like to reach the cities in the morning hours to be able to attend offices/factories and want to go back as early as possible after the office is closed so as to arrive at their residence in the evening. These passengers generally travel in groups as they belong to the same place and travel together regularly. Their livelihood is dependent on punctual running of trains. They are very vociferous and do not tolerate changes which do not suit them. At locations where industries work in shifts, there is traffic around such locations both ways. It is, therefore, essential for the Railways to provide stoppages for passenger trains for the category of passengers at convenient timings. At a few places, even long distance trains are provided halts to enable these passengers to reach their work centres in time.
- ii. *Medium distance* - In this group passengers whose range of travel falls between 80 to 300 kilometres are included. Some of these passengers travel between two important cities and prefer to have over night trains. Alternatively, they use long distance trains which are fast, but finding accommodation on such long distance trains may be a bit difficult. A large number of passengers in this group are those who work in major cities and have roots in places where they are not able to go back every day. They stay at the place of their work and visit their native place frequently, say once or twice a month. Another section of this group are those passengers who travel mainly on social or business occasion from one village/town to another. They require at least one train a day in each direction so that they can travel conveniently.
- iii. *Long distance* - These passengers prefer fast trains with increased level of comfort. They require trains which do not have many stops enroute and are able to cover the entire journey in as short a time as possible.

## **(2) Operator's Requirement**

This has to be kept in mind that the trains are run for the use of passengers and their basic requirements are supreme. Railways make efforts to ensure that they are able to cater to all reasonable requirements of the users. There are, however, certain departmental requirements which influence framing of time table. These can broadly be classified into the following categories:

(a) *Infra structural requirements* - While continuous exercises to augment infra structural facilities available for running of trains continue, these do act as a constraint to introduction of more number of trains as well as timings when trains can be scheduled. Terminal facilities like platforms, stabling lines, examination lines and repair facilities at the passenger terminals influence not only introduction of additional trains, but also timings of the trains. As there is only a certain number of trains which can be attended to during a given time, departures and arrivals of the trains have to be so spaced as to permit handling at the terminals depending upon the layout at the terminals. Simultaneous departure of one train and reception of another train may

also not be possible. While framing time table, therefore, an interval between the two operations would be required.

Availability of coaches and locomotives is another factor which influences scheduling of trains. Since these are costly assets, proper use of them has to be maintained.

Railway line also has a capacity which is provided based on certain requirements. This limits the number of trains that can run and the timing at which those trains can be run. It may be convenient for the passengers to travel at a given time but lack of adequate line capacity may force railways to run the trains at time which may not be suitable to the passengers.

These infra structural constraints can be overcome but this is very costly proposition. Even when adequate funds are available, there is long gestation period between planning and installation of facilities. This problem is particularly acute in developing countries.

*(b) Maintenance requirements* - The infrastructure required to run the trains also need maintenance periodically. The train services are so time tabled so as to enable the maintenance of rakes and locomotives at terminals as well as at intermediate points. Most of the routine maintenance of coaches and locomotives is attended to at one of the terminals, which is considered as the base and is responsible for proper mechanical condition of the equipment. This is also called 'Primary Maintenance'. Maintenance at the terminal at the other end is called 'Secondary Maintenance'. In addition, routine examination is carried out at important intermediate stations also.

Another requirement of coaches enroute is cleaning, watering and that of locomotives, watering and fuelling for which time also has to be provided. In addition to the rolling stock, fixed installations like track, platforms, signals and electrical overhead equipment (OHE) also need repairs. Time tables provide a suitable block of time during day light hours for this maintenance. Efforts are made to ensure that no passenger train is scheduled during this block of time so that equipment can be maintained in proper fettle.

*(c) Operational requirement* - In the running of trains, there are a number of operational factors which have to be provided in the time table. There are some trains which run faster than others. Slower trains have, therefore, to be stopped to give precedence to fast trains. In addition, on a single line section, only one train can run at a time in a block section. We generally do not have facilities on such sections where two trains running in the opposite direction to each other can cross without one of them being stopped. Generally less important train is scheduled to stop for crossing of fast train. Similarly, number of platforms at terminals as well as at important junction stations may be limited and a train may be delayed for reception till an earlier train vacates the platform.

There are a number of slip coaches which are required to be attached or detached at junction stations. Additional halt is required to be provided for performing shunting for this purpose. This also necessarily slows down the trains. Indian Railways have, therefore, taken a conscious decision to reduce the number of slip coaches wherever possible and it is not very inconvenient to passengers to change trains. A large number of slip coaches have already been discontinued and trains accelerated.

*(d) Change of locomotives* - Locomotives required to be changed either at places where traction changes or at stations where loco shed is located and locomotives are required to go to the shed as per the loco link.

*(e) Loading/unloading of parcels/luggage* - Stations having lot of luggage of passengers and parcels are also required to be provided additional time to permit loading/unloading.

*(f) Staff requirement* - There is a limited time up to which railway staff is expected to perform their duties. They have, therefore, to take over and made over their charge at fixed locations. A

bit of additional time is provided for the staff to examine the equipment and documents etc., being taken over.

(g) *Unforeseen circumstances* - There are a number of circumstances like signal failure, alarm chain pulling, occasional failures for which provision has to be kept. If no provision for such eventualities is kept, it is likely that the trains may run late frequently. This is generally up to the maximum of 3% of the total running time and is called 'traffic recovery time' and is provided short of big junctions, divisional/zonal interchange points. It may, however, be noted that in actual practice on most of the railways very little traffic recovery time is available.

## **IMPORTANT CONNOTATIONS USED IN CONNECTION WITH TIME TABLE:**

### **1. Maximum Permissible Speed (MPS) -**

This is the speed which a Loco Pilot cannot exceed. This is also called technical speed and is dependent upon the technical condition of the track, signalling and rolling stock in use. It is generally different for different sections and trains. Most of the express trains on Indian Railways have MPS of 100 kmph. In order to increase this speed limit, signalling and track need to be carried out and Commissioner of Railway Safety has to satisfy himself before he permits this limit to be enhanced. Very few super fast trains have MPS higher than 100 kmph. Our fastest train so far was Rajdhani Express between Howrah and New Delhi (130 kmph). But with the introduction of Shatabdi Express between NDLS - JHS, the fastest booked speed is now 140 kmph between NDLS - AGC, and 130 kmph between AGC - JHS.

### **2. Booked Speed -**

This is the speed which determines the normal running time of the trains and on the basis of which time table is prepared. This is generally 10% less than the maximum permissible speed.

### **3. Average Running Speed -**

This is the average speed of the train on run. For calculating this, total time consumed in halts is deducted from the total time taken by a train between originating and termination stations.

### **4. Commercial Speed / Overall Speed -**

This is the average time taken by the train per hour from its start to termination. Long distance passengers are concerned with this. They are not interested how fast a train runs between the stations. What they are concerned about is how fast it can reach its destination.

### **5. Speed Restriction -**

Maximum permissible speed and booked speed relate to the particular section of the railway engine. Actual condition of the track bridges, curves and nature of signalling at certain stations may require the trains to be run at speeds which should be lower than the booked speed of a particular train. For this, special speed restrictions are imposed, which are of two types:

- a. *Permanent Speed Restrictions* - These speed restrictions are the ones which are supposed to be for sufficiently long duration and are mentioned in the Working Time Table. Since copies of the Working Time Table are available with the train crew, no other intimation is required to be given to them on day to day basis. The time which the trains are expected to lose in observing its restrictions is built into the running time and is time tabled accordingly. These restrictions last the currency of a time table and are reviewed at the time of revision in the time table.
- b. *Temporary Speed Restrictions* - A number of speed restrictions may have to be imposed for a short duration either on account of defects in track and related equipment or to facilitate repairs to the track and OHE and signalling installations. Requirement of time for such repairs is assessed well in time before a new time table is introduced and this time is separately provided for in the time table and is called 'Engineering Allowance' (EA). This

time is also provided in the time table short of junction stations or at the divisional/zonal interchange points. If there are repair works elsewhere on the section, trains would run late and this would be adjusted before the junction interchange points.

### **6. Minimum Running Time**

This is the time which a train should take between two stations when running at maximum permissible speed. This is calculated taking into consideration the permanent speed restrictions that may be in force from time to time in the concerned sections. This would be different for different trains and the Loco Pilot is in no case permitted to take less than the minimum running time relevant to his train. Guards of the trains and Section Controller keep a watch on this aspect so that in case of over-speeding by the Loco Pilots, they may take steps to check them.

### **7. Normal Running Time**

This time is based on the booked speed of the train and is generally about 10% more than the minimum running time. The Loco Pilot is expected to run faster to the minimum running time when running late and is expected to make up time.

### **8. Calculation of Running Time**

Calculation of running time is based on a number of factors, viz.:

- a. Distance between the two stations
- b. Hauling power of the locomotive
- c. Load of the train
- d. Permissible speeds
- e. Permanent speed restrictions
- f. Gradients and curves
- g. Time required for acceleration and deceleration.

This time is calculated with the help of computer by RDSO and is further validated through trials.

### **9. Authorised Detentions**

This is a time for which a train can be detained at a junction station to wait for another train running late in order to facilitate passengers to maintain connections at the junction stations, some trains can be detained for a specific period, after this detention the train can give connection to another nominated train so that undue hardship to the passengers is not caused. These are, however, the outer limits and connecting train cannot be detained, if it is not likely to connect the trains to be connected within the prescribed limit. This is given in the Working Time Table.

### **Working & Public Time Table:**

A Working Time Table is published simultaneously for each division, for the exclusive use of Railway Staff. The difference between Public Time Table and Working Time Table mentioned below:

#### **PUBLIC TIME TABLE:**

1. Issue on payment
2. Information is applicable to all the stations in zone.
3. These are of various types:

- a) Detailed time Table - Zone wise
  - b) Abstract Time Table
  - c) Sheet Time Table
  - d) Trains at a glance
4. Map on Zonal Railway, Indian Railways is provided.
  5. Facilities to passengers like retiring room, Information about tourist spots are mentioned.
  6. Timings of daily, non daily passengers, Mail/Exp. trains Arr. And Dep. are mentioned.
  7. It contains information about reservations, refunds

**WORKINGTIME TABLE:**

1. Issued free of cost to the staff of the division
2. Information/Instructions applicable to only to a particular division.
3. Only one is issued
4. Divisional map is provided.
5. Operational requirements are mentioned.
6. Timings on Arr./ Dep, Run through of all trains running in the division is mentioned.
7. It contains rules and regulations with regard to
  - a. Marshalling
  - b. Movement of ODC
  - c. Location of MRT/ART and their target time etc.,

**Punctuality:**

As far as the passenger train operation is concerned the sole and core factor that gauges its efficiency is 'punctuality'. It is monitored at various levels of Railway Operation and management. It is an all-important index which decides the overall working of passenger operation. It is undeniable and understandable facts that image of Railways solely depend on this factor. Any deviation or dilution of punctuality will lead to doom and gloom on the part of everyone. Considering the essence of punctual running it is the endeavor of every railway man to strain every nerve to achieve this and no stone shall be left unturned.

**Concept of punctuality:**

Punctuality on its own cannot be defined like any scientific item. It differs with perception of persons. What is punctuality in the eyes of a passenger may not be the same from what railways perceive. Both are striking a different note.

**Passenger's perspective:**

As far as a passenger is concerned, he is more guided and governed by timings mentioned in public timetable. Accordingly he wants and wishes the train shall and must arrive and depart as per these published timings. The 'comings' and 'goings' shall not only applicable to originating destination stations, but he expects punctuality at intermediate station also. A passenger views any variation as unpunctual; he will be upset and will be in a downbeat mood if the train has not adhered to the published timings.

**Indian Railway's perspective:**

Indian Railways concept of punctuality is not the same as that of a passenger. Train working is inherited with certain innate qualities. As such train being 'track bound' the freedom of movement is possessed with certain limitations. In the case of railways a train is said to be punctual when it reaches its destination as per the arrival time given in PTT. It might not have arrived/depended from intermediate stations according to mentioned timings. Railways also wish

passengers perception of punctuality to be fulfilled, but in actual working and in practice. It may not be possible due to its uniqueness in working.

### **Not losing time (NLT) concept:**

In Indian Railways trains are running from one end of a country to another covering a network of more than 63000 route kms traversing through sixteen zonal railways and many divisions. Separate administrative set up is available for each zone/division and efficiency in working is judged through such unit-wise. A late running of a train in one railway/division due to any reason cannot be accounted in another ones performance. The receiving railway/division cannot be forced to accept the responsibility for late reception. The reasons for unpunctual running may be genuine or in genuine. It is unwise and undemocratic to blame another railway/division for delayed running of the train over another one. Under these circumstances, a concept of not losing time is evolved.

This means, if a train is taken over by a railway/division from another railway/division with a late arrival of say 15 minutes and if its continues to run with the same late and handed over to another railway/division with same 15 minutes or may be earlier also, then as far as this railway/division is concerned the train has not lost any time further and said to be punctual. This concept is known as 'NOT LOSING TIME'. In case if the train is handed over by 20 minutes late, then it is derived that the train has lost punctuality only by 5 minutes.

Calculation of punctuality:

Punctuality is calculated for train wise (Mail, Express, passenger, suburban) and gauge-wise. The formula is expressed in percentage. Targets are fixed for Zonal railways. Punctuality statistics are maintained for trains reaching destinations at right time. Punctuality statistics on Division / Railway is also maintained, so that trains are not late over a particular Division / Railway.

Formula:

$$\text{Punctuality} = \frac{\text{No. of Trains running RT} + \text{No. of trains NLT}}{\text{Total No. of passenger Trains}} \times 100$$

### **Factors affecting punctuality:**

#### 1. Operating Department:

- Faulty time tabling.
- Bad controlling.
- Late placement of rakes on platform.
- Extra time in shunting, loading & unloading.
- Signals is not taken off in time.(Rec.& Desp.)
- Delay by Station staff in asking, giving & handing over the Authority to proceed to LP.
- Missing token / tablet.
- To maintain connection with the trains arriving late.
- Late start of trains on account of Guard.
- Defective rake links.
- Extra time at road side station for shunting
- Improper planning at terminal facilities.
- Wrong Marshalling.
- Defective Loco pilot / Guard links

#### 2. Mechanical / ACT(RS):

- Failure of Passenger / Goods loco.
- Engine defects.
- Coach failure.
- Hot Axle / Flat tyre.
- Late turning out of train engine from shed.
- Air pressure / vacuum trouble, brake binding etc.
- Time lost on the run.

3. S&T:

- Failure of Points, track, signalling or interlocking.
- Failure of means of line clear working i.e. Block Instrument / Block Telephone etc.
- Failure of Control telephones.
- Non availability of signal maintainer. (ESM, MSM, TCM)

4. Engineering:

- Excessive Engineering speed restriction. (Over and above the Engineering Allowance)
- Engineering block being bursted.
- Stopping of trains on banner flags or by showing danger signals.
- Rail breakage, lurch felt by loco pilot.
- Improper track patrolling.

5. Electrical:

- Defective lights and fans in trains resulting ACP by the passengers.
- Tripping / failure of OHE.
- Failure of electrical water pump.
- Failure of Head light of the engine or bad focusing.
- Bursting of Power Blocks & Power +Traffic Blocks.
- Train lighting and Air conditioning problems.

6. Commercial:

- Inadequate labour for the work of loading and unloading work.
- Dispute due to duplicate reservations.
- Insufficient halt for loading and unloading of packages.
- Alarm chain pulling.
- Overcrowding.

7. Miscellaneous:

- Storm.
- Heavy rain.
- Floods.
- Cattle run over.
- Accident.
- Public agitation.
- Poor visibility due to thick & fog, dust.

**Remedial measures to improve punctuality - Efforts by Railways:**

Loco Pilots to run at MPS – Now a day, Loco Pilots have been instructed to run at MPS always. Earlier Loco Pilots used to run at booked speed and in case of late running only they were authorized to run at MPS, to make up time. This has been dispensed with now. This will very much reduce the pressure on Loco Pilots. In case of late running, pressure was mounting on Loco Pilots and they were under tremendous stress to make up time. To avoid this extra strain, Loco Pilots are advised to run at MPS from starting station itself.

**Starting a train before allowed time when arrived late** – At every station a specified time is given for stopping / starting. If a train arrived after the published departure in PTT, it may be started before the allowed time after ensuring all transactions are over. These will in some extent help in minimizing the late running. It is the responsibility of all those concerned to cooperate and ensure that the business connected with the train is completed and carried out at the earliest and train started soon. This will mainly applicable to parcels loading / unloading, any attaching/detaching of coaches and subsequent examination, preparing and handing over train related documents in time etc.

**Punctuality drives** – To enhance and enlighten the efficiency of punctuality, at various levels punctuality drives are conducted periodically. Recurring reasons for late running are identified and instructions are issued for corrective action. Staffs are counseled and if needed to be pulled up and punished. Awards are given for fine performances. These drive help in detecting any system defects such as poor visibility of signals, poor engineman ship, inadequate sighting distance of signals etc. Reports are made out at the appropriate levels and follow-up action is initiated.

**Punctuality meeting**—Punctuality meetings are conducted at Zonal/divisional levels at the highest level. Reasons are analyzed and directions are issued then and there. Punctuality position from divisions is reported to Zonal headquarters and in turn to ‘Railway Board daily.

Monitoring of specified trains at specified level - Punctuality of some important trains is closely monitored at higher levels. Punctuality for such trains is watched at the level of Minister/Board officials/Zonal Railway officials. This helps in creating awareness among the staff on punctuality. By this way punctuality consciousness is developed in the minds of railway men.

**Efficiency of Railway men** - Train running may be put up in the following way and efficiency can be very well judged -

**Originating Station.**

1. Leaving right time
2. Leaving right time
3. Leaving late
4. Leaving late

**Destination Station**

1. Arriving right time
2. Arriving late
3. Arriving right time
4. Arriving late.

Railway men’s efforts will be appreciated and applauded once item No 1 is taken care of.. It will also be a laudable feature if the train arrived in time due to any late start (item No 3) of uncontrollable reasons.

**Conclusion:** Punctual running of trains is not one man's affair. It reflects the concept of teamwork. All factors should work in tandem to achieve punctuality. A train might have traveled 500 Km punctually and only 5 Km may be left to reach the destination. A failure on the part of man or material at this stage may force the train to reach the destination late. All good efforts put up by many quarters so far for 500 Km will go waste due to failure of somebody or something. All parameters shall go hand in hand so that punctuality can be maintained always. Concerted efforts and cohesiveness in working is the need of the hour. In a world of competitiveness punctuality plays a prominent role in passenger train operation. Once railway man makes punctuality as a way of life, then the commons will be in cloud nine and Railways will be in the seventh heaven.

**Movement Advice:**

1. Movement advice is an advice given by the divisional control office through Central Control to the Owing Railway of the wagon / vehicle regarding their movement on the users' railway.
2. The control office advises the Central Control of the concerned Railway.
3. The Central Control conveys the message to the Central Control of the Owing Railway.
4. The movement particulars of the special kind of stock should be advised to the STM (Goods) in the HQ's office on the telephone.
5. The advice is conveyed at 10:00 hours in the morning daily.
6. The message should be included in the daily statement of special stock submitted to the HQ's office.
7. The movement advice helps in tracing of the wagons / vehicles and plan accordingly.
8. In the event of interruption of through communication, such advice shall be given to the Owing Railway within 48 hours.
9. The movement advice must contain all the detailed particulars of the wagon / vehicle along with contents there in.
10. Timely movement advice helps in smooth and safe movement of traffic.

**PPM (Passenger Profile Management):**

1. Maximization of earnings from passenger traffic by maximizing the occupation and earnings of each train.
2. CRIS has created a website [www.trainenquiry.com](http://www.trainenquiry.com).
3. Zonal Railway will create a PPM 204enter under CCM/PM of each zonal railway.
4. PPM 204enter must have a good PC with internet.
5. The zonal PPM 204enter will be linked to the Railway board PPM 204enter.
6. Zonal PPM 204enter will carry out analysis of all its primary ownership coaching trains which will include all reasoned accommodations available on these trains.
7. The zonal railway will analyze the data ware housing report options.
8. Zonal PPM centers will use the various reports to identify poorly occupied and poorly earnings trains.
  - a. The reason for poor occupation of each train will have to be analyzed and indicated with proposed course of action on a daily basis

- b. Zonal railway will send the details on a daily basis in an Excel sheet format enclosed herewith as an E-mail attachment to the Railway board PPM 205enter.
9. A comprehensive review of utilization of various quota at trains sources and different remote location of Central railway train has been done under PPM.
10. Quota at various remote locations have been scrutinized and redistributed on the basis of utilization report and wherever found suitable.

### **COACHING VEHICLE CENSUS:**

Coaching Vehicle census is conducted as and when, the directives are received from Railway Board. Prior to conducting a coaching vehicle census, CPTM holds a meeting and instructs the census officials. The month, date time of census is notified to all the staff involving in census. Unlike, goods wagon census, coaching vehicles census is not laborious, as the vehicles are generally run in rakes and they are keenly monitored daily. A Cardex system in the coaching cabinet was a method to monitor the movement of individual coaches. After full implementation of COIS, the monitoring of the movement of coaches will be further made easy.

All the staff involved in the census duties are to be briefed about their responsibilities. A mock census has to be conducted on the nominated day prior to the official census. The lacunae in the mock drill are to be identified and corrected. During the enumeration each vehicle should be stenciled by a census symbol of equilateral of six inches each side in white colour at extreme left of the vehicles on both sides. A representative of mechanical branch also involved to identify the mechanical code of the wagons. Each railway should update the list of the condemned vehicles after the last census was held, with necessary details, well before the census. The census timings are to be followed strictly.

#### **Advantages in coaching vehicle census:**

- a) To know the location of loading vehicles and their status.
- b) To identify and take them to the maintenance depot in case the coaches have become due for POH and other repairs.
- c) To identify the area where excessive holding exist, which leads to coaching yard congestion.
- d) To compare the requirements with that of allotment and to suggest better supply.
- e) To compile the utilisation statistics and to see the viability for future utilisation.
- f) For introduction of new coaching trains.

#### **Rules for booking Special Coaches & Special Trains on FTR:**

1. Reservation of special coaches / trains: Application for reservation of carriage must be made through the SM of originating station to the CPTM, giving details of the journey such as destination, route to be followed, halts enroute, and the specific train to which the coach is to be attached at least 30 days in advance and not more than 6 months prior to the commencement of journey.
2. In case any party wishes to requisition a special coach at a short notice of less than 30 days, specific permission must be obtained from CPTM.
3. It will be the sole discretion of the Railway Administration to allot a coach / train and programme its movement depending on the availability of coaches, path and other operational considerations.
4. Security deposit cum registration charge:

a) An amount as prescribed from time to time which at present is Rs.10,000/- per coach as Registration Charge-cum-Security Deposit will be payable at the station from where the proposed journey will commence, of this half will be retained as Security Deposit & the balance amount would be adjusted against the fare payable at the time of booking. The security deposit will be refunded by the Station Manager of the originating station on completion of the tour after adjusting any other amount of extra detention etc.

b) The deposit charges for allotment of reserved coaches for journeys performed by railway employees and their families on privilege pass& passes/PTOs would be an amount as prescribed from time to time, which at present is Rs.10,000/- per coach.

**Note:-**

Tourists are exempted from paying the Deposit for reserved carriage provided:-

- iii) They apply through recognized Tourist Agents who should give a guarantee to the Railways.
  - ii) Their journeys are sponsored or recommended by Indian Embassies abroad.
5. Reserved coaches are not guaranteed – Railway Administration do not guarantee reserved Carriages / Coaches by any particular train and will admit no claim for compensation for inconvenience, loss or extra expenses due to such accommodation not being provided or attached to trains by which asked for.
  6. Parties requiring such accommodation need not be members of the same family.
  7. The reservation of coach / special train will be on priority of date of registration i.e. application along with Security Deposit receipt duly forwarded by Station Manager / Station Master of originating station endorsing the M.R. No. and date of the Security Deposit.
  8. Charges for Special Coaches / Special Trains will be computed point to point on the basis of full adult Mail / Express fare of the concerned class for the actual number of passengers traveling or the marked carrying capacity of the coach which ever is more + Security Deposit Charges + Services Charges + Empty Haulage Charges + Detention Charges @ prescribed from time to time.
  9. The charges must be paid in full 48 hours in advance of the departure of the train to which Special Coach are to be attached failing which it will be deemed that the running of Special Coach has been countermanded by the organizers. The entire registration cum Security Deposit will be forfeited in this case. Same Rule is also applicable in the case of Special Train.
  10. As prescribed from time to time the minimum Composition of Special Train at present is 15 coaches and minimum chargeable distance is 500 Kms for Mail / Express trains both for coach as well as special train.
  11. No concession will be allowed for booking of Special Coaches. Charges will be recovered in full for children, students, Sr. Citizens etc.

**Coaching codes**

**Vehicle codes for Coaching stock:-** The following code letters must be used to designate the various designations of coaching stock in use:

| Nature of stock                                           | Transportation Codes |
|-----------------------------------------------------------|----------------------|
| 1. Bogie first class                                      | F                    |
| 2. Bogie first class with servants compartment            | FQ                   |
| 3. Bogie first class with coupe compartment               | FC                   |
| 4. Bogie first class with coupe and attendant compartment | FCQ                  |
| 5. Bogie second class (self generating)                   | GS                   |
| 6. Four wheeled first and second class                    | EFS                  |

|                                                                  |        |
|------------------------------------------------------------------|--------|
| 7. Four wheeled first class                                      | EF     |
| 8. Bogie first and second class                                  | FS     |
| 9. Bogie first and second class with attendant compartment       | FSQ    |
| 10. Bogie first with coupe and second-class with attendant comp. | FCSQ   |
| 11. Bogie first class AC and First class luggage and Brake comp. | ACFLQ  |
| 12. Bogie first with coupe AC and FC and attendant compartment   | ACFQ   |
| 13. Bogie first class air conditioned                            | FAC    |
| 14. Bogie fully air conditioned                                  | WAC    |
| 15. – do – with coupe and second                                 | FCSC   |
| 16. Bogie first and second class                                 | FS     |
| 17. Bogie first with coupe second luggage and brake              | FCSLR  |
| 18. Bogie first with coupe second                                | FCS    |
| 19. – do – attendant compartment, luggage and brake              | FCSQLR |
| 20. Four wheeled second class                                    | ES     |
| 21. Bogie second class 3 tier sleeping car (vestibule)           | WGSCN  |
| 22. Bogie second class                                           | S      |
| 23. – do – with permanent ladies compartment                     | GSY    |
| 24. Bogie prison van                                             | VJ     |
| 25. Bogie lower class day cum sleeping car                       | WGSCG  |

#### FREIGHT AND BRAKE VANS

|                                                       |     |
|-------------------------------------------------------|-----|
| 26. Four wheeled freight van of 4 wheeler luggage van | EL  |
| 27. Bogie freight van or luggage van                  | L   |
| 28. Four wheeled brake van with luggage compartment   | ELR |
| 29. Bogie parcel van                                  | VP  |
| 30. Four wheeled parcel van                           | EVP |
| 31. Four wheeled fruit van                            | EVF |
| 32. Bogie luggage and brake van                       | LR  |
| 33. Bogies second class luggage and brake van         | SLR |

#### POSTAL VANS

|                                                         |      |
|---------------------------------------------------------|------|
| 34. Bogie second and full postal van                    | SPP  |
| 35. Bogie second class and 2/3 <sup>rd</sup> postal van | PPE  |
| 36. Bogie full postal van                               | PP   |
| 37. Bogie second class and 3/4 <sup>th</sup> postal van | PPI  |
| 38. Bogie luggage brake and full postal van             | LRPP |
| 39. Bogie second and 1/4 <sup>th</sup> postal van       | PPQ  |
| 40. Bogie second and 1/2 <sup>nd</sup> postal van       | PPH  |

#### VANS

|                                   |     |
|-----------------------------------|-----|
| 41. Four wheeled prison van       | EVJ |
| 42. Four wheeled refrigerator van | EVR |

#### CARS

|                                              |     |
|----------------------------------------------|-----|
| 43. Bogie dining car                         | CD  |
| 44. Bogie kitchen car                        | CK  |
| 45. Bogie inspection car                     | CE  |
| 46. Bogie tourist car first class            | CT  |
| 47. Bogie tourist car second class           | CTT |
| 48. Bogie state saloon for ministers or VIPs | CR  |

#### RAILWAY SERVICES

|                                                        |      |
|--------------------------------------------------------|------|
| 49. Bogie inspection car (administrative)              | RA   |
| 50. Bogie inspection car (Jr. administrative)          | RB   |
| 51. Bogie subordinate carriage                         | RD   |
| 52. Four / Six wheeled inspection car (Sr. Assistants) | ERB  |
| 53. Four wheeled inspection car (Jr. Assistants)       | ERC  |
| 54. Four wheeled subordinate inspection car            | ERD  |
| 55. Bogie cinema cum exhibition car                    | RPCB |
| 56. Four wheeled mobile TXR van                        | ERW  |
| 57. Four wheeled store van                             | ERS  |
| 58. Bogie store van                                    | RS   |
| 59. Bogie accident tool or relief van                  | RT   |
| 60. Four wheeled accident tool or relief van           | ERT  |
| 61. Four wheeled traveling charging or dynamo van      | ERM  |
| 62. Bogie traveling charging or dynamo van             | RM   |
| 63. Four wheeled crew rest van                         | ERR  |
| 64. Bogie medical van or mobile dispensary van         | RH   |
| 65. Four wheeled medical van                           | ERH  |

#### OTHER STOCK

|                                     |     |
|-------------------------------------|-----|
| 66. Four wheeled horse box (double) | EHH |
| 67. Mobile library van              | ERL |
| 68. Four wheeled motor van          | EVK |
| 69. Rail motor car, first class     | ZZF |

#### MILITARY CARS

|                                               |        |
|-----------------------------------------------|--------|
| 70. Bogie military car vestibule              | WM     |
| 71. Bogie ward cum dining car air conditioned | WACMRD |
| 72. Bogie kitchen car                         | MK     |
| 73. Bogie kitchen car Indian troops vestibule | WML    |
| 74. Bogie dispensary car vestibule            | WMHRA  |
| 75. Bogie generator car vestibule             | WMRM   |
| 76. Bogie officers car                        | MF     |
| 77. Bogie family car                          | MR     |
| 78. Bogie air conditioned sick officers car   | WACMRA |

- 
- Note: -
1. "Y" Suffixed to indicate permanent ladies compartment.  
"Y" Prefixed to indicate suburban stock  
"A" Prefixed to indicate articulated vehicle  
"W" Prefixed to indicate vestibule vehicle  
"G" Prefixed to indicate self generating equipment
  2. In case two or three letters out of "Y" "A" "W" are to be used, they will be shown in the above order when prefixing or suffixing to codes.
  3. The code letters of each description of coaching vehicle are placed at each end of the vehicle on the left bottom end panel at diagonally opposite corners. The staff must refer to these code letters in case of doubt.
  4. All coaching stock is vacuum braked.
-

### III ACCIDENT AND SAFETY ORGANISATION

#### ACCIDENT

**Definition** : For the purpose of Railway working, accident is an occurrence in the course of working of Railway which does or may affect the safety of the railway, its engine, rolling stock, permanent way and works, fixed installations, passengers or servant which affect the safety of others or which does or may cause delay to train or loss to the railway property. For statistical purposes accident has been classified in categories from A to R excluding I and O.

#### **Classification of Accidents: (AM 117 –124)**

Accidents are classified under following heads -

1. Train Accidents
2. Yard Accidents
3. Indicative Accidents
4. Equipments Failures
5. Unusual Incidents.

**1. Train Accidents** – Train accidents is an accident that involve a train. Train accidents are further divided as –

**a. Consequential Train Accidents** – Include train accidents having serious repercussion in terms of either one or many or all the following –

- Loss of human life
- Human injury
- Loss of Railway property
- Interruption of Rail traffic.
- Train accident under following classification will be termed as consequential train accident.

Collision

All cases under category A1 to A4

|                |                                   |
|----------------|-----------------------------------|
| Fire           | All cases under category B1 to B4 |
| Level crossing | All cases under category C1 to C4 |
| Derailment     | All cases under category D1 to D4 |
| Miscellaneous  | All cases under category E1       |

**b. Other Train Accidents.-** All other accidents which are not covered under the definition of consequential train accident are to be treated as other train accident.

**2. Yard Accidents:** All accidents that take place in a yard and does not involve a train are termed as yard accident. These include accidents falling under category A-5,B-7,C-9 and D-6.

**3. Indicative accidents:** In real term they are not accidents but are serious potential hazards and include all cases of train passing signal at danger, averted collision, breach of block rule coming under classification F,G and H.

**a. Averted collision** – An averted collision is a circumstance under which but for the vigilance shown by any person or persons, a collision could have occurred, either in the block section or within the station limits between two trains or between a train and an obstruction.

Provided further that such an occurrence may not be treated as an “Averted Accident”

i) If, outside the station limits, the distance between the two trains or the train and the obstruction at the time the train or trains have finally come to a stop, is 400 meters or more.

ii.) If, within the station limits, there is an intervening stop signal at danger governing the moving train, and compliance by the moving train with the indication conveyed by the stop signal averted the collision between the trains or between the train and the obstruction.

**b. Breach of rules-** When a train enters a block section without any “Authority to proceed” or with an improper authority to proceed, or is received on a blocked line not constituting an averted collision, or when it enters or is received on a wrong line at a station or a Catch / Slip siding or sand hump, it constitutes breach of Block Rules.

**c. Signal passed at danger-** Passenger train passed signal at danger without proper authority (H-1) and other train passed signal at danger without proper authority (H-2)

**4. Equipment failure** –Failure of railway equipment i.e. Engine, rolling stock, permanent way, OHE, signal and telecommunication (J,K,L,M)

**5. Unusual Incident** –These include cases related to law and order but not resulting in train accidents and other incidents under classification N, P,Q and R

#### **Reportable train accident- (AM-106)**

All accident falling under the purview of section 113 of railway act 1989 are termed as reportable train accident and include following -

1. Any accident attended with loss of human life, or with grievous hurt.
2. Any collision between trains of which one is a train carrying passengers or
3. The derailment of any train carrying passenger, or of any part of such train, or
4. Accident which are attended with loss of human life in passenger trains involving train wrecking or attempted train wrecking , caused of running over obstruction placed on the line, of passenger falling out of train or of fires in trains, or grievous hurt as defined in the Indian Penal Code , or serious damage to railway property of the value exceeding rupees 25 Lakhs which have not actually occur which by the nature of the accident might reasonably have been expected to occur and also caused interruption of any important through line of communications for at least 24 hours.

#### **Means to report of an accident –AM 201**

Every Railway servant shall report with least possible delay every “Accident” or “Unusual Occurrence ” in the course of working the Railway which may come to his notice, to the nearest station master or section in charge through the following any possible means-

1. PFT/EFT/Walkie-Talkie / VHF set /Mobile phone
2. Gate Telephone.
3. By stopping train/loco/trolley or other vehicle passing on adjacent line.
4. BSNL/MTNL Telephone
5. By sending message through a railway servant to the nearest SM.
6. Sending the light engine of the train before detaching the engine ,SR 6.09-1 should be followed, however in case of suspected sabotage, engine etc should not be disturbed ,or
7. By road transport if available.

### **SERIOUS ACCIDENT (AM 105)**

- a)** Accident to a train carrying passengers which is attended with –
- i. Loss of life **or**
  - ii. With grievous hurt (as per section 320 of IPC) to a passenger in the train, **or**
  - iii. With serious damage to railway property of the value exceeding Rs. 25 Lakhs **and**
- b)** Any other accidents which in the opinion of the Chief Commissioner of Railway Safety or CRS require the holding of an inquiry by the CRS shall also be deemed to be a serious accident.

However the following shall be **excluded** -

(a) Cases of trespassers run over and injured or killed through their own carelessness or of passengers injured or killed through their own carelessness, and

(b) Cases involving persons being Railway servant or holding valid passes / ticket or otherwise who are killed or grievously injured while traveling outside the rolling stock of a passenger train such as on foot board or roof or buffer but excluding the inside of vestibules between coaches, or run over to a Level Crossing or elsewhere on the Railway track by a train , and

(c) Level crossing accident where no passenger or Railway servant is killed or grievously hurt unless the Chief Commissioner of Railway Safety or

Commissioner of Railway Safety is of the opinion that the accident requires the holding of an inquiry by the Commissioner of Railway Safety.

### **Duty of Station master after accident (AM 311)**

If an accident comes to the notice to the Station Master, he shall immediately -

1. Ensure that no other train enters the affected section. On Double line he must lock the commutator of the block instrument controlling the affected section in 'Train on Line' position.
2. Advise the controller of the accident, indicating the nature of medical and other assistance required. If the section is not controlled or if the control phone is out of order, the DOM or the CHC must be advised on the public phone or by other means available. The Station Master of adjacent station and other major station should also be advised accordingly.
3. Take action to protect and safe Guard Railway and public property.
4. Collect medical aid, if required, locally from the nearest hospitals, dispensaries and doctors. In order to convey medical help to the site of the accident, trolleys may be sent out and train engines utilized or outside conveyance requisitioned, if necessary .In this connection, he must requisition help from the local police and Magistrate.
5. Report the accident to all concerned as prescribed in rules.
6. Call all the 'Off' duty staff and allot them specific duties for relief and rescue.
7. Arrange to provide all sort of assistance to the affected passengers such as catering, drinking water, issue of complimentary passes, free messages to relatives etc.
8. Open information counter and booth for giving information to the public regarding name of the injured / dead passenger and regulation /diversion of the train etc. STD booth located at stations /adjacent areas should be utilized for giving relevant information.
9. Arrange for whatever assistance is required in connection with clearing arrangements, transshipment etc. and provide lights, refreshments, manual help and any other requirements which can be procure within his resources.
10. Arrange for the section to be cleared of unaffected vehicles as early as possible, but if the accident is attributed to sabotage or suspected sabotage he shall not do so, but wait for instructions from the Officer in charge at site.

11. Remain on-duty taking orders from the control and the Officer in charge of break down operations till the accident is cleared or he is replaced by a competent person.

## **DISASTER MANAGEMENT**

After accident cope the situation the steps taken by Rail administration called “Disaster Management”

The top priority of Railway to provide accident free, safe journey. For which continuous effort are carrying on. New technology has been introduced in Railway. Effort are taken to less dependence on human being and system made such type that human failure does not made any unusual.

The best training has been given to employee and how to stress free this also describe by training. But there are always chances of accident and to cope the situation of the system called” Disaster Management”.

In every 150 to 200 k.m. Accident relief train and Medical relief train provided and staffs are made available round the clock. Target time for dispatched also fixed. Each train movement Rail employee trained in First Aid.

First aid available with Station Master and Guard, Phone no. of local administrative Offices, hospitals and their name displayed for quick information and assistance.

### **Object of Disaster Management (AM - 301)**

1. Protection of adjacent running line.
2. Protection of the site of accident.
3. Save life and alleviate suffering.
4. Protect property including mails.
5. Provide succor and help the passengers at the site of the accident.
6. Transportation of stranded passengers.

7. Preservation of clue and ascertain the cause of the accident.
8. Restore through communication.

### **Hooter code**

Hooter will blow to inform about accident to all concerned on those station where Accident relief train and Medical relief van is available.

Each hooter will blow for 45 second and the time interval between the hooter codes will keep 5 seconds for clear understanding.

The meaning of hooter code is as under –

- |              |   |                                                   |
|--------------|---|---------------------------------------------------|
| Two Hooter   | - | ART required at home station.                     |
| Three Hooter | - | ART required at outside the Home station.         |
| Four Hooter  | - | ART and MRV required at Home station.             |
| Five Hooter  | - | ART and MRV required at Outside the home station. |

One long Hooter (90 second) - For Cancellation of Medical Van and Breakdown train.

**Note** - Each hooter code will be repeated **twice** with an interval of **five** minutes.

**Target time for turning out the Breakdown trains.**

**ART** During day. - 30 minutes.

During night. - 45 minutes.

**Note :** The time is reckoned from the time of ordering to the time of leaving the shed.

### **Target time for turning out the Medical Van.**

**MRV** In case of Double exit siding - 15 minutes.

In case of Single exit siding - 20 minutes.

**Note:** The time is reckoned from the time of ordering to the time of dispatch.

### **General Instructions :**

1. Accident relief train run on priority, giving precedence of all trains.
2. MRV should be preceding over Relief train.
3. MRV and ART should be dispatched on their schedule time.
4. Relief train should not be delayed for Guard, the breakdown incharge will carry the train and Guard will send by following means.

### **Duties of Loco Pilot and Assistant Loco Pilot in case of an Accident (AM 307)**

At the time of accident the Loco Pilot and Assistant Loco Pilot must immediately -

1. Switch on the flasher light of the engine and switch 'Off' the head light of the engine.
2. Sound short whistle frequently to warn the Loco Pilot of an approaching train.

3. Arrange to protect the adjacent line and then the same line in accordance with GR 6.03 and SR 6.03-1. Information should be exchanged with Guard on Walkie Talkie set or other means available.
4. Arrange to advise control and adjacent stations about the accident by available means.
5. Take such technical precautions as may be necessary or as prescribed by special instructions to make the train safe.
6. Render all possible Assistance to Guard particularly, in the assessment of damage to rolling stock and or locomotive and the nature of assistance required.

## दुर्घटना जाँच (Accident Inquiry)

- 1) सूचना एकत्रित करना (Information to be collected) (AM-702)
  - (i) प्रत्येक दुर्घटना के पश्चात दुर्घटना के कारणों से सम्बंधित विशिष्ट महत्वपूर्ण जानकारी तत्काल एकत्रित की जानी चाहिए। जो कि दुर्घटना स्थल की साफ सफाई के बाद और यातायात सामान्य हो जाने पर ऐसी जानकारी उपलब्ध नहीं होगी।
  - (ii) दुर्घटना स्थल पर उपस्थित पदाधिकारी यह सुनिश्चित करेंगे कि दुर्घटना के कारणों का पता जाँच समिति द्वारा लगाने के लिए आवश्यक ऐसी जानकारी सफाई आरंभ करने से पहले एकत्रित कर ली गई है।
- 2) जाँच का वर्गीकरण (Classification of Inquiries) (AM-704)
  - (i) जाँच आयोग (Commission of Inquiry) :- गंभीर दुर्घटना के मामले में केन्द्र सरकार जाँच आयोग अधिनियम-1952 (1952 का 60 वां ) के अर्न्तगत जाँच आयोग नियुक्त कर सकती है।
  - (ii) रेल संरक्षा आयुक्त द्वारा जाँच (Commissioner of Railway Safety Inquiry) :- ऐसी किसी भी दुर्घटना के बारे में जिसे इस प्रकार की जाँच के लिए काफी गंभीर समझे, जाँच के आदेश दे सकता है, और उसकी स्वयं जाँच कर सकता है। CRS जाँच करने के अपने आशय की सूचना GM / CSO को देंगे और साथ ही जाँच की तारीख, समय एवं स्थान के बारे में सूचित करेंगे।
  - (iii) न्यायिक जाँच (Magisterial Inquiry) :- रिपोर्ट करने योग्य दुर्घटना के मामले में जिला न्यायाधीश या अन्य कोई न्यायाधीश, स्वयं जाँच कर सकता है या अपने अधीनस्थ न्यायाधीश को प्रतिनियुक्त कर सकता है या पुलिस द्वारा सीधी जाँच की जाने के आदेश दे सकता है।
  - (iv) संयुक्त जाँच (Joint Inquiry) :- जब भी रिपोर्ट करने योग्य दुर्घटना घटित हो तो दुर्घटना के लिए जिम्मेदार कारणों की पूरी-पूरी छानबीन करने के लिए एक संयुक्त जाँच की जाएगी।
  - (v) विभागीय जाँच (Departmental Inquiry) :-
    - (क) अधिकारियों द्वारा जाँच (Officers Inquiry) :- रिपोर्ट करने योग्य दुर्घटना की संयुक्त जाँच /न्यायिक जाँच / CRS जाँच न की जाय तो दुर्घटना के कारणों को निश्चित करने के लिए एवं जिम्मेदारी तय करने के लिए अधिकारियों द्वारा विभागीय जाँच आयोजित की जाएगी।
    - (ख) वरिष्ठ पर्यवेक्षकों द्वारा जाँच (Sr. Supervisor Inquiry) :- DSO / Sr.DSO / DRM द्वारा गठित वरिष्ठ पर्यवेक्षकों की समिति द्वारा सभी यार्ड दुर्घटनाओं की जाँच की जाएगी।  
नोट : CRS यदि चाहे तो उपरोक्त सभी जाँचों या किसी एक जाँच के समय उपस्थित रह सकता है।
- 3) जाँच के उद्देश्य (Objects of Inquiry) (AM-713)
  - (i) दुर्घटना का कारण निश्चित करना।
  - (ii) दुर्घटना की जिम्मेदारी निश्चित करना।
  - (iii) दुर्घटना रोकने हेतु प्रस्ताव तैयार करना।
  - (iv) कार्य पध्दति में सुधार हेतु सुझाव देना।
- 4) जाँच के आदेश (Ordering of Inquiry) (AM-705)
  - (i) सामान्यता: दुर्घटना की जाँच का आदेश DRM द्वारा दिया जाएगा।

- (ii) गंभीर दुर्घटना के मामले में जैसा उचित हो GM या GM की ओर से CSO जाँच के आदेश दे सकता है।
- 5) जाँच समिति का गठन (Composition of Inquiry Committee) (AM-707)
- (i) जाँच समिति में सामान्यता: संरक्षा, यांत्रिक और इंजीनियरी विभाग के अधिकारियों का समावेश होता है। यदि आवश्यक हो तो अन्य विभाग के प्रतिनिधि भी शामिल किए जा सकते हैं।
- (ii) आग लगने के कारण हुई दुर्घटना की जाँच की समिति में RPF विभाग को भी शामिल किया जाएगा।
- (iii) यदि अन्य मंडल का कर्मचारी या इंजन दुर्घटना से कोई सम्बंध हो तो उस मंडल के प्रतिनिधि को जाँच समिति में शामिल किया जाएगा।
- (iv) ऐसे किसी भी अधिकारी या अधीनस्थ अधिकारी को समिति के सदस्य के रूप में नामित न किया जाय जिसकी साक्ष्य जाँच समिति के समक्ष दर्ज करनी हो। किन्तु CSO / DRM के व्यक्तिगत आदेश पर ऐसी नियुक्ति की जा सकती है।
- 6) जाँच समिति का अध्यक्ष (President of Inquiry Committee) (AM-708)
- (i) संयुक्त जाँच या अधिकारी जाँच में उपस्थित अधिकारियों में से उच्चतम वेतनमान में कार्य करने वाला अधिकारी समिति का अध्यक्ष होगा। अधिकारियों के बीच वरीयता का निर्धारण विभिन्न विभागों में कार्यरत अधिकारियों की सेवा की कुल अवधि के आधार पर किया जाएगा। उसी विभाग के अधिकारियों के बीच वरीयता का निर्धारण उस वेतनमान में नियुक्ति की तारीख के आधार पर किया जाएगा।
- (ii) वरिष्ठ पर्यवेक्षकों द्वारा की जाने वाली जाँच में उपस्थित पर्यवेक्षकों में से उच्चतम वेतनमान में कार्य करने वाला पर्यवेक्षक अध्यक्ष होगा। विभिन्न विभागों के समान वेतनमान में पर्यवेक्षकों के बीच वरीयता का निर्धारण सेवा की कुल अवधि के आधार पर किया जाएगा। उसी विभाग के पर्यवेक्षकों के बीच वरीयता का निर्धारण विभाग में उनकी अपनी - अपनी वरीयता के आधार पर किया जाएगा।
- 7) जाँच के लिए समय सीमा (Time Limit for Inquiry) (AM-703)

| क्र.सं. | अवधि | कार्य का विवरण                                                                                                 |
|---------|------|----------------------------------------------------------------------------------------------------------------|
| 1       | D    | दुर्घटना की तारीख (Date of Accident)                                                                           |
| 2       | D+1  | जाँच के आदेश ( DRM / GM के द्वारा ) यदि किसी विभाग द्वारा जिम्मेदारी न ली गयी हो।                              |
| 3       | D+3  | दुर्घटना जाँच समिति द्वारा दुर्घटना की जाँच शुरू की जाएगी।                                                     |
| 4       | D+7  | समिति द्वारा DRM / GM* को जाँच रिपोर्ट सौंपी जाएगी।                                                            |
| 5       | D+10 | DRM / GM* के द्वारा जाँच रिपोर्ट की स्वीकृति करना।<br>(यार्ड दुर्घटना के लिए Sr.DSO द्वारा स्वीकृति दी जाएगी ) |
| 6       | D+15 | CSO / AGM के द्वारा जाँच रिपोर्ट को अन्तिम रूप दिया जाएगा।                                                     |
| 7       | D+20 | CRS को जाँच रिपोर्ट प्रस्तुत की जाएगी तथा इसकी एक प्रति रेलवे बोर्ड को भी दी जाएगी।                            |
| 8       | D+90 | जिम्मेदार कर्मचारियों के विरुद्ध DAR कार्यवाही की जाएगी।                                                       |

\*SAG Level Inquiry के लिए।

- 8) जाँच का समय और स्थान (Time & Place for Inquiry) (AM-709)  
यदि समिति एक मत से सहमति प्रदान करती है कि कहीं और जाँच आयोजित करने से मामले की परिस्थितियों के लिए उचित रहेगा और गवाह के लिए सुविधाजनक रहेगा तो ऐसी जगह पर जाँच की जाए अन्यथा जाँच दुर्घटना स्थल पर ही अथवा निकटतम स्टेशन पर की जाए।
- 9) जाँच की तारीख आगे बढ़ाना (Postponing of an Inquiry) (AM-712)
- सामान्यता: गवाह की अनुपस्थिति के कारण जाँच स्थगित नहीं की जाएगी। परंतु यदि सभी साक्ष्यों को दर्ज करने के बाद निर्णय पर पहुँचना सम्भव न हो तो गवाह उपलब्ध होने तक जाँच स्थगित कर दी जाएगी।
  - यदि गवाह बीमार हो तो जाँच समिति का अध्यक्ष चिकित्सा प्राधिकारी को सूचित करेगा कि गवाह को जाँच में उपस्थित होने के निर्देश दिए जायें और यदि गवाह स्वयं जाँच के दौरान उपस्थित होने में असमर्थ है तो चिकित्सा अधिकारी की सहमति से अपना प्रतिनिधि भेजकर उसकी साक्ष्य दर्ज करवायेगा।
- 10) जाँच का स्तर (Level of Inquiry) (AM-706)
- सभी गंभीर दुर्घटनाओं की जाँच CRS द्वारा की जाएगी।
  - यदि गंभीर दुर्घटनाओं की जाँच CRS / CCRS द्वारा करना संभव न हो तो DRM की स्वीकृति से JAG जाँच समिति द्वारा जाँच की जाएगी। तथा इसका CSO द्वारा रिव्यू (Review) किया जाएगा।
  - सभी टक्करों (A1 से A4 तक) की जाँच GM की स्वीकृति से SAG जाँच समिति द्वारा की जाएगी।
  - अनमेन्ड गेट छोड़कर सभी परिणामी गाड़ी दुर्घटनाओं की जाँच DRM की स्वीकृति से JAG जाँच समिति द्वारा की जाएगी तथा इसका रिव्यू CSO द्वारा किया जाएगा।
  - अनमेन्ड गेट परिणामी गाड़ी दुर्घटना एवं अन्य गाड़ी दुर्घटनाओं की जाँच DRM की स्वीकृति से Sr. Scale / Jr. Scale Officers जाँच समिति द्वारा की जाएगी।
  - सभी यार्ड दुर्घटनाओं की जाँच Sr.DSO / DSO की स्वीकृति से वरिष्ठ पर्यवेक्षक (Sr.Supervisors) जाँच समिति द्वारा की जाएगी।
  - सभी सांकेतिक दुर्घटनाओं की जाँच DRM की स्वीकृति से Sr. Scale / Jr.Scale Officers जाँच समिति द्वारा की जाएगी। किंतु SPAD के मामले में मंडल स्तर पर JA Grade Officers Committee द्वारा जाँच की जाएगी जिसमें Sr.DSO / DSO समिति के एक सदस्य अवश्य होंगे।
  - दुर्घटना की गंभीरता को ध्यान में रखते हुए GM / DRM के द्वारा जाँच हेतु उच्च स्तरीय ऑफीसर्स कमेटी नियुक्त की जा सकती है।
  - इंटर रेलवे DAR का निपटारा सम्बंधित विभाग के PHOD द्वारा किया जाएगा। यदि GM स्तर पर भी इसका निपटारा संभव न हो तो ऐसे मामले रेलवे बोर्ड को हस्तांतरित कर दिये जायेंगे।
  - उपस्करों की खराबी से सम्बंधित दुर्घटनाओं की जाँच सम्बंधित विभाग के वरिष्ठ पर्यवेक्षकों/ पर्यवेक्षकों द्वारा की जाएगी।
  - सभी जाँच के आदेश DRM द्वारा दिये जायेंगे। किन्तु टक्कर के मामले (A1 से A4 तक) में जाँच के आदेश GM द्वारा ही दिये जायेंगे।

11) जाँच कार्यवाही के दस्तावेज (Contents of Proceedings)

(AM-715)

- (i) समिति के सदस्यों की सूची।
- (ii) दुर्घटना का विवरण और सारांश।
- (iii) साक्ष्यों (witnesses) से की पूछताछ की क्रमानुसार सूची।
- (iv) प्रत्येक साक्षी का नाम, पदनाम, सेवा की अवधि तथा उनके द्वारा दिये गये सबूत।
- (v) समिति द्वारा निकाला गया निष्कर्ष।
- (vi) निष्कर्ष का आधार।
- (vii) निम्नलिखित को यदि कोई क्षति पहुँची हो तो उसका मूल्य दर्शाने वाला विवरण -
  - (a) रेलपथ या निर्माण कार्य
  - (b) इंजन
  - (c) चल स्टॉक
  - (d) सिगनल एवं दूरसंचार उपस्कर
  - (e) ऊपरी उपस्कर
  - (f) सामान, पार्सल और माल
- (viii) मृत या घायल यात्रियों या रेल कर्मचारियों की सूची।
- (ix) सम्बंधित कागजातों का सारांश यदि आवश्यक हो।
- (x) किन नियमों का उल्लंघन किया गया है।
- (xi) दुर्घटना के लिए जिम्मेदार ठहराये गए कर्मचारियों की सेवा का विवरण जिनमें पिछले तीन वर्षों के दौरान वे जिस दुर्घटनाओं से सम्बंधित थे उनका संक्षिप्त विवरण तथा उन्हें जो दंड दिया गया था उसका विवरण।
- (xii) दुर्घटना स्थल का आरेख।
- (xiii) सिफारिशें।
- (xiv) प्रणाली में सुधार के लिए सुझाव।
- (xv) उजागर हुए अन्य मामले।

12) साक्ष्य (Evidence)

(AM-717)

- (i) कैसे रिकार्ड किया गया (How recorded).
- (ii) अनपढ़ गवाहों के साक्ष्य (Evidence of illiterate witnesses)
- (iii) गवाही को किसके द्वारा रिकार्ड किया जाए (Evidence by whom recorded)
- (iv) जाँच के दौरान झूठी गवाही देना (False evidence at inquiries)

13) निष्कर्ष (Findings)

(AM-718)

- (i) निष्कर्ष में जाँच समिति द्वारा दुर्घटना का कारण, जिम्मेदार कर्मचारी, किन नियमों का उल्लंघन किया गया और उन्होंने कौन सा अपराध किया इन सब बातों का उल्लेख किया जाना चाहिए।
- (ii) निष्कर्षों से असहमति के कारण।  
नोट - यदि समिति के सदस्य निष्कर्ष से सहमत नहीं हैं तो वे अपनी असहमति दर्ज करें और उसका कारण भी बतायें, तथा असहमति की टिप्पणी (Dissent Note) जाँच स्थल पर ही लिखी जानी चाहिए।
- (iii) निष्कर्षों के कारण।

- 14) समिति के सुझाव (Recommendations) (AM-719)
- दुर्घटना रोकने के लिए समिति द्वारा सुझाव दिये जा सकते हैं।
  - प्रस्तावित सुझावों की व्यावहारिकता पर भी ध्यान रखना चाहिए।
  - इस बात की भी जाँच करनी चाहिए कि उन सुझावों से कार्य संचालन के अन्य अंगों पर क्या प्रभाव पड़ेगा।
- 15) प्रणाली में सुधार के लिए सुझाव (Suggestions for system improvement) (AM-720)
- समिति कार्य प्रणाली की जाँच करके कार्य पध्दति में सुधार के लिए सुझाव दे सकती है जिससे भविष्य में दुर्घटनाओं पर रोक लग सके।
  - जिन नियम और प्रक्रियाओं को कार्यान्वित नहीं किया जा सकता या कार्यान्वित करने में कठिनाई आती हो, उन नियमों और प्रक्रियाओं के बारे में टिप्पणी दी जाये।
- 16) निष्कर्षों को स्वीकृत करना (Acceptance of findings) (AM-802)
- CSO द्वारा अनुवर्ती कार्यवाही के दिशानिर्देशों सहित निष्कर्षों की स्वीकृति के बारे में DRM को सूचित किया जाएगा।
  - यदि DRM / CSO द्वारा निष्कर्ष स्वीकार न किये गये हों तो फिर से विभागीय जाँच के लिए आदेश दिये जा सकते हैं।
  - यदि वरिष्ठ पर्यवेक्षकों की जाँच समिति के निष्कर्ष स्वीकृत न किये गये हों तो DRM / CSO द्वारा अधिकारियों के स्तर पर जाँच के आदेश दिये जाने चाहिए।
  - यदि संयुक्त या अधिकारियों के निष्कर्ष स्वीकृत न किये गये हों तो वह विषय उसी समिति को पुनः विचार करने के लिए वापस किया जा सकता है, या उसके स्थान पर नई समिति का गठन किया जा सकता है।
- 17) जाँच रिपोर्ट को प्रस्तुत करना (Submission of inquiry reports) (AM-801)
- जाँच समिति के अध्यक्ष द्वारा DRM को रिपोर्ट प्रस्तुत करना।
  - Sr.DSO / DSO द्वारा CSO को जाँच रिपोर्ट प्रस्तुत करना।
  - DRM द्वारा विभागप्रमुख / विभागाध्यक्षों (PHOD / HODs) को जाँच रिपोर्ट प्रस्तुत करना।
  - CSO द्वारा जाँच रिपोर्ट रेलवे बोर्ड को भेजना।
  - CSO द्वारा जाँच रिपोर्ट CRS को भेजना।
  - DRM द्वारा जाँच रिपोर्ट CCO को भेजना।
  - DRM द्वारा जाँच रिपोर्ट CSC को भेजना।



# Syllabus Cum Content

1. Improved signalling and interlocking arrangement.
2. SM's central and intercabin control over route.
3. Track Circuits and Axle Counters.
4. Route Relay Interlocking.
5. Automatic Cab Warning System and Automatic Braking System.

### *Definition of Interlocking:*

An arrangement of points, lock bars, detectors, LC gates, axle counters, Train Detection Devices [Track circuits, axle Counters and AFTCs], slots and signals etc. operated from a lever frame or panel so interconnected by means of mechanical/Electrical/both locking that their operation takes place in a proper sequence to ensure safety.

There are two basic types of interlocking.

1. *Indirect Interlocking:* points and signals are operated from two different places with KPL system of interlocking. Points and KPLs are operated at site and signals are taken OFF from lever frame located at station.
2. *Direct Interlocking:* Points, lockbars, detectors and signal levers are located and operated from single place [cabin].

*Essentials of Interlocking:* Various signalling functional levers connected with the concerned signalling gears provided for operation and control are arranged and interlocked as to comply with the following essentials.

1. It shall not be possible to take OFF a signal unless:
  - A] All the points are set properly.
  - B] All the facing points are locked properly.
  - C] Level crossing gates are closed and locked properly against road traffic.
2. Once the signal is taken OFF it shall not be possible to:
  - A] Alter any point.
  - B] Unlock the facing points.
  - C] Unlock and open the LC gates for road users.

[ This shall be provided in the route including isolation and overlap]
3. It shall not be possible to take OFF two or more conflicting signals a time.
4. To avoid conflicting movements wherever feasible point to point locking shall be provided.

*Standard of interlocking: Addendum and corrigendum in IRSEM Part I [Slip No. 6]*  
 Railway Board's letter No. 2003/SIG/SEM/3, dated: 19.05.2004, Chapter VII, Para 7.131,  
 section M.

| SN | Items                     | Important signalling features as per new revised Para 7.131 |                                                                                                      |                       |                               |
|----|---------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------|
|    |                           | STD I ®                                                     | STD II ®                                                                                             | STD III ®             | STD IV ®                      |
|    | Permissible speed in KMPH | Upto 50                                                     | Upto 110                                                                                             | Upto 140              | Upto 160                      |
| 1  | Isolation                 | Y*                                                          | Y                                                                                                    | Y                     | Y                             |
| 2  | Type of Signalling        | 2A/MA                                                       | 2A/MA                                                                                                | MA                    | MA                            |
| 3  | Double Distant            | N                                                           | Y**                                                                                                  | Y                     | Y                             |
| 4  | Point Operation           | Mech                                                        | Mech/Elect                                                                                           | Mech/Elect            | Elect                         |
| 5  | Point Locking             | Key/FPL/HPL                                                 | FPL/Point Machine                                                                                    | FPL/Point Machine     | Clamp type direct [desirable] |
| 6  | Point Detection           | Mech/Elect                                                  | Mech/Elect                                                                                           | Mech/Elect            | Elect                         |
| 7  | Lock Detection            | N                                                           | Y                                                                                                    | Y                     | Y                             |
| 8  | Interlocking              | Key/Mech                                                    | Mech/Elect/Electronic                                                                                | Mech/Elect/Electronic | Elect/Electronic              |
| 9  | Track Circuiting          | N                                                           | <u>Mech. Interlocking:</u><br>All run through lines<br><u>Elect/Electronic:</u><br>All running lines | All running lines     | All running lines             |
| 10 | Block Working             | Token                                                       | Token/SGE                                                                                            | #SGE/TC               | #SGE/TC                       |
| 11 | Preventing SPAD           | N                                                           | N                                                                                                    | N                     | Y [Desirable]                 |

**Legends:**

\*: Isolation is not compulsory provided that the condition laid down in the second paragraph of the general rule 90c or 4.11 are complied with limits of speed while running through station.

\*\* : Double Distant on section where goods trains have a braking Distance of more than 1 KM.

# At CPI or High Density Routes means for verifying complete arrival of the train by suitable means.

### *Basic Principles of Signal Engineering:*

1. Each and every apparatus and circuit employed in signalling circuit shall be so designed that the failure occurring in any of all the components, parts of the system results in signal/signals controlled by the system displaying their most restrictive aspect.
2. Reliability, simplicity and expansive capabilities shall be important consideration in the design of apparatus, circuit and system.
3. The aspect of the fixed signals shall be distinctive and unambiguous.
4. Once aspect shall have but one name and one indication, conversely for a given indication, the same aspect shall be used everywhere and at all times.
5. The action required by a signal indication shall be definite and capable of easy implementation.
6. Each and every signal shall have the sighting distance of required for it.
7. The no. of fixed signals provided shall be minimum for each route.
8. The overlap required for each system of aspect shall be clearly specified.

*SM's central and intercabin control over route:*

*A] Reception of trains at an interlocked station:*

1. With a telephonic conversations with near end cabin and far end cabin staff SM shall exchange the private number, description of the train and nominate the line for their compliance.
2. If the points are leading to sand hump, SM shall advise accordingly with private number.
3. Near end cabin staff shall set and lock the route, advise far end cabin staff and release the slot control to take OFF the concerned signal.
4. SM will be acknowledged by the near end cabin staff that the route is set and locked for the nominated route.
5. SM will exchange private number with near end cabin staff and release the slot control for the reception signal. Accordingly cabin man will take OFF the concerned signal.

*B] Despatch of trains from an interlocked station:*

1. After obtaining the line clear, SM exchanges the private number, description of the train and the line from which the train is to be despatched.
2. If the cabins are provided with block instrument, then after obtaining line clear, cabin staff will set and lock the concerned route to take OFF the starter signal.
3. After verifying concerned taken OFF starter signal, SM will advise the cabin staff to take OFF advance starter.
4. He shall also release his slot control, where control over LSS is exercised through SM's control.

*C] Procedure for 'Run Through' trains from an interlocked station:*

1. SM shall obtain the line clear or ask far end cabin staff to obtain the line by exchanging private number and description of the train. SM will ask cabin staff to set and lock the route. After ensuring the route SM will release the slot control for taking OFF concerned Home signal.
2. Far end cabin staff, after obtaining the line clear will set and lock the route and ask SM to release slot control for Advance starter with the exchange of private number. After exchanging private number cabin staff shall take OFF Advance starter.
3. Then SM ensures with near end cabin staff that the correct route has been set and locked. In the process private number is exchanged. Now the slot for the Home signal is released to take OFF the concerned Home signal.

*Auxiliary Warning System:* It is also called as Automatic Warning system. It is a microprocessor based electronic device for giving assistance to the driver in their routine duties. OR It is a microprocessor device which automatically applies break, when there is possibility of collision. It is provided as technical aid to the motorman for avoiding accident due to human error.

1. AWS gives information of the signal to the motorman inside the cab by audio-visual indication.
2. Thus it ensures proper speed by alerting motorman.
3. It also actuates breaking if motorman's response is not appropriate.

AWS is to be installed in all A, B, C group routes starting first with the suburban lines and then gradually extending them to the other busy lines. It is also suggested henceforth the installation of AWS device in all new locomotives manufactured at the DLW and CLW be made mandatory forthwith.

*Safety Features:*

1. It provides instantaneous visual indication about the status of the signal passed on panel mounted in front of the motorman.
2. An audible alarm also sounds whenever motorman passes any signal other than Green and double Yellow.
3. Acknowledgement of audible alarm is compulsory within 4 seconds.

*Objectives of AWS:*

- Bring train to halt in case of SPAD.
- Prevent train approaching faster other than it is safe.
- Audio-visual assistance to the driver about speed and distance etc.
- Check vigilance/alertness of driver and takeover if driver is not responding.
- Supervise train in terms of speed limits.

### *Features of AWS:*

1. It can processor 21 information [RG, HG, DG, 15 KMPH.....].
2. Frequencies are used out of 7 frequencies to make on information.
3. Frequencies can be measured by track magnet test jig.

$F1 = 2800 \text{ Hertz} = 2800 \text{ Hertz.}$

$F2 = F1 + 800 \text{ Hertz} = 3600 \text{ Hertz.}$

$F3 = F2 + 800 \text{ Hertz} = 4400 \text{ Hertz.}$

Similarly

$F7 = F6 + 800 \text{ Hertz} = 7600 \text{ Hertz. [Tolerance is -55 Hertz to +60 Hertz.]}$

4. It gives audio and visual indication to the drivers regarding aspect information received from track side equipment.
5. It applies emergency brake automatically under following conditions:
  - A] If driver passes signal at DANGER.
  - B] If driver fails to acknowledge YELLOW aspect or a permissive RED signal in ABS.
  - C] If train is rolled back.
  - D] If driver fail to observe 'Caution Order'.
  - E] If driver is going more than 10 KMPH of the sectional speed.
6. In some cases emergency brakes will be released automatically, if driver reduces the speed within the permissible limit.
7. In some cases driver has to press a reset button for releasing emergency brakes.

### *Exclusive Features of AWS:*

1. No moving parts, no wear and tear, hence requires negligible maintenance.
2. Suitable for speed upto 250 KMPH.
3. Can work in adverse climatic conditions.
4. Robust and sturdy equipment.
5. Continuously monitors speed and applies braking.
6. High degree of operational reliability and maximum safety.

### *When and how AWS system works:*

1. If motorman fails to acknowledge audible alarm penalty/emergency brakes are applied.
2. After acknowledging, if motorman does not control, the speed as per pre-determined program.
  - First an audible hooter sounds.
  - Then service brake is applied.
  - Penalty/Emergency brakes will be applied.

### *Anti Collision Device:*

- ACD is a microprocessor based networked control system providing a non vital safety shield over the existing signal based protection system.
- It comprises
  - Global Positioning System (GPS) Receiver
  - Data Radio Modem
  - Central Processing Unit (CPU)
  - Interfaces to Auto-Braking Unit (ABU)/ tachometer / Point & Track Circuit relays at Stations /Gate 'open' or 'close' sensing mechanism etc.

It is a train collision prevention system invented by Raja Ram Bojji and patented by Konkan Railway. ACD have always embedded intelligence. They take inputs from GPS satellite system for position updates and network among themselves for exchanging information using their data radio modems to take decision for timely auto application of brakes to prevent dangerous collision. Thus forming a 'Raksha Kavach'.

Raksha Kavach is a Network of 'self-acting', computer based communication devices called 'Anti-Collision Devices' (ACDs) that 'AUTOMATICALLY' apply BRAKES to Trains, thereby protecting the Travelling Public as well as Road Users at Level Crossing Gates from 'Collision' related Accidents

Basic objective of ACD is to

- 1) To prevent high speed collisions
- 2) To minimize the damage caused by collisions between trains and between trains and road vehicles.

- 3) It was first developed by Konkan Railway Corporation Ltd
- 4) It is fitted on Locomotives, Guard Brake Vans, Stations and Level Crossings
- 5) The ACD system includes a variety of networked ACDs mentioned below.
- 6) 1)Loco ACD 2)Guard ACD 3) Station ACD 4) Manned LC Gate ACD 5)Unmanned L Xing ACD6) ACD Repeater 7)TID assigning ACD

- The Main systems used by ACD for functioning are :
- 1) GPS
- 2) Radio Communication
- 3) TID (Track Identification )
- 4) Interlocking /signaling system at stations and gates
- 5) On board Computer, ABU and controls.

The main features of the ACD are as follows:

1. It is also called as Raksha Kavach.
2. It was first introduced on 19.10.1999 in KRCL.
3. These are provided at engines, LC gates and stations. It is also useful to stop the train during train parting.
4. ACD finds out collision like situation by means of GPS, digital Modem communication and angular deviation count and causes application of brakes at a distance of 3 KM.
5. It gives audio-visual information to the road users, resulting in averting the accidents at LC gates.

*S P A D Case:* If motorman passes the signal at "Danger" without following the prescribed procedure, AWS applies an emergency brake to bring the train to STOP within the adequate distance.

ACDs are provided in locomotives, brake van station and LC gates etc. By the means of ACD side on collisions, rear in collision, head on collision, end collision at LC gates are averted. ACD finds out the collision like situation by the means of Global Positioning System, Digital Modem communication and angular deviation counts, causing application of brakes at a distance of 3 KM. It is also useful in train parting cases etc. It also gives audio visual information to the road users, resulting in averting the accident at LC gates.

At present ACD is extensively used on NEF Railway and Konknan Railway and is working successfully. By 2013-14 it is planned to provide ACD over entire BG on Indian Railways.

*Train Protection Warning System:* It can be viewed as a replacement of ACD. TPWS operates by combination of train borne equipments and track mounted sensors. It automatically applies the brakes on a train that has passed the train at a speed higher than it should, thus minimizing the consequences of the Signal Passing At Danger.

It is designed and manufactured by Ansaldo ATS [Union Switch & Signals] and experimented first on Chennai-Gummundipundi line in Southern railway. The technology reduces the probability of driver error and enhances the passenger safety by using latest European Rail Traffic Management System [ERTMS], which warns the driver of changed condition ahead. Its incremental technology upgrades, which opens the way of Indian Railways to introduce new technological elements, such as train location and detection technology as it continues to build upon the safety and efficiency of rail network.

*Train Collision Avoidance System:* It can be viewed as a replacement of TPWS and ACD. A path breaking technology to avoid train collision was tested successfully between Navangdi and Manhatti stations in Rangareddi district on 16<sup>th</sup> October 2012. The system was developed jointly by RDSO and a Hyderabad based private organization. This system is called as Train Collision Avoidance System. It is a fusion of Anti Collision Device and Train Protection Warning System.

Train Collision Avoidance System is designed to detect and prevent collisions between trains. It receives layout specifications and train movement updates through openMQ and XML documents.

*ETCS:* It is a signalling control and train protection system designed to replace the many incompatible safety systems currently used.

ETCS requires standard track side equipment and standard controller within the train cab. All the lineside information is passed to the driver electronically, removing the need for lineside signals, which at high speed could be almost impossible to see or assimilate.

*Objectives of ETCS:*

1. Achievement of optimum safety and reliability.
2. Allowance of gradual implementation.
3. Allowance of difference levels of application according to performance or needs.
4. Standardization of train control function.
5. Unified modular architecture for train borne equipment.
6. Well defined internal module, external module and interfaces.

*Advantages of ETCS:*

1. Improvement of international train traffic.
2. shorter headway on heavy loaded lines
3. Reduced workload for technical services
4. Step by step introduction of new technology is possible.

*Data Logger:* It is microprocessor based electronic device for storing the events with date and time into memory with battery back up. Data loggers are compulsory for all new relay interlocking i.e. PI/RRI/EI and it is recommended to provide in existing PI/RRI. Due to complexity in the circuit and wiring sometimes it is very difficult to trace the failure and rectify the same, so data logger can monitor them with real time clock.

This can be named as black box of the signalling equipments, since it helps in analyzing the failures, accidents and helps as a tool in preventive and predictive maintenance of relay interlocking gears. NMDL helps to monitor the behaviour of relay interlocking remotely by networking.

It takes analogue and digital inputs.

Digital inputs: Contact make/break status of relays is taken in.

1. Digital inputs are given to the data logger through digital scanning units [DSU].
2. These DSUs contain optocouplers.
3. Digital scanning time is 16 milliseconds.
4. Each DSU contains 8 cards and each card takes 64 inputs.

Analogue inputs:

1. It has frequency converters in analogue scanning units [ASU].
2. Each ASU contains 8 cards and each card takes 3 inputs.

The main events logged by data loggers are:

- |                       |                |
|-----------------------|----------------|
| 1. Track Circuits:    | TPRs.          |
| 2. Signals:           | HR, DR, ECR.   |
| 3. Slots:             | YRs.           |
| 4. Block Instruments: | LCPR.          |
| 5. Crank handle:      | CHYR.          |
| 6. LC gates:          | CXKR/OXKR etc. |

*Advantages of data loggers:*

1. It helps in monitoring the failures.
2. It helps in analyzing the failures.
3. It helps in detecting human failures.
4. Failure reports can be generated.
5. It helps in analyzing serious accidents, SPAD condition, Over/under speed of trains, malfunctioning of equipments and wrong operations done by operating staff.
6. It can be networked and through NMDL helps to monitor PI/RRI/EI remotely.
7. It helps in preventive/predictive maintenance like bulb fusing/replacement, loose packing of point zone sleepers, signal bobbing, track circuit bobbing, sluggish operation of points, early releasing of panel buttons, and pre-warns about overhauling of point machines.
8. On and OFF line simulation is possible.
9. Speed of the trains can be calculated in point zone and track circuit area.
10. Age of the relays can be found out [in terms of no. of operations].

*Track Circuit:* It is an electrical signalling gear, which is provided on both the rails of a track, for the detection of occupation of the vehicle. It ensures the safe passage/operation of the train.

When point zone track circuit fails, the concerned point machine becomes “in-operative” and the point remains locked in last operated position. This is called as ‘track locking of point’. So point zone track circuit takes care of the concerned point and ensures safety.

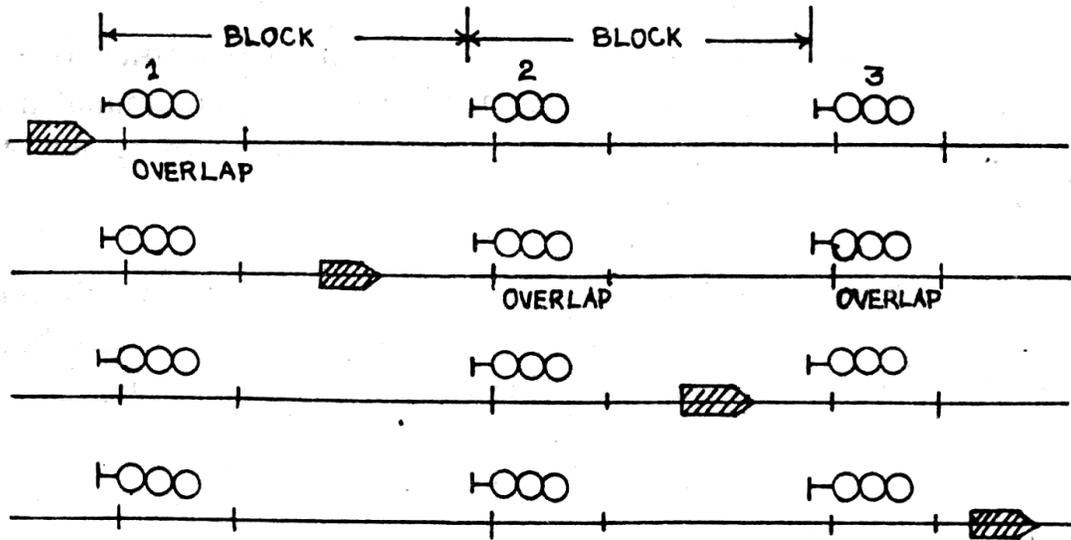
Track circuits also control aspects of the signals in the Automatic Signalling Territory thereby automatic change of sequence of aspect behind the train as it passes. To achieve this in Automatic Signalling System Continuous Track Circuits shall be provided.

Track Circuits should control the aspects of the Signal such that:

(i) It cannot display the ‘OFF’ aspect unless the line is clear not only upto the next stop signal but also for an adequate distance beyond it. Since the ‘OFF’ aspect can be yellow, double yellow or green, the ‘OFF’ aspect of stop signal mentioned above can be only yellow with the minimum clearance of one Block plus Overlap. The stop signal can exhibit green aspect when the line is clear for 2 blocks and overlap in the one case of 3-aspect signalling or double yellow in the case of 4-aspect signalling. The signal will go to green only when 3 blocks plus one overlap are clear in the case of 4-aspect signalling.

(ii) The Signal is automatically replaced to ‘ON’ soon after it is passed by a Train.

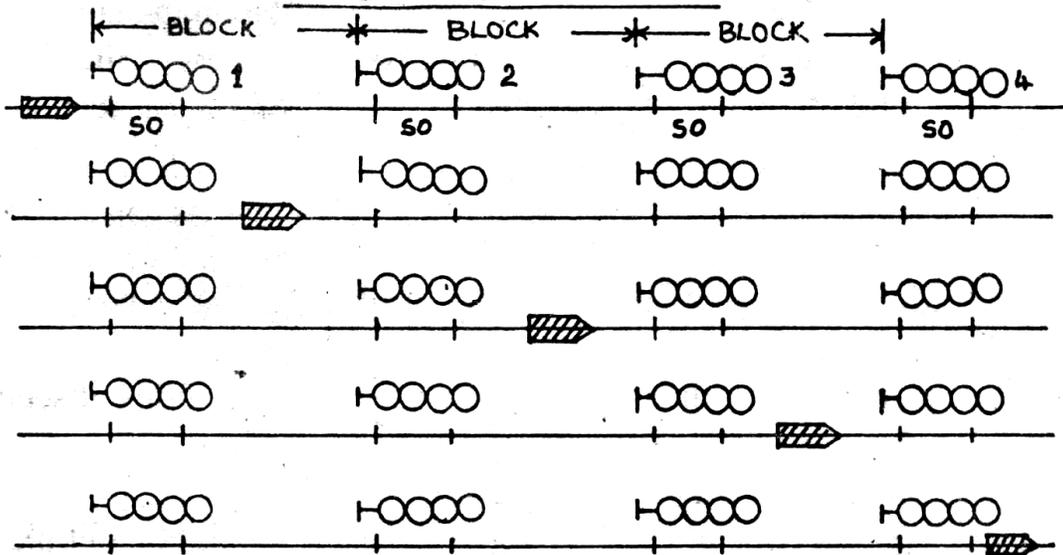
Note: Unless otherwise directed by approved special instructions, the adequate distance referred above shall not be less than 120 meters.



FOR SIGNAL 1. TO ASSUME YELLOW - LINE MUST BE CLEAR FOR ONE BLOCK AND ONE OVERLAP.

FOR SIGNAL 1. TO ASSUME GREEN - LINE MUST BE CLEAR FOR TWO BLOCKS AND ONE OVERLAP.

(a) IN 3 ASPECT SIGNALLING.



SIG. 1. TO ASSUME YELLOW - LINE MUST BE CLEAR FOR ONE BLOCK AND ONE OVERLAP.

SIG. 1. TO ASSUME DOUBLE YELLOW, LINE MUST BE CLEAR FOR TWO BLOCK AND ONE OVERLAP.

SIG. 1. TO ASSUME GREEN - LINE MUST BE CLEAR FOR THREE BLOCKS AND ONE OVERLAP

(b) IN 4- ASPECT SIGNALLING

*Axle Counters:* It was developed as a substitute for conventional track circuit. It is an electronic device used for detecting vehicles on a particular length of track portion like conventional track circuits, analogue axle counters and AFTC. Clearance of the train or vehicle is ensured by the tally of outcount with incount and an inference can be drawn that the particular length of track portion is clear of the vehicle or train. It was manufactured in technical collaboration with IIT, Delhi and DOE. Two models were emerged, these are:

1. Single entry/exit axle counters: Used for BPAC purpose in block section and
2. Multi entry/exit axle counters: Used for yard of a station.

*Advantages of Axle Counters or Why Axle Counters:*

1. Does not require wooden sleepers [where concrete sleepers are not available] except for short track circuit to suppress the counts due to movement of insulated trolleys.
2. Long range of operation [15 KM], as against the conventional track circuits [350/450/750 meters].
3. Unaffected by flooding and poor maintenance of track unlike conventional track circuit.
4. Does not require insulated joints, which reduces track maintenance.
5. Complete arrival is ensured by the system, hence human error is eliminated, so safety is improved.

*Application of Axle Counters:*

1. Monitoring of berthing tracks in station area and yard.
2. Monitoring of point zones in station area and yard.
3. Automatic signalling system using axle counters.
4. Block working through axle counters using multiplexers with OFC.
5. Level crossing warning system using axle counters.

*Reset Box:* It is installed in stations master's room to reset the system in case of failure, after observing prescribed procedure.

*Line Verification Box:* It is kept near the track portion to be monitored. This is a box consisting of a lock with a key fixed inside. The key is inserted, turned and pressed. Whenever there is a failure of axle counter, SM will depute SM/switchman to verify whether the traction is clear or not. ASM/switchman after verification of track, if found clear will report to SM who in turn will handover the key of the LV Box for operation.

*Digital Axle Counters:* It is microprocessor based device used for detecting vehicles on a particular length of track portion like conventional track circuits, analogue axle counters and AFTC.

*Advantages of Digital Axle Counters over Analogue Axle counters:*

1. High immunity for external interference.
2. Temperature range is from  $-30^{\circ}$  to  $+ 80^{\circ}$ .
3. Operating range is upto 30 KM.
4. Less power consumption.
5. Less conductors are required.
6. Self diagnostic through LED available.
7. Suitable upto 180 KMPH.

*Advantages of BPAC:*

1. Complete arrival ensure by the system, hence human error is eliminated.
2. Panel used is of non co-operative type.
3. Except taking line clear rest operation is automatic.
4. No mechanical parts, hence no overhauling.
5. Block working time is less; hence sectional capacity can be increased.

*The Outcome at a glance:*

- Operational safety and Reliability
- Efficiency and Cost-effectiveness
- Compatibility with other data and
- Telecommunications systems, such as the Train Protection Warning System
- Elimination of risks associated with track circuit failure to detect trains
- Savings on long track sections
- Complex track layouts
- Integration with modern telecommunication systems
- Vital relay interfaces to interlocking

### *Specifications of Relay Interlocking:*

1. It shall be as per approved Signal Interlocking Plan and Route Control Chart.
2. Suitable for RE and shall confirm to G & SR and IR SEM.
3. Domino type control panel with push button either combined or separate.
4. Track circuits shall be clearly demarcated with different colours taking care of FM.
5. Provision to prevent unauthorized operation of panel.
6. All equipments shall be of approved type and standard.
7. Stable power supply shall be provided.
8. All the gears shall be geographically located and panel shall be oriented accordingly.
9. Track locking, approach locking, dead approach locking, indication locking, sectional route release, sequential route release shall be provided.
10. Indications for points, track circuits, signals etc shall be mentioned.
11. Control for sidings, LC gates slotting to other cabin, CH interlocking shall be provided.
12. Red lamp protection, lamp failure, point failure, button stuck up indication and condition of block instrument and section shall be provided.
13. Communication facilities with adjacent station, cabin and LC gate shall be provided.
14. Air conditioning, fire extinguishers, data logger etc shall be provided.
15. Double cutting, cross protection, earthing surge arrestors etc shall be provided.
16. Buttons for operation of different function shall be provided.
17. Provision for manual operation, emergency operation with counters, emergency signal cancellation, emergency route cancellation with counter shall be provided.

### *Requirement of Relay Interlocking:*

1. Operating cum indication panel with buttons/knobs for points and signals.
2. Operation of functions.
3. Track circuits.
4. Geographical representation of points, signals and track circuits etc.
5. Emergency signal cancellation, emergency route release, emergency point operation with sealing and counters.
6. Stable and reliable power supply.
7. Condition of block section on panel.
8. Authorized operation by providing SM key.

*Advantages of Relay Interlocking:*

1. Quick and efficient operation.
2. Long range of operation.
3. Less operating staff.
4. Less detention.
5. Less wear and tear, less mechanical maintenance.
6. No overhauling

*Disadvantages of Relay Interlocking:*

1. Efficient and skilled staff is required.
2. Initial cost is more.
3. It requires reliable and stable power supply.

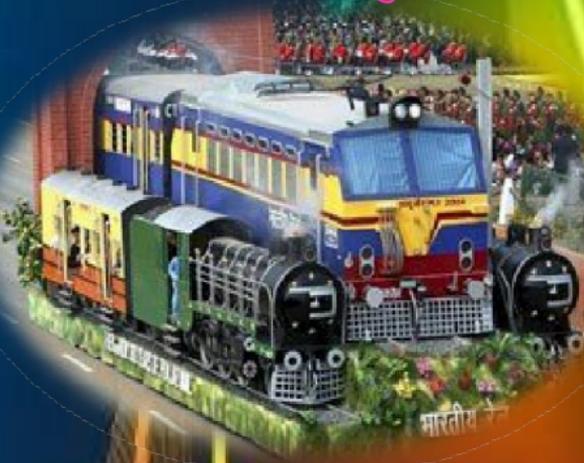
*Difference between PI and RRI:*

| SN | PI                                          | RRI                                   |
|----|---------------------------------------------|---------------------------------------|
| 1  | It is Route setting type                    | It is also Route setting type         |
| 2  | Colour Light Signalling is optional         | Colour Light Signalling is compulsory |
| 3  | Sectional route release optional            | Sectional route release compulsory    |
| 4  | May be partially/completely track circuited | Completely track circuited            |
| 5  | It is installed for smaller yards           | It is installed for major yards       |
| 6  | Emergency point operation is not given      | Emergency point operation is given    |
| 7  | Only 2 type electrical lockers are provided | Locking actions are many              |
| 8  | It can also be provided on end cabin.       | Provided for centralized operation.   |
| 9  | SM key is provided.                         | SM key is not provided.               |



# क्षेत्रीय रेल प्रशिक्षण संस्थान

मध्य रेल, भुसावल



राजभाषा हिंदी



## क्षेत्रीय रेल प्रशिक्षण संस्थान

मध्य रेल, भुसावळ.

### गुणवत्ता नीति

आमची नीति, सुरक्षित आणि विश्वसनीय रेल्वे संचालनासाठी पर्याप्त प्रशिक्षण देणे व सतत सुधारणांद्वारा ग्राहक संतुष्टि सुनिश्चित करणे आहे।

## क्षेत्रीय रेल प्रशिक्षण संस्थान

मध्य रेल, भुसावल.

### गुणवत्ता नीति

हमारी नीति है, सुरक्षित एवं विश्वसनीय रेल संचालन के लिए पर्याप्त प्रशिक्षण प्रदान करना तथा निरंतर सुधार द्वारा ग्राहक संतुष्टि सुनिश्चित करना।

## Zonal Railway Training Institute

Central Railway, Bhusawal.

### QUALITY POLICY

Our Policy is to impart adequate training for the purpose of Safe and Reliable train operations, ensuring Customer Satisfaction through continual improvement.

## विद्यालय गीत

विद्या का मंदिर है ये, और ज्ञानदीप है प्यारा ।  
सबसे उन्नत सबसे अच्छा ये शिक्षा केन्द्र हमारा ॥

रेल कर्मी को संरक्षा के पाठ यहां है पढ़ाते,  
संचालन के नियमों से अवगत उनको करवाते,  
यातायात सुरक्षित हो यही पहला ध्येय हमारा ॥1॥  
विद्या का मंदिर ..... ये शिक्षा केन्द्र हमारा ॥

अनुशासन और शिक्षा के संग, सीखें साफ सफाई,  
आओ इस पर अमल करें, हम मिलकर सारे भाई,  
निष्ठा से कर्तव्य करेंगे, यही निश्चय है हमारा ॥2॥  
विद्या का मंदिर ..... ये संस्थान हमारा ॥

दुर्घटना को टालें हम सब ऐसा कार्य करेंगे,  
जनसेवा में अपना तनमन, न्यौछावर कर देंगे,  
बढ़े प्रतिष्ठा रेलों की और, मान बढ़ेगा हमारा ॥3॥

विद्या का मंदिर है ये और ज्ञानदीप है प्यारा ।  
सबसे उन्नत सबसे अच्छा ये संस्थान हमारा ॥



## संरक्षक

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आर.डी.कोरी, उप-प्राचार्य

## मार्गदर्शन

एम.के.गायकवाड  
सहायक कार्मिक अधिकारी  
एवं संपर्क राजभाषा अधिकारी,

## प्रेरणा

जे.डी.वाणी  
सहायक परिवहन प्रबंधक

## संकलन एवं टंकण

ज्वाला प्रसाद  
मुख्य यातायात अनुदेशक

## सहयोग

लीलाधर सिंह (कनिष्ठ अनुवादक)  
यशवंत घोलप (पुस्तकालय प्रभारी)  
रामसिंग तायडे (पुस्तकालय कर्मचारी)

क्षेत्रीय रेल प्रशिक्षण संस्थान

मध्य रेल, भुसावल

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# राजभाषा हिंदी

1. **प्रस्तावना:-** “बिना राष्ट्रभाषा के राष्ट्र गूंगा है।” इस तरह की भावनाओं ने देश के विभिन्न भागों में हिंदी के प्रसार की प्रेरणा दी है। हिंदी वह सेतु है जो भारत के विभिन्न भाषा-भाषियों को एक दूसरे से जोड़ती है।

सरकारी कामकाज के संदर्भ में हिंदी के प्रयोग के बारे में जो आदेश है उन्हें समझने के लिए संविधान के प्रावधान और राजभाषा अधिनियम -1963 के अधीन बनाये गये राजभाषा नियम-1976 को जानना होगा। सरकार ने हिंदी के प्रयोग को बढ़ावा देने के लिए अनेक प्रोत्साहन योजनाएं बनाई है।

## 2. हिंदी का प्रयोग :-

- (i) **संविधान का अनुच्छेद-343(i):-** भारत संघ की राजभाषा में लिखी देवनागरी लिपि हिंदी होगी तथा संघ के सरकारी कार्यों में भारतीय अंकों के अन्तर्राष्ट्रीय रूपों का प्रयोग होगा।
- (ii) **संविधान का अनुच्छेद-343(ii) :-** संविधान लागू होने से 15 वर्ष तक (26 जनवरी 1950 से 26 जनवरी 1965 तक) अंग्रेजी भाषा सरकारी कार्यों में पूर्ववत् चलती रहेगी। इस अवधि में राष्ट्रपति सरकारी कार्यों में अंग्रेजी के स्थान पर हिंदी तथा भारतीय अंकों के अन्तर्राष्ट्रीय रूप के स्थान पर देवनागरी रूप के प्रयोग को आदेश द्वारा प्राधिकृत कर सकते हैं।

(iii) **संविधान का अनुच्छेद-343(iii) :-** संसद 26 जनवरी 1965 अर्थात 15 साल के बाद भी अंग्रेजी भाषा या देवनागरी अंकों के प्रयोग को विधि द्वारा विनिर्दिष्ट प्रयोजनों में जारी रख सकेगी।

(iv) **राजभाषा आयोग का गठन :-** भारतीय संविधान के अनुच्छेद-344 के अनुसार संविधान के प्रारंभ से 5 और 10 वर्षों की समाप्ति पर राष्ट्रपति हिंदी के विकास और प्रयोग को निश्चित करने के लिए आयोगों का गठन करेंगे। अनुच्छेद 344(i) के अनुसार राजभाषा आयोग का गठन 7 जून, 1955 को बान गंगाधर खेर की अध्यक्षता में हुआ।

(v) **राजभाषा आयोग की सिफारिशें :-**

- ❖ संघ लोक सेवा आयोग द्वारा आयोजित परीक्षाओं में परीक्षा का माध्यम अंग्रेजी तो बना रहे किन्तु कुछ समय बाद हिंदी को वैकल्पिक माध्यम के रूप में अपना लिया जाये अर्थात परीक्षार्थी अपनी सुविधानुसार अंग्रेजी या हिंदी माध्यम से परीक्षा दे सकें।
- ❖ संसदीय विधान अंग्रेजी में ही चलता रहेगा किन्तु विधि मंत्रालय इसका प्रामाणिक हिंदी अनुवाद उपलब्ध करायेगा।
- ❖ उच्चतम न्यायालय की भाषा अन्ततः हिंदी होगी।
- ❖ सभी प्रदेशों में हिंदी सामान्यतः सभी निर्णयों, नियमों या आदेशों की भाषा होगी।

3. **राजभाषा हिंदी का विकास :-** राजभाषा हिंदी के विकास के संबंध में संविधान के अनुच्छेद - 351 का उल्लेखनीय महत्व है। इस अनुच्छेद में यह कहा गया है कि हिंदी का इस प्रकार विकास किया जाये कि वह भारत की सामासिक संस्कृति (Composit Culture) के तत्वों की अभिव्यक्ति का माध्यम बन सके। हिंदी के सरल और सुबोध प्रयोग को प्रोत्साहित किया जाना चाहिए।
- अनुच्छेद - 351 में केन्द्र सरकार को यह निर्देश दिया गया है कि वह हिंदी के विकास एवं प्रसार के लिए विशेष कदम उठाये।



**4. राजभाषा समितियां :-** संघ के राजकीय प्रयोजनों के लिए, हिंदी भाषा के उत्तरोत्तर प्रयोग पर ध्यान रखने के लिए तथा औद्योगिक, सांस्कृतिक एवं वैज्ञानिक उन्नति के सम्पर्क को ध्यान में रखते हुए, राजभाषा के प्रगामी प्रयोग का जायजा लेने के लिए, इन समितियों का गठन किया गया है। ये समितियां भारत सरकार की राजभाषा नीति तथा संसद द्वारा पारित राजभाषा अधिनियम, 1963 एवं राजभाषा नियम, 1976 के प्रावधानों का अनुपालन सुनिश्चित करेंगी। राजभाषा समितियां निम्नलिखित हैं:-

**(क) केन्द्रीय हिंदी समिति :-**

- (i) यह राजभाषा की सर्वोच्च समिति है जो राजभाषा के विषय में नीति तय करती है।
- (ii) इस समिति के अध्यक्ष प्रधानमंत्री होते हैं।
- (iii) सदस्य गृहमंत्री, गृह राज्यमंत्री, तथा 6केन्द्रीय मंत्रालयों के मंत्री, 6राज्यों के मुख्यमंत्री, संसदीय राजभाषा समिति के उपाध्यक्ष, संयोजक तथा हिंदी के विद्वान, समाजसेवी तथा पत्रकार।
- (iv) इस समिति का पुनर्गठन दिनांक 13.11.2009 को किया गया।
- (v) समिति की पिछली (30वीं) बैठक दिनांक 28.07.2011 को हुई थी।
- (vi) उद्देश्य :-
  - ✓ हिंदी राजभाषा की प्रगति तथा प्रयोग पर निगरानी रखना।

- ✓ सरकारी कामकाज में हिंदी के उत्तरोत्तर प्रयोगार्थ तथा उपरोक्त उद्देश्यों हेतु विभिन्न केन्द्रीय मंत्रालयों/विभागों में समन्वयार्थ गठित शीर्षस्थ समिति।

## (ख) संसदीय राजभाषा समिति :-

- (i) इस समिति का गठन राजभाषा अधिनियम, 1963 की धारा-4 के अधीन 1976 में किया गया।
- (ii) इस समिति के अध्यक्ष गृहमंत्री होते हैं।
- (iii) इस समिति के 30 सदस्य होते हैं जिसमें 20 लोक सभा से, तथा 10 राज्य सभा से।
- (iv) यह समिति सिफारिशों सहित अपनी रिपोर्ट राष्ट्रपति को देती है, जिसे राष्ट्रपति द्वारा संसद के दोनों सदनों के समक्ष रखा जायेगा और राज्य सरकारों को भेजा जायेगा। संसद तथा राज्य सरकारों द्वारा इस पर अभिव्यक्त मत पर विचार करने के बाद उसके सम्पूर्ण अथवा किसी भाग के लिए राष्ट्रपति निर्देश जारी करेंगे।
- (v) उद्देश्य :- संघ के राजकीय प्रयोजनों के लिए हिंदी के प्रयोग में की गई प्रगति का पुनर्विलोकन करके उस पर सिफारिश करते हुए राष्ट्रपति को प्रतिवेदन प्रस्तुत करना।
- (vi) उप-समितियां :-
  1. कार्य संचालन के लिए समिति को तीन उप-समितियों में विभाजित किया गया है जिसके लिए संयोजक, अध्यक्ष द्वारा नामित किये जाते हैं।

2. इसके अतिरिक्त एक आलेख एवं साक्ष्य उपसमिति भी गठित है जो संसदीय राजभाषा समिति की नीति निर्धारक उपसमिति है।
3. संसदीय राजभाषा समिति के उपाध्यक्ष इस समिति के पदेन अध्यक्ष होते हैं तथा उपरोक्त तीनों उपसमितियों के संयोजक इस समिति के सदस्य होते हैं।
4. इसके अतिरिक्त समिति के अध्यक्ष तीनों उपसमितियों में से एक-एक सदस्य को आलेख एवं साक्ष्य उपसमिति में सदस्य नामित करते हैं।
5. इन उपसमितियों द्वारा निरीक्षणों व संवाद के आधार पर आलेख एवं साक्ष्य उपसमिति द्वारा राष्ट्रपति को प्रस्तुत किये जाने वाले प्रतिवेदन का मसौदा तैयार किया जाता है। प्रतिवेदन में समिति द्वारा विभिन्न संस्तुतियों की जाती है।
6. समिति द्वारा राष्ट्रपति को प्रस्तुत किये गये प्रतिवेदन की अधिप्रमाणित प्रतियां संसद के पटल पर रखी जाती हैं। इन संस्तुतियों पर राजभाषा विभाग द्वारा विभिन्न हितधारकों से मंत्रणा व परामर्श के आधार पर तथा अन्य प्रासंगिक तथ्यों के आलोक में राष्ट्रपति के आदेश प्राप्त किये जाते हैं।
7. समिति द्वारा अब तक प्रस्तुत किये गये प्रतिवेदन के 8 खंडों में की गई सिफारिशों पर राष्ट्रपति के आदेश जारी किये जा चुके हैं।
8. अंतिम आदेश 2 जुलाई, 2008 में जारी हुए थे तथा नौवां खंड विकसित चरण पर है।

## (ग) हिंदी सलाहाकार समिति :-

- (i) प्रत्येक मंत्रालय में ये समितियां गठित है।
- (ii) इस समिति के अध्यक्ष संबन्धित मंत्रालय/विभाग के मंत्री होते है।
- (iii) इसमें 15 गैर सरकारी सदस्य तथा मंत्रालय/विभाग के अधिकारी, सचिव राजभाषा विभाग, संयुक्त सचिव राजभाषा विभाग, तथा विभिन्न मंत्रालयों/विभागों में गठित हिंदी सलाहाकार समितियों की बैठकों में भाग लेने के लिए स्थायी रूप से आमंत्रित अधिकारी इसके सदस्य होते हैं।
- (iv) वर्ष में कम से कम दो बैठकें एवं यथासम्भव अधिक बैठकों के आयोजन का लक्ष्य।
- (v) 54 मंत्रालयों/विभागों में गठित तथा अल्पसंख्यक कार्य मंत्रालय में गठन विचाराधीन।
- (vi) वैधता की अवधि तीन वर्ष तथा समय-समय पर पुनर्गठन किया जाता है।
- (vii) राजभाषा विभाग में समन्वयक की भूमिका निभाता है।
- (viii) उद्देश्य :- केन्द्र सरकार के मंत्रालयों/विभागों में राजभाषा नीति के कार्यान्वयन की प्रगति एवं संबंधित समस्याओं की समीक्षा करना व परामर्श देना।

## (घ) केन्द्रीय राजभाषा कार्यान्वयन समिति :-

- (i) इस समिति के अध्यक्ष सचिव राजभाषा विभाग होते हैं।
- (ii) इसके सदस्य विभिन्न मंत्रालयों/विभागों में राजभाषा नीति का कार्यान्वयन देख रहे संयुक्त सचिव स्तर या उच्च स्तर के अधिकारी होते हैं।
- (iii) इस समिति की अब तक 35 बैठकें हो चुकी हैं।
- (iv) पिछली बैठक 29 व 30 दिसम्बर 2010 को आयोजित हुई जिसमें 69 मंत्रालयों/विभागों के प्रतिनिधियों ने भाग लिया था।
- (v) उद्देश्य :-
  - ✓ मंत्रालय/विभागों में राजभाषा नीति (संवैधानिक व कानूनी प्रावधान, राष्ट्रपति के आदेश, वार्षिक कार्यक्रम में दिये गये लक्ष्यों, राजभाषा विभाग द्वारा जारी किये गये अनुदेशों आदि) के कार्यान्वयन की समीक्षा करना तथा उसके अनुपालन में पाई गई कमियों को दूर करने के उपाय सुझाना।
  - ✓ हिंदी के प्रभावी प्रयोगार्थ सफल पहलात्मक कदमों व अभिनव प्रयोगों की जानकारी का आदान-प्रदान करना।

## (ड) विभागीय राजभाषा कार्यान्वयन समिति :-

- (i) इस समिति के अध्यक्ष संबन्धित विभाग में राजभाषा कार्यान्वयन देख रहे संयुक्त सचिव या उच्च स्तर के अधिकारी होते हैं।
- (ii) इसके सदस्य विभाग एवं संबद्ध तथा अधीनस्थ कार्यालयों के अधिकारी एवं राजभाषा विभाग के प्रतिनिधि होते हैं।
- (iii) सभी मंत्रालयों/विभागों तथा कार्यालयों में राजभाषा कार्यान्वयन समितियां गठित हैं।
- (iv) उद्देश्य :- तिमाही प्रगति रिपोर्टों की समीक्षा करना तथा वार्षिक कार्यक्रम के लक्ष्यों को प्राप्त करने के उपाय सुझाना।

## (च) नगर राजभाषा कार्यान्वयन समिति :-

- (i) इसका अध्यक्ष नगर में स्थित केन्द्र सरकार के कार्यालयों में नियुक्त अधिकारियों में से वरिष्ठतम अधिकारी होता है।
- (ii) इसके सदस्य नगर में स्थित केन्द्र सरकार के सदस्य कार्यालयों के प्रमुख होते हैं।
- (iii) प्रत्येक नगर में केन्द्रीय कार्यालयों, केन्द्रीय उपक्रमों, राष्ट्रीयकृत बैंकों को मिलाकर इस समिति का गठन किया जाता है।
- (iv) जहां ऐसे दस या अधिक कार्यालय हैं वहां ये समितियां गठित की जाती हैं।
- (v) इस समिति की बैठक वर्ष में दो बार होती है।

- (vi) कुछ नगरों में उपक्रमों, बैंकों और अन्य केन्द्रीय कार्यालयों के लिए अलग-अलग समितियां गठित है। जिसमें अब तक गठित कुल 274 नगर राजभाषा कार्यान्वयन समितियों में सार्वजनिक क्षेत्र के उपक्रम के लिए 13 तथा बैंकों के लिए गठित 26 समितियां शामिल हैं।
- (vii) प्रधान कार्यालय के अतिरिक्त, अधीनस्थ कार्यालयों/स्टेशनों पर, जहां कर्मचारियों की संख्या 25 या उससे अधिक हो, वहां भी ऐसी समितियां गठित की जाती है। जहां एक कार्यालय में कर्मचारियों की संख्या 25 नहीं है, वहां स्थित अन्य कार्यालयों को मिलाकर ये समितियां गठित की जाती है। इसकी बैठक हर तीसरे महीने में आयोजित की जाती है।



## 5. राजभाषा अधिनियम - 1963

(दिनांक 10-05-63 यथासंशोधित-1967)

राजभाषा अधिनियम-1963 की 9 धाराएं :-

- (1) संक्षिप्त नाम और प्रारम्भ।
- (2) परिभाषाएं।
- (3) संघ के राजकीय प्रयोजनों के लिए और संसद में प्रयोग के लिए अंग्रेजी भाषा का बना रहना।
- (4) राजभाषा के संबंध में समिति।
- (5) केन्द्रीय अधिनियमों आदि का प्राधिकृत हिंदी अनुवाद।
- (6) कतिपय दशाओं में राज्य अधिनियमों का प्राधिकृत हिंदी अनुवाद।
- (7) उच्च न्यायालय के निर्णयों, आदि में हिंदी या अन्य राजभाषा का वैकल्पिक प्रयोग।
- (8) नियम बनाने की शक्ति।
- (9) कतिपय उपबंधों का जम्मू कश्मीर पर लागू न होना।

राजभाषा अधिनियम 10 मई 1963 को पारित किया गया था, जो 26 जनवरी 1965 से लागू है। राजभाषा अधिनियम 1963 की 9 धाराएं हैं जिसमें से धारा - 3(3) सबसे महत्वपूर्ण है। इस धारा के अनुसार कुछ कागजात हिंदी और अंग्रेजी द्विभाषी रूप में एक साथ जारी करना अनिवार्य है। ऐसे कागजात द्विभाषी रूप में जारी करने की जिम्मेदारी राजभाषा नियम - 1976 के नियम - 12 के अनुसार उन कागजातों पर हस्ताक्षर करने वाले व्यक्ति की होगी।

- धारा - 3(3) के अन्तर्गत आने वाले 13 कागजात इस प्रकार हैं:- (धारा 3/3 - 26 जनवरी 1965 को लागू हुई।)
- (i) सामान्य आदेश। (परिपत्र, आरक्षण चार्ट, ज्ञापन, सूचना भी शामिल है)
  - (ii) अधिसूचना।
  - (iii) संकल्प।
  - (iv) नियम।
  - (v) प्रेस विज्ञप्ति/प्रेस नोट।
  - (vi) संविदा।
  - (vii) करार।
  - (viii) लाइसेंस।
  - (ix) परमिट।
  - (x) निविदा प्रारूप और निविदा नोटिस।
  - (xi) संसद में प्रस्तुत की जाने वाली प्रशासनिक या अन्य रिपोर्ट।
  - (xii) संसद के दोनों सदनों में प्रस्तुत किये जाने वाले सरकारी कागजात।
  - (xiii) केन्द्रीय सरकारी कार्यालयों द्वारा जारी की जाने वाली प्रशासनिक तथा अन्य रिपोर्ट।



6. भारतीय संविधान की आठवीं अनुसूची में 22 भाषाओं को राजभाषा के रूप में मान्यता दी गई है जो इस प्रकार है :-

|             |              |
|-------------|--------------|
| (1) असमी    | (12) तेलगू   |
| (2) बंगाली  | (13) संस्कृत |
| (3) गुजराती | (14) उर्दू   |
| (4) हिन्दी  | (15) सिंधी   |
| (5) कन्नड़  | (16) कोंकणी  |
| (6) कश्मीरी | (17) मणिपुरी |
| (7) मलयालम  | (18) नेपाली  |
| (8) मराठी   | (19) डोंगरी  |
| (9) ओडिया   | (20) मैथली   |
| (10) पंजाबी | (21) बोडो    |
| (11) तमिल   | (22) संथाली  |

“उपरोक्त 22 भाषाओं के अतिरिक्त अंग्रेजी भारत की सह-भाषा है।”

नोट :- मूल रूप से आठवीं अनुसूची में 14 भाषाएं थीं।

21 वां संविधान संशोधन - 1967 में सिंधी, तथा 71 वां संविधान संशोधन - 1992 में कोंकणी, मणिपुरी, नेपाली तथा 92 वां संविधान संशोधन - 2003 में डोंगरी, मैथली, बोडो, और संथाली भाषाओं को जोड़ा गया है।



## 7. राजभाषा नियम - 1976 (दिनांक 17-07-1976 से लागू)

केन्द्र सरकार ने राजभाषा नियम 28 जून 1976 को बनाया। राजभाषा नियम कुल 12 हैं, जो तमिलनाडु राज्य को छोड़कर सम्पूर्ण भारत पर लागू है।

राजभाषा नियम -1976 के अनुसार राजभाषा नीति के सम्यक कार्यान्वयन के लिए भारत को तीन भागों में बांटा गया है:-

‘क’ क्षेत्र : बिहार, उत्तर प्रदेश, राजस्थान, हिमाचल प्रदेश, मध्य प्रदेश, हरियाणा, झारखंड, उत्तरांचल, छत्तीसगढ़, दिल्ली तथा अंडमान एवं निकोबार द्वीप समूह।

‘ख’ क्षेत्र : गुजरात, महाराष्ट्र, पंजाब, तथा चडीगढ़, दमन एवं द्वीप, दादर एवं नागर हवेली संघ राज्य।

‘ग’ क्षेत्र : ‘क’ तथा ‘ख’ क्षेत्र से भिन्न राज्य तथा संघ शाषित प्रदेश।

### नोट :

गृह मंत्रालय राजभाषा विभाग का दिनांक 23.05.2011 के पत्र क्रमांक 24/क्षे का का/ब/2010-2011/266 के अनुसार संघ राज्य क्षेत्र दमन एवं द्वीप तथा दादर एवं नागर हवेली संघ राज्य को ‘ग’ क्षेत्र से ‘ख’ क्षेत्र में जोड़ा गया है।



## 8. राजभाषा नियम - 1976 के 12 नियम :-

- (1) संक्षिप्त नाम, विस्तार और प्रारम्भ।
- (2) परिभाषाएं।
- (3) राज्यों आदि और केन्द्र सरकार के कार्यालयों से भिन्न कार्यालयों के साथ पत्रादि।

(i) केन्द्रीय सरकार के कार्यालय से 'क' क्षेत्र के राज्य को या व्यक्ति को पत्र आदि असाधारण दशाओं के सिवाय हिंदी में होंगे। यदि कोई पत्र आदि किसी को अंग्रेजी में भेजे जाते हैं, तो उनके साथ हिंदी अनुवाद भी भेजा जायेगा।

(ii) केन्द्रीय सरकार के कार्यालय से 'ख' क्षेत्र के राज्य को पत्र आदि सामान्यतः हिंदी में भेजे जायेंगे, यदि अंग्रेजी में भेजे जाते हैं तो उनके साथ हिंदी अनुवाद भी भेजा जायेगा।

यदि राज्य सरकार किसी विशिष्ट वर्ग के पत्र उतनी अवधि तक जो संबंधित राज्य सरकार द्वारा विनिर्दिष्ट किया जाये, अंग्रेजी या हिन्दी, दूसरी भाषा में अनुवाद सहित भेजे जायें।

'ख' क्षेत्र के राज्य में किसी व्यक्ति को पत्र आदि हिंदी या अंग्रेजी में भेजे जा सकते हैं।

(iii) केन्द्रीय सरकार के कार्यालय से 'ग' क्षेत्र के राज्य को या ऐसे राज्य में किसी कार्यालय या व्यक्ति को पत्र आदि अंग्रेजी में लिखे जायेंगे।

(iv) 'क' क्षेत्र और 'ख' क्षेत्र में किसी बात के होते हुए भी 'ग' क्षेत्र के केन्द्रीय सरकार के कार्यालय से 'क' या

‘ख’ क्षेत्र के राज्य को या कार्यालय या व्यक्ति को पत्र आदि हिंदी या अंग्रेजी में हो सकते हैं।

(4) **केन्द्रीय सरकार के कार्यालयों के बीच पत्रादि :**

- (i) केन्द्रीय सरकार के एक मंत्रालय या विभाग और दूसरे मंत्रालय या विभाग के बीच पत्र-व्यवहार हिंदी या अंग्रेजी में हो सकता है।
- (ii) केन्द्रीय सरकार के एक मंत्रालय या विभाग और ‘क’ क्षेत्र में स्थित संलग्न या अधीनस्थ कार्यालयों के बीच पत्र-व्यवहार आदि केवल हिंदी में होंगे।
- (iii) ‘क’ क्षेत्र और ‘ख’ क्षेत्र या ‘ग’ क्षेत्र में स्थित केन्द्रीय सरकार के कार्यालयों के बीच पत्रादि हिंदी में या अंग्रेजी में हो सकते हैं।
- (iv) ‘क’ क्षेत्र और ‘ग’ क्षेत्र में स्थित केन्द्रीय सरकार के कार्यालयों के बीच पत्र-व्यवहार हिंदी या अंग्रेजी में हो सकते हैं।

(5) **हिंदी में प्राप्त पत्रादि के उत्तर :**

हिंदी में पत्रादि के उत्तर केन्द्रीय सरकार के कार्यालय से उत्तर हिंदी में होंगे।

(6) **हिंदी और अंग्रेजी दोनों भाषाओं का प्रयोग :**

जहां पत्रादि ‘क’ क्षेत्र या ‘ख’ क्षेत्र के कार्यालयों को सम्बोधित है वहां यदि आवश्यक हो तो पहुँच के स्थान पर दूसरी भाषा में अनुवाद उपलब्ध कराया जायेगा।

(7) **आवेदन, अपील या अभ्यावेदन आदि :**

- (i) कर्मचारी कोई आवेदन, अपील या अभ्यावेदन हिंदी या अंग्रेजी में कर सकता है।
- (ii) यदि कोई आवेदन, अपील या अभ्यावेदन हिंदी में किया जाये या उसमें हस्ताक्षर हिंदी में किया गया हो तो उसका उत्तर अनिवार्य रूप से हिंदी में ही दिया जायेगा।
- (iii) यदि कर्मचारी यह चाहता है कि कोई आदेश या सूचना जिसका कर्मचारी पर तामील किया जाना अपेक्षित है, हिंदी या अंग्रेजी होना चाहिये तो उसे बिना किसी अनुचित विलम्ब के उसी भाषा में दी जायेगी।

(8) **केन्द्रीय सरकार के कार्यालयों में टिप्पणी का लिखा जाना:**

- (i) कर्मचारी किसी फाइल पर टिप्पणी या कार्यवृत्त हिंदी में या अंग्रेजी में लिख सकता है और उससे यह अपेक्षा नहीं की जायेगी कि वह उसका अनुवाद दूसरी भाषा में भी प्रस्तुत करे।
- (ii) केन्द्रीय सरकार का कर्मचारी, जिसे हिंदी का कार्यसाधक ज्ञान प्राप्त है किसी हिंदी दस्तावेज के अंग्रेजी अनुवाद की मांग तब ही कर सकता है जबकि दस्तावेज विधिक या तकनीकी प्रकृति का है।

(9) **हिंदी में प्रवीणता :**

- (i) हिंदी में प्रवीणता ऐसे ज्ञान से है, जिसने हिंदी माध्यम से मैट्रिक या कोई समकक्ष या उच्चतर परीक्षा पास की हो। या
- (ii) स्नातक या उसके समकक्ष या उससे किसी उच्च स्तर की परीक्षा में ऐच्छिक विषय के रूप में हिंदी विषय लिया हो। या
- (iii) विहित प्रपत्र में यह घोषणा की हो कि उसे हिंदी में प्रवीणता प्राप्त है ऐसे कर्मचारी को अनिवार्य हिंदी प्रशिक्षण से छूट दी गई है।

(10) **हिंदी का कार्यसाधक ज्ञान :**

- (i) हिंदी में कार्य साधक ज्ञान का अभिप्राय ऐसे ज्ञान से है, जिसने हिंदी विषय के साथ मैट्रिक या कोई समकक्ष या उच्चतर परीक्षा पास की हो। या
- (ii) हिंदी शिक्षण योजना की प्राज्ञ परीक्षा या उससे कम स्तर की कोई परीक्षा या उसके समकक्ष किसी निर्धारित परीक्षा में सफलता हासिल की हो, जो किसी कोटि के लिए निर्धारित की गई हो। या
- (iii) सरकार के द्वारा निर्धारित कोई अन्य परीक्षा में सफलता हासिल की हो। जैसे-हिंदी प्रचार सभा। या
- (iv) विहित प्रपत्र में यह घोषणा की हो कि उसे हिंदी में कार्य साधक ज्ञान प्राप्त है ऐसे कर्मचारी को अनिवार्य हिंदी प्रशिक्षण से छूट दी गई है।

(11) **मैनुअल, संहिताएं, प्रक्रिया संबंधी अन्य साहित्य, लेखन सामग्री आदि का द्विभाषी होना :**

- (i) केन्द्रीय सरकार के कार्यालयों से संबंधित सभी मैनुअल, संहिताएं और प्रक्रिया संबंधी अन्य साहित्य हिंदी और अंग्रेजी द्विभाषी रूप में यथास्थिति मुद्रित और प्रकाशित किया जायेगा।
- (ii) केन्द्रीय सरकार के किसी कार्यालय में प्रयोग किये जाने वाले रजिस्ट्रों के प्रारूप एवं शीर्षक हिंदी और अंग्रेजी में होंगे। इसी प्रकार इन कार्यालयों में प्रयोग किये जाने वाले सभी नामपट्ट, सूचनापट्ट, पत्रशीर्ष और लिफाफों पर उत्कीर्ण लेख तथा लेखन सामग्री की अन्य मर्दे हिंदी तथा अंग्रेजी में होंगी।

(12) **अनुपालन का उत्तरदायित्व :**

केन्द्रीय सरकार के प्रत्येक कार्यालय के प्रशासनिक प्रधान का यह उत्तरदायित्व होगा कि वह यह सुनिश्चित करे कि अधिनियम और इन नियमों के उपबंधों का समुचित रूप से अनुपालन हो रहा है और इस प्रयोजन के लिए उपयुक्त और प्रभावकारी जांच के लिए उपाय करें।



## 9. राजभाषा हिंदी का स्थान :-

भारत में सबसे ज्यादा बोली जाने वाली भाषा और लोकप्रिय भाषा हिंदी है, जो लगभग 41 करोड़ लोगों द्वारा बोली जाती है। भारत की जनभाषा हिंदी है। भारत में प्रकाशित होने वाले पत्र-पत्रिकाओं की सर्वाधिक संख्या हिंदी भाषा भाषियों की है। हिंदी आजादी के आन्दोलनों की भाषा थी। हिंदी या हिन्दोस्तानी, पूज्य बापू महात्मा गाँधी का सपना था कि स्वतंत्र भारत का कामकाज अपनी भाषा हिंदी में होगा। गाँधीजी ने तो यहां तक कहा था कि हिंदी का प्रश्न मेरे लिए स्वराज्य का, भारत की आजादी का प्रश्न है। स्वतंत्रता आंदोलन के सभी नेता हिंदी को ही राष्ट्र भाषा मानते थे।

किसी भी देश की पहचान उस देश का राष्ट्रीय झंडा, राष्ट्रीय गान, एक संविधान और उस देश की एक राजभाषा होती है। स्वतंत्रता के बाद हमारा अलग संविधान बना, राष्ट्रीय झंडा निर्धारित किया गया, राष्ट्रीयगान तैयार किया गया। लेकिन जब राजभाषा का प्रश्न आया तो राजभाषा तय करना कठिन हो गया, क्योंकि भारत जैसे विशाल देश में बहुत सी भाषाएं एवं अनगिनत बोलियां बोली जाती हैं। ऐसी स्थिति में सवाल यह उठा कि किस भाषा को राज भाषा बनाया जाये।

आखिरकार 14 सितम्बर, 1949 को हमारी संविधान सभा में एकमत से हिंदी को राजभाषा के रूप में स्वीकार कर लिया। स्वीकार इसलिए किया गया क्योंकि हिंदी इस देश में सबसे अधिक बोली, लिखी, पढ़ी और समझी जाने वाली भाषा है और लगभग हर भारतवासी इसका प्रयोग करता है। इसलिए हिंदी को ही इस देश की राजभाषा का दर्जा दिया गया है।



## 10. मध्य रेल पर राजभाषा हिंदी के प्रयोग को और अधिक बढ़ाने हेतु सुझाव :-

वर्तमान में मध्य रेल का क्षेत्र घटकर मराठी भाषी इलाके तक सीमित रह गया है और मराठी तथा राजभाषा हिंदी के शब्दों में काफी हद तक समानता है अतः मराठी भाषी कर्मचारी बड़ी आसानी से हिंदी बोल, पढ़, लिख और समझ सकता है। इसलिए मेरा सुझाव है कि मराठी भाषी इलाके वाले मध्य रेल पर राजभाषा हिंदी को प्रयोग करने के लिए बढ़ावा देने में कोई मुश्किल नहीं है।

आवश्यकता थोड़े प्रयास करने की है। इसके लिए हिंदी कार्यशालाएं चलाई जा सकती हैं, कर्मचारियों को टेबल ट्रेनिंग दी जा सकती है। हिंदी सेमिनारों, प्रतियोगिताओं का समय-समय पर आयोजन किया जा सकता है। कार्यालयों में प्रयुक्त रजिस्टर, डायरियों के कॉलम हिंदी में बनवाकर उसमें प्रविष्टियां और कर्मचारियों के नाम, पदनाम हिंदी में लिखे जा सकते हैं। डायरियां हिंदी में भरवानी चाहिये।

चतुर्थ श्रेणी कर्मचारियों के साथ पत्राचार और अनुशासन की कार्यवाही हिंदी में की जानी चाहिये। विभागीय बैठकों की कार्यवाही हिंदी में की जानी चाहिये, तथा अधिकारी अपनी निरीक्षण टिप्पणियां हिंदी में जारी कर सकते हैं। छुट्टी/पास/पी.टी.ओ. के आवेदन और दौरा का कार्यक्रम हिंदी में जारी करना चाहिये।

मेरा यह भी सुझाव है कि मध्य रेल जैसे अहिंदी भाषी क्षेत्र में राजभाषा का प्रयोग यहां की स्थानीय और प्रचलित अंग्रेजी शब्दों को देवनागरी में लिखकर किया जाना चाहिये ताकि हिंदी में काम भी हो और सम्प्रेषण में भी कोई अड़चन न आये।



## 11. राजभाषा नीति निर्देशिका :-

- (i) भारत के सभी मंत्रालयों/विभागों तथा अन्य कार्यालयों में प्रयोग में आने वाली सभी रबड़ की मोहरें और कार्यालय की मुद्राएं द्विभाषिक रूप में हिंदी के शब्द ऊपर रखते हुये प्रयोग की जायें।
- (ii) पदनाम, कार्यालय का नाम, पता आदि के बारे में जो मोहरें बनवाई जायें उनमें एक पंक्ति हिंदी की और फिर एक पंक्ति अंग्रेजी की हो या एक ही पंक्ति में हिंदी और उसके बाद अंग्रेजी में लिखा हो।
- (iii) बैंकों के चैकों पर यदि द्विभाषी मोहर लगाने के लिए पर्याप्त स्थान उपलब्ध न हो तो क और ख क्षेत्रों के कार्यालयों आदि में चैकों पर मोहर केवल हिंदी में और ग क्षेत्र के कार्यालयों में केवल हिंदी या अंग्रेजी में लगा दी जायें।
- (iv) जो मोहर टिप्पणी आदि की जगह पर बनाई जाती है वे या तो द्विभाषी बनाई जायें या क और ख क्षेत्र के कार्यालयों आदि में केवल हिंदी में और ग क्षेत्र के कार्यालयों में केवल हिंदी या अंग्रेजी में बनाई जायें।
- (v) रबड़ की मोहर तैयार करते समय भाषाओं के अक्षर समान आकार के होने चाहिए।
- (vi) क और ख क्षेत्रों में स्थित कार्यालयों के नामपट्ट रबड़ की मोहरें, पत्र-शीर्ष, द्विभाषिक रूप से बनवाये जायें।

(vii) देवनागरी के नामपट्ट, मोहरें आदि पर पूरा नाम तो एक रीति से लिखा जा सकता है, परन्तु संक्षिप्त नाम लिखने के लिए अनेक पद्धतियां हैं। जैसे यदि किसी का नाम राम प्रसाद गुप्ता है तो देवनागरी लिपि में उसका संक्षिप्त नाम किसी एक प्रकार से लिखा जा सकता है:- रा.प्र.गुप्ता, राम प्रसाद गुप्ता, आर.पी.गुप्ता।

यह प्रत्येक की अपनी रुचि पर निर्भर करता है कि वह अपना नाम किस प्रकार लिखे। यदि कोई व्यक्ति अपना नाम किसी एक प्रकार से लिखना चाहता है तो उसे दूसरी रीति से लिखने को बाध्य नहीं किया जा सकता है।



## 12. भारतीय रेल द्वारा हिंदी के प्रयोग-प्रसार को बढ़ाने के लिए क्या कदम उठाये गये हैं ? :-

- (i) सभी विभागों के लिए यह अनिवार्य है कि वे अपने कार्यालय में राजभाषा कार्यान्वयन समितियों का गठन कराएं और संबंधित कार्यालय के कार्यालय अध्यक्ष को इस समिति के अध्यक्ष के रूप में नामित किया जाना चाहिए।
- (ii) समितियों में उचित अनुपात में अहिंदी भाषी अधिकारियों को प्रतिनिधित्व दिया जाये तथा जहां तक हो सके कोशिश की जाये कि किसी भी समिति में आधे सदस्य अहिंदी भाषी हों।
- (iii) समिति की बैठक प्रत्येक तिमाही में एक बार अवश्य की जानी चाहिए।
- (iv) जो कर्मचारी हिंदी संबंधी प्रतियोगिताओं में पुरस्कृत किये जाते हैं उन्हें राजभाषा कार्यान्वयन समिति की बैठकों में आमंत्रित किया जाये।
- (v) हिंदी के संदर्भ साहित्य, टाइपराइटर्स, टाइपिस्टों, आशुलिपिकों आदि को उपलब्ध कराया जाये, और प्रशिक्षण की व्यवस्था की जाये।
- (vi) विभागीय तथा पदोन्नति परीक्षाओं में प्रश्नों के उत्तर हिंदी या अंग्रेजी में देने का प्रावधान किया गया है तथा साक्षात्कार भी हिंदी में देने की छूट है।

- (vii) प्रशिक्षण संस्थानों में हिंदी माध्यम से प्रशिक्षण देने की व्यवस्था की जाये।
- (viii) 'क' तथा 'ख' क्षेत्र में कार्यरत हिंदी माध्यम से प्रशिक्षण देने वाले प्रशिक्षकों को कुछ समय के लिए 'ग' क्षेत्र में भेजा जाये।
- (ix) हिंदी दिवस/पखवाड़ा/मास मनाया जाना चाहिए।
- (x) त्रिभाषा सूत्र का कार्यान्वयन सभी राज्यों में लागू है।
- (xi) हिंदी कार्य में उत्कृष्ट उपलब्धि के लिए इंदिरा गांधी राजभाषा पुरस्कार योजना लागू की गई है।
- (xii) अधिकारियों व कर्मचारियों को प्रतिवर्ष उनके द्वारा किये गये कार्य के आधार पर नकद पुरस्कार दिये जाते हैं।
- (xiii) हिंदी में आशुलिपि और टाइपिंग के लिए प्रोत्साहन भत्ता दिया जाता है।
- (xiv) हिंदी शिक्षण योजना के अधीन प्रबोध, प्रवीण व प्राज्ञ परीक्षाएं उत्तीर्ण करने पर मिलने वाली प्रोत्साहन राशि में वृद्धि की गई है।
- (xv) नये सरकारी भवनों, उनके परिसरों, सरकारी कार्यक्रमों और परियोजनाओं आदि का नामकरण हिंदी भाषा में हो।
- (xvi) प्रत्येक वर्ष 14 सितम्बर को हिंदी दिवस तथा उस दिन से शुरु करके हिंदी सप्ताह मनाएं तथा इनमें हिंदी से संबंधित विभिन्न प्रचार सामग्री का प्रदर्शन व वितरण होना चाहिए।

- (xvii) हिंदी में कार्य करने की झिझक समाप्त करने हेतु हिंदी कार्यशालाओं का आयोजन करना।
- (xviii) 'क' क्षेत्र से केन्द्र सरकार में प्रतिनियुक्ति पर आने वाले अधिकारियों द्वारा अधिक से अधिक कार्य हिंदी में किया जाना चाहिए।
- (xix) राष्ट्रपति ने लोकसभा के 20 सदस्य तथा राज्य सभा के 10 सदस्यों की एक समिति बनाई है जो राजभाषा के प्रचार-प्रसार की समीक्षा कर उसकी रिपोर्ट राष्ट्रपति को सौंपती है।
- (xx) 45 वर्ष से कम आयु वाले सभी कर्मचारियों के लिए हिंदी प्रशिक्षण अनिवार्य होना चाहिये।
- (xxi) जनता से हिंदी में जो भी पत्रादि मिले उनके उत्तर हिंदी में ही दिये जाने चाहिए।



### 13. प्रोत्साहन पुरस्कार :-

- (i) राजीव गाँधी ज्ञान-विज्ञान पुरस्कार
- (ii) रेलमंत्री राजभाषा शील्ड/ट्राफी योजना
- (iii) रेलमंत्री हिंदी निबंध प्रतियोगिता
- (iv) रेलमंत्री व्यक्तिगत नकद पुरस्कार योजना
- (v) महाप्रबंधक व्यक्तिगत नकद पुरस्कार योजना
- (vi) इंदिरा गाँधी राजभाषा पुरस्कार
- (vii) लालबहादुर शास्त्री तकनीकी मौलिक लेखन पुरस्कार
- (viii) कथा संग्रह, उपन्यास के लिए प्रेमचंद्र पुरस्कार
- (ix) काव्य संग्रह के लिए मैथिली शरण गुप्त पुरस्कार
- (x) सामूहिक पुरस्कार योजना
- (xi) रेल यात्रा वृतांत पुरस्कार योजना
- (xii) हिंदी में टिप्पणी तथा प्रारूप लेखन के लिए पुरस्कार
- (xiii) हिंदी में टाइपिस्ट एवं आशुलिपिक को प्रोत्साहन भत्ता
- (xiv) हिंदी में डिक्टेसन देने वाले अधिकारियों के लिये पुरस्कार
- (xv) एक वेतन वृद्धि के बराबर विशेष वेतन योजना
- (xvi) आदर्श स्टेशन/कार्यालय/मंडल/वर्कशॉप के लिए राजभाषा शील्ड/ ट्राफी योजना



## राजभाषा हिंदी का प्रचार-प्रसार बढ़ाने हेतु चलाई जा रही विभिन्न राजभाषा प्रोत्साहन योजनाओं के पुरस्कारों का संक्षिप्त विवरण:

| क्र. | पुरस्कार का नाम                                                        | विधाएं                                                                                                                                                                                                                                       | संख्या         | राशि     |
|------|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| 1    | राजीव गाँधी ज्ञान-विज्ञान पुरस्कार (प्रमाण-पत्र एवं स्मृति चिन्ह सहित) | तकनीकी / वैज्ञानिक जैसे :-<br>इंजीनियरिंग, कंप्यूटर, जैव, विज्ञान, भैतिकी, अंतरिक्ष, ऊर्जा, आयुर्विज्ञान, /समसामायिक विषय उदारीकरण, भूमंडलीकरण, मानवाधिकार, उपभोक्तावाद, प्रदूषण आदि विषयों पर मौलिक पुस्तक लेखन।<br>(न्यूनतम पृष्ठ सं. 100) | प्रथम (एक)     | 2 लाख    |
|      |                                                                        |                                                                                                                                                                                                                                              | द्वितीय (एक)   | 1.25 लाख |
|      |                                                                        |                                                                                                                                                                                                                                              | तृतीय (एक)     | 75000/-  |
|      |                                                                        |                                                                                                                                                                                                                                              | सांत्वना (दस)  | 10000/-  |
| 2    | इंदिरा गाँधी राजभाषा पुरस्कार                                          | सरकारी कार्य से संबंधित किसी भी विषय पर मौलिक लेखन हेतु इंदिरा गाँधी राजभाषा पुरस्कार दिया जाता है। (न्यूनतम पृष्ठ सं. 100)                                                                                                                  | प्रथम (एक)     | 40,000/- |
|      |                                                                        |                                                                                                                                                                                                                                              | द्वितीय (एक)   | 30,000/- |
|      |                                                                        |                                                                                                                                                                                                                                              | तृतीय (एक)     | 20,000/- |
|      |                                                                        |                                                                                                                                                                                                                                              | प्रोत्साहन(एक) | 2,500/-  |

|   |                                                |                                                                                                                                   |               |          |
|---|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| 3 | लालबहादुर शास्त्री तकनीकी मौलिक लेखन पुरस्कार  | तकनीकी रेल विषयों पर मौलिक पुस्तक लेखन हेतु लालबहादुर शास्त्री पुरस्कार दिया जाता है।<br>(न्यूनतम पृष्ठ सं. 100)                  | प्रथम (एक)    | 15,000/- |
|   |                                                |                                                                                                                                   | द्वितीय (एक)  | 7,000/-  |
|   |                                                |                                                                                                                                   | तृतीय (एक)    | 3,300/-  |
| 4 | कथा संग्रह, उपन्यास के लिए प्रेमचंद्र पुरस्कार | कथा/कहानी संग्रह एवं उपन्यास के लिए                                                                                               | प्रथम (एक)    | 15,000/- |
|   |                                                |                                                                                                                                   | द्वितीय (एक)  | 7,000/-  |
|   |                                                |                                                                                                                                   | तृतीय (एक)    | 3,300/-  |
| 5 | काव्य संग्रह के लिए मैथिली शरण गुप्त पुरस्कार  | काव्य/गजल संग्रह के लिए                                                                                                           | प्रथम (एक)    | 15,000/- |
|   |                                                |                                                                                                                                   | द्वितीय (एक)  | 7,000/-  |
|   |                                                |                                                                                                                                   | तृतीय (एक)    | 3,300/-  |
| 6 | बीस हजार/दस हजार शब्द योजना                    | गृह मंत्रालय की बीस हजार/दस हजार शब्द या इससे अधिक लिखने पर पुरस्कार                                                              | प्रथम (दो)    | 1600/-   |
|   |                                                |                                                                                                                                   | द्वितीय (तीन) | 800/-    |
|   |                                                |                                                                                                                                   | तृतीय (पाँच)  | 600/-    |
| 7 | रेलमंत्री हिंदी निबंध प्रतियोगिता              | रेल संचालन एवं प्रबंधन से संबंधित किसी भी विषय पर लिखने हेतु पुरस्कार (न्यूनतम पृष्ठ सं. 5,000) राजपत्रित एवं अराजपत्रित को (1+1) | प्रथम (1+1)   | 6,000/-  |
|   |                                                |                                                                                                                                   | द्वितीय (1+1) | 4,000/-  |

|    |                                                     |                                                                                                                                                                      |                       |                 |         |
|----|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|---------|
| 8  | रेलवे बोर्ड की राजभाषा व्यक्तिगत नकद पुरस्कार योजना | सरकारी कामकाज में हिंदी का अधिकाधिक व प्रशंसनीय प्रयोग के लिए अधिकारी एवं कर्मचारियों को दिया जाता है।                                                               | मध्य रेल के लिए (सात) | 1,500/-         |         |
| 9  | क्षेत्रीय स्तर पर सामूहिक पुरस्कार योजना            | प्रथम (6 X 1,500)                                                                                                                                                    |                       | 9,000/-         |         |
|    |                                                     | द्वितीय (5 X 1,200)                                                                                                                                                  |                       | 6,000/-         |         |
|    |                                                     | तृतीय (5 X 800)                                                                                                                                                      |                       | 4,000/-         |         |
| 10 | रेल यात्रा वृतांत पुरस्कार                          | रेल कर्मियों सहित जनसाधारण के रेल यात्रा संबंधी अनुभव प्राप्त करने के आधार पर रेलों द्वारा अपनी छवि को बेहतर बनाने के उद्देश्य से, रेल मंत्रालय की योजना प्रचलित है। | प्रथम (एक)            | 4,000/-         |         |
|    |                                                     |                                                                                                                                                                      | द्वितीय (एक)          | 3,000/-         |         |
|    |                                                     |                                                                                                                                                                      | तृतीय (एक)            | 2,000/-         |         |
| 11 | हिंदी में टिप्पणी, तथा प्रारूप लेखन के लिए पुरस्कार | हिंदी निबंध/वाक/ टिप्पण एवं प्रारूप लेखन के लिए प्रतियोगिता पुरस्कार                                                                                                 | अखिल रेल स्तर पर      | प्रथम (एक)      | 3,000/- |
|    |                                                     |                                                                                                                                                                      |                       | द्वितीय (एक)    | 2,500/- |
|    |                                                     |                                                                                                                                                                      |                       | तृतीय (एक)      | 2,000/- |
|    |                                                     |                                                                                                                                                                      |                       | सांत्वना (पांच) | 1,500/- |

|    |                                                        |                                                                                                                            |                                   |                |         |
|----|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------|---------|
|    |                                                        |                                                                                                                            | मुख्यालय/<br>क्षेत्रीय स्तर<br>पर | प्रथम (एक)     | 1,200/- |
|    |                                                        |                                                                                                                            |                                   | द्वितीय (एक)   | 1,000/- |
|    |                                                        |                                                                                                                            |                                   | तृतीय (एक)     | 900/-   |
|    |                                                        |                                                                                                                            |                                   | सांत्वना (तीन) | 250/-   |
|    |                                                        |                                                                                                                            | मंडल/कारखाना<br>ना स्तर पर        | प्रथम (एक)     | 500/-   |
|    |                                                        |                                                                                                                            |                                   | द्वितीय (एक)   | 400/-   |
|    |                                                        |                                                                                                                            |                                   | तृतीय (एक)     | 300/-   |
|    |                                                        |                                                                                                                            |                                   | सांत्वना (दो)  | 150/-   |
| 12 | क्षेत्रीय स्तर पर<br>नकद पुरस्कार                      | प्रत्येक विभाग/मंडल/कारखाना से एक<br>अधिकारी तथा दो कर्मचारी                                                               |                                   | अधिकारी        | 500/-   |
|    |                                                        |                                                                                                                            |                                   | कर्मचारी       | 200/-   |
| 13 | हिंदी में डिक्टेशन<br>देने वाले अधिकारी<br>को पुरस्कार | हिंदी भाषी अधिकारी द्वारा बीस हजार<br>शब्द तथा अहिंदी भाषी अधिकारी द्वारा<br>दस हजार शब्द लिखने पर वर्ष में दो<br>पुरस्कार |                                   | हिंदी भाषी     | 2,000/- |
|    |                                                        |                                                                                                                            |                                   | अहिंदी भाषी    | 2,000/- |
| 14 | अंग्रेजी टंककों को हिंदी में कार्य करने पर मानदेय      |                                                                                                                            |                                   | प्रतिमाह       | 80/-    |
| 15 | अंग्रेजी आशुलिपिकों को हिंदी में कार्य करने पर मानदेय  |                                                                                                                            |                                   | प्रतिमाह       | 120/-   |

|    |                                                                                                                                                          |                |                            |                  |       |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|------------------|-------|
| 16 | राजभाषा विभाग द्वारा संचालित विभिन्न कार्यालयों एवं स्टेशनों में स्थित हिंदी पुस्तकालय का कार्य अंशकालीन पुस्तकालय अध्यक्ष के रूप में देखने हेतु मानदेय। |                | प्रतिमाह                   | 500/-            |       |
| 17 | राजभाषा विभाग द्वारा मंडल के विभिन्न कार्यालयों एवं स्टेशनों पर गठित राजभाषा समितियों का कार्य हिंदी सचिव के रूप में देखने हेतु मानदेय।                  |                | प्रतिमाह                   | 300/-            |       |
| 18 | मुख्यालय स्तर पर मुख्य राजभाषा अधिकारी के रूप में राजभाषा विभाग का कार्य देखने हेतु मानदेय।                                                              |                | प्रतिमाह                   | 1,200/-          |       |
| 19 | मंडल स्तर पर अपर मुख्य राजभाषा अधिकारी के रूप में राजभाषा विभाग का कार्य देखने हेतु मानदेय।                                                              |                | प्रतिमाह                   | 600/-            |       |
| 20 | कारखाना स्तर पर अपर मुख्य राजभाषा अधिकारी के रूप में राजभाषा विभाग का कार्य देखने हेतु मानदेय।                                                           |                | प्रतिमाह                   | 400/-            |       |
| 21 | एक वेतन वृद्धि के बराबर विशेष वेतन योजना                                                                                                                 | परीक्षा का नाम | अग्रिम वेतन वृद्धि की अवधि | अंकों का प्रतिशत | -     |
|    |                                                                                                                                                          | प्रबोध         | 12 महीना                   | 70% या अधिक      | 800/- |
|    |                                                                                                                                                          |                |                            | 60-69 अंक        | 400/- |

|  |  |                    |                |             |           |       |
|--|--|--------------------|----------------|-------------|-----------|-------|
|  |  |                    |                | 55-59 अंक   | 200/-     |       |
|  |  | प्रवीण एवं प्राज्ञ | 12 महीना       | 70% या अधिक | 1200/-    |       |
|  |  |                    |                |             | 60-69 अंक | 800/- |
|  |  |                    |                |             | 55-59 अंक | 400/- |
|  |  | टंकण               | 12 महीना       | 97% या अधिक | 1200/-    |       |
|  |  |                    |                |             | 95-96 अंक | 800/- |
|  |  |                    |                |             | 90-94 अंक | 400/- |
|  |  | आशुलिपि            | 12 या 24 महीना | 95%या अधिक  | 1200/-    |       |
|  |  |                    |                |             | 92-94 अंक | 800/- |
|  |  |                    |                |             | 88-91 अंक | 400/- |

14. मंत्रालयों / विभागों और उसके संबद्ध / अधीनस्थ कार्यालयों एवं केन्द्रीय सरकार के निगमों, उपक्रमों, बैंकों आदि में राजभाषा नीति के कार्यान्वयन हेतु वर्ष 2013-14 के लिए निर्धारित लक्ष्य :-

| क्र. | कार्य का विवरण                                                   | ‘क’ क्षेत्र<br>(बिहार, उत्तर प्रदेश, राजस्थान, हिमाचल प्रदेश, मध्य प्रदेश, हरियाणा, झारखंड, उत्तरांचल, छत्तीसगढ़, दिल्ली तथा अंडमान एवं निकोबार द्वीप समूह) |                              | ‘ख’ क्षेत्र<br>(गुजरात, महाराष्ट्र, पंजाब, तथा चडीगढ़, दमन एवं दीप, दादर एवं नागर हवेली संघ राज्य) |                            | ‘ग’ क्षेत्र<br>(‘क’ तथा ‘ख’ क्षेत्र से भिन्न राज्य तथा संघ शासित प्रदेश)            |                   |
|------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------|-------------------|
|      |                                                                  | क क्षेत्र से क क्षेत्र को<br>क क्षेत्र से ख क्षेत्र को<br>क क्षेत्र से ग क्षेत्र को                                                                         | 75-100%<br>65-100%<br>50-65% | ख क्षेत्र से क क्षेत्र को<br>ख क्षेत्र से ख क्षेत्र को<br>ख क्षेत्र से ग क्षेत्र को                | 75-90%<br>65-90%<br>45-55% | ग क्षेत्र से क क्षेत्र को<br>ग क्षेत्र से ख क्षेत्र को<br>ग क्षेत्र से ग क्षेत्र को | 55%<br>55%<br>55% |
| 1    | हिंदी में प्रचलित पत्राचार (तार) बेटार, टेलेक्स, फैक्स आदि सहित। | क क्षेत्र से क व ख क्षेत्र के राज्य/संघ राज्य क्षेत्र के कार्यालय/व्यक्ति<br>क से क<br>क से ख                                                               | 75-100%<br>65-100%           | ख क्षेत्र से क व ख क्षेत्र के राज्य/संघ राज्य क्षेत्र के कार्यालय/व्यक्ति<br>ख से क<br>ख से ख      | 75-90%<br>65-90%           | ग क्षेत्र से क व ख क्षेत्र के राज्य/संघ राज्य क्षेत्र के कार्यालय/व्यक्ति           | 55%               |
| 2    | हिंदी में टिप्पण                                                 |                                                                                                                                                             | 55-75%                       |                                                                                                    | 40-50%                     |                                                                                     | 20-30%            |
| 3    | हिंदी टंकक, आशुलिपिक की भर्ती                                    |                                                                                                                                                             | 80%                          |                                                                                                    | 70%                        |                                                                                     | 40%               |
| 4    | देवनागरी                                                         |                                                                                                                                                             | 100%                         |                                                                                                    | 50%                        |                                                                                     | 50%               |
| 5    | हिंदी प्रशिक्षण                                                  |                                                                                                                                                             | 100%                         |                                                                                                    | 100%                       |                                                                                     | 100%              |

|    |                                                                                                                   |                |  |                |  |                                                              |
|----|-------------------------------------------------------------------------------------------------------------------|----------------|--|----------------|--|--------------------------------------------------------------|
| 6  | हिंदी पुस्तकों आदि की खरीद पर पुस्तकालय के लिए उपलब्ध कुल अनुदान का % खर्च जर्नल और मानक संदर्भ ग्रंथों को छोड़कर | 50%            |  | 50%            |  | 50%                                                          |
| 7  | सभी प्रकार के इलेक्ट्रॉनिक उपकरणों की द्विभाषी रूप में खरीद                                                       | 100%           |  | 100%           |  | 100%                                                         |
| 8  | द्विभाषी बेवसाइट तैयार करना                                                                                       | 100%           |  | 100%           |  | 100%                                                         |
| 9  | मंत्रालयों/विभागों द्वारा दिल्ली से बाहर स्थित कार्यालयों का निरीक्षण (कार्यालयों का प्रतिशत)                     | 25%<br>न्यूनतम |  | 25%<br>न्यूनतम |  | 25%<br>न्यूनतम                                               |
|    | मुख्यालय में स्थित अनुभागों का निरीक्षण                                                                           | 25%<br>न्यूनतम |  | 25%<br>न्यूनतम |  | 25%<br>न्यूनतम                                               |
| 10 | राजभाषा की बैठकें                                                                                                 |                |  |                |  |                                                              |
|    | (क) हिंदी सलाहीकार समिति                                                                                          |                |  |                |  | वर्ष में न्यूनतम दो बैठकें                                   |
|    | (ख) नगर राजभाषा कार्यान्वयन समिति                                                                                 |                |  |                |  | वर्ष में दो बैठकें (प्रति छमाही एक बैठक)                     |
|    | (ग) राजभाषा कार्यान्वयन समिति                                                                                     |                |  |                |  | वर्ष में चार बैठकें (प्रति तिमाही एक बैठक)                   |
| 11 | कोड, मैन्युअल, फार्म, प्रक्रिया साहित्य का हिंदी अनुवाद                                                           |                |  |                |  | 100%                                                         |
| 12 | मंत्रालय/विभाग के ऐसे अनुभाग जहां सारा कार्य हिंदी में हो                                                         |                |  |                |  | न्यूनतम अनुभाग:- क क्षेत्र-40%, ख क्षेत्र-30%, ग क्षेत्र-20% |

सार्वजनिक क्षेत्र के उन उपक्रमों/निगमों आदि, जहां अनुभाग जैसी कोई अवधारणा नहीं हो, में क क्षेत्र में कुल कार्य क्षेत्र का 40%, ख क्षेत्र में 25%, और ग क्षेत्र में 15% कार्य हिंदी में किया जाये।



## 15. हिंदी में कार्य साधक ज्ञान और हिंदी में प्रवीणता में अन्तर

| क्र | हिंदी में कार्य साधक ज्ञान                                                                                                                                                                                                                                               | हिंदी में प्रवीणता                                                                                                                 |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1   | हिंदी में कार्य साधक ज्ञान का अभिप्राय ऐसे ज्ञान से है जिसने एक हिंदी विषय के साथ मैट्रिक या कोई समकक्ष या उच्चतर परीक्षा पास की हो। या                                                                                                                                  | हिंदी में प्रवीणता ऐसे ज्ञान से है जिसने हिंदी माध्यम से मैट्रिक या कोई समकक्ष या उच्चतर परीक्षा पास की हो। या                     |
| 2   | हिंदी शिक्षण योजना की प्राज्ञ परीक्षा या उससे कम स्तर की कोई परीक्षा या उसके समकक्ष किसी निर्धारित परीक्षा में सफलता हासिल की हो, जो किसी कोटि के लिए निर्धारित की गई हो। या सरकार के द्वारा निर्धारित कोई अन्य परीक्षा में सफलता हासिल की हो। जैसे-हिंदी प्रचार सभा। या | स्नातक या उसके समकक्ष या उससे किसी उच्च स्तर की परीक्षा में ऐच्छिक विषय के रूप में हिंदी विषय लिया हो। या                          |
| 3   | विहित प्रपत्र में यह घोषणा की हो कि उसे हिंदी में कार्य साधक ज्ञान प्राप्त है ऐसे कर्मचारी को अनिवार्य हिंदी प्रशिक्षण से छूट दी गई है।                                                                                                                                  | विहित प्रपत्र में यह घोषणा की हो कि उसे हिंदी में प्रवीणता प्राप्त है ऐसे कर्मचारी को अनिवार्य हिंदी प्रशिक्षण से छूट दी गई है।    |
| 4   | हिंदी में कार्य साधक ज्ञान का अभिप्राय हिंदी में केवल काम चलाने वाले ज्ञान से है अर्थात् वह हिन्दी में कार्य करने के लिए महारथी नहीं है।                                                                                                                                 | हिंदी में प्रवीणता का अभिप्राय हिंदी भाषा का अच्छा ज्ञान रखने वाला व्यक्ति से है अर्थात् वह हिंदी में कार्य करने के लिए महारथी है। |

(परीक्षा के प्रकार - प्रबोध, प्रवीण, प्राग्य)

## 16. राजभाषा और राष्ट्रभाषा में अन्तर

| क्र. | राजभाषा                                                                                                 | राष्ट्रभाषा                                                                                                                             |
|------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | राजभाषा एक संवैधानिक शब्द है।                                                                           | राष्ट्रभाषा स्वाभाविक रूप से सृजित शब्द है।                                                                                             |
| 2    | राजभाषा प्रशासन की भाषा है।                                                                             | राष्ट्रभाषा जनता की भाषा है।                                                                                                            |
| 3    | केवल प्रशासनिक अभिव्यक्ति राजभाषा में होती है।                                                          | समस्त राष्ट्रीय तत्वों की अभिव्यक्ति राष्ट्रभाषा में होती है।                                                                           |
| 4    | इसकी शब्दावली सीमित है।                                                                                 | इसकी शब्दावली विस्तृत है।                                                                                                               |
| 5    | राजभाषा नियमों में बँधी है।                                                                             | राष्ट्रभाषा स्वतंत्र या मुक्त प्रकृति की होती है।                                                                                       |
| 6    | इसमें शब्दों का प्रवेश, निर्माण अथवा निष्कासन विद्वानों एवं विशेषज्ञों की समिति की राय से किया जाता है। | इसमें शब्दों का प्रवेश समाज से तथा प्रचलन के आधार पर रुढ़ होकर मान्यता प्राप्त करते हैं तथा इसके निर्माण में सभी वर्गों का हाथ होता है। |
| 7    | राजभाषा के प्रयोग का क्षेत्र सीमित होता है।                                                             | राष्ट्रभाषा के प्रयोग का क्षेत्र इतना व्यापक होता है कि उसका व्यवहार अंतर्राष्ट्रीय स्तर पर भी होता है।                                 |
| 8    | राजभाषा के रूप में हिंदी का विकास क्रमशः व उत्तरोत्तर अंग्रेजी की जगह पर हो रहा है।                     | राष्ट्र भाषा के रूप में हिंदी का प्रयोग देश विदेश में सर्वत्र हो रहा है।                                                                |



## क्या आप जानते हैं ?

1. 14 सितम्बर 1949 को संविधान सभा द्वारा हिंदी को संघ की राजभाषा के रूप में स्वीकृति दी गई।
2. 10 मई 1963 को राजभाषा अधिनियम पारित हुआ।
3. राजभाषा अधिनियम वर्ष 1963 में पारित हुआ था और उसका संशोधन 1967 में हुआ था।
4. 26 जनवरी 1965 को राजभाषा अधिनियम की धारा 3 (3) लागू हुई।
5. राजभाषा अधिनियम के अनुसार 26 जनवरी 1965 से सह राजभाषा अंग्रेजी है।
6. 28 जून 1976 को राजभाषा नियम बनाया गया।
7. हिंदी माध्यम से सम्पूर्ण शिक्षा देने वाली देश की पहली संस्था गुरुकुल कांगणी, हरिद्वार है।
8. भारत में सबसे पहले हिंदी में एम.ए. का पाठ्यक्रम कलकत्ता विश्वविद्यालय ने शुरू किया था।
9. राजभाषा कर्मियों को अनुवाद प्रशिक्षण हेतु केन्द्रीय अनुवाद ब्यूरो, नई दिल्ली भेजा जाता है।

10. केन्द्रीय अनुवाद ब्यूरो की स्थापना 1973 में नई दिल्ली में हुई।
11. मातृभाषा दिवस 21 फरवरी को मनाया जाता है।
12. हिंदी दिवस 14 सितम्बर को मनाया जाता है।
13. राजभाषा अधिनियम 1963 की धारा-9 के अनुसार धारा-6, और 7 जम्मू एंड कश्मीर पर लागू नहीं होती है।
14. संसद द्वारा राजभाषा संकल्प 18-1-1968 में पारित किया गया।
15. केन्द्रीय हिंदी समिति का गठन 5 सितम्बर, 1967 को प्रधानमंत्री की अध्यक्षता में किया गया।
16. शास्त्रीय भाषा (Classical Language) के रूप में तमिल भाषा को दर्जा दिया गया है।
17. राजभाषा हिंदी का प्रयोग बढ़ाने एवं इसके प्रचार-प्रसार के लिए रेलवे बोर्ड द्वारा प्रकाशित त्रैमासिक पत्रिका का नाम “रेल राजभाषा” है।
18. राजभाषा हिंदी का प्रयोग बढ़ाने एवं इसके प्रचार-प्रसार के लिए मध्य रेल द्वारा प्रकाशित त्रैमासिक पत्रिका का नाम “रेल सुरभि” है।

19. संविधान के अनुच्छेद 120 में संसद की भाषा के लिए प्रावधान है।
20. प्रशासनिक हिंदी का ज्ञान कराने वाले पाठ्यक्रमों के नाम प्रबोध, प्रवीण, प्राज्ञ है।
21. प्रबोध, प्रवीण, व प्राज्ञ, हिंदी शिक्षण योजना का प्रशिक्षण है।
22. प्रबोध परीक्षा केवल दक्षिण भारतीय के लिए है।
23. राजभाषा विभाग गृहमंत्रालय के अन्तर्गत आता है।
24. HTS का पूरा अर्थ हिंदी ट्रेनिंग स्कीम है।
25. प्रबोध, प्रवीण, व प्राज्ञ परीक्षा का शैक्षिक स्तर क्रमशः प्रबोध - (प्राथमिक) पांचवी की हिंदी, प्रवीण - मिडिल स्कूल की हिंदी व प्राज्ञ - हाईस्कूल की हिंदी के बराबर होता है।
26. राजभाषा नियम तमिलनाडु राज्य को छोड़कर सम्पूर्ण भारत पर लागू है।
27. प्रथम राजभाषा आयोग का गठन 7 जून, 1955 में हुआ, जिसके अध्यक्ष श्री बान गंगाधर खेर थे।
28. प्रथम राजभाषा संसदीय समिति का गठन 1957 में हुआ जिसके सभापति श्री पं. गोविन्द बल्लभ पंत थे।

29. भारत में हिंदी का पहला समाचार पत्र “उदंत मार्तण्ड” था, जिसका संपादन श्री जुगल किशोर शुक्ल ने दिनांक 30-5-1826 को किया।
30. राष्ट्रभाषा के समान्तर राजभाषा शब्द के प्रयोग का प्रस्ताव श्री सी. राज गोपालाचारी किया।
31. हिंदी संसदीय राजभाषा समिति में 30 सदस्य होते हैं जिसमें लोक सभा से 20 तथा राज्य सभा से 10 सदस्य होते हैं।
32. हिंदी सलाहाकार समिति की बैठकों की संख्या वर्ष में न्यूनतम दो होती है।
33. राजभाषा कार्यान्वयन समिति में बैठकों की संख्या वर्ष में चार (तीन माह में एक बार) होती है।
34. हिंदी की लिपि देवनागरी है।
35. अंतर्राष्ट्रीय अंकों का आविष्कार भारत में हुआ था।
36. राष्ट्र संघ (UNO) को हिंदी भाषा में संबोधित करने वाले प्रथम भारतीय प्रतिनिधि श्री अटल बिहारी बाजपेयी जी हैं।
37. राष्ट्र संघ (UNO) को हिंदी भाषा में संबोधित करने वाले द्वितीय भारतीय राजनेता श्री पी. वी. नरसिंहराव जी (विदेश मंत्री) हैं।

38. त्रिभाषा सूत्र का अभिप्राय प्रादेशिक भाषा, हिंदी व अंग्रेजी से है।
39. उच्चतम न्यायालय की प्राधिकृत भाषा अंग्रेजी है।
40. राजभाषा नियमानुसार हिंदी कार्यान्वयन की जिम्मेदारी कार्यालय प्रमुख की है।
41. सरकार की राजभाषा नीति संबंधी जानकारी देने वाली सर्वोच्च समिति 'केन्द्रीय हिंदी समिति' के नाम से जानी जाती है।
42. रेल हिंदी सलाहाकार समिति का सचिव निदेशक राजभाषा (रेलवे बोर्ड) होता है।
43. मंडल स्तर पर राजभाषा कार्यान्वयन समिति का अध्यक्ष मंडल रेल प्रबंधक होता है।
44. 'ग' क्षेत्र में स्टेशनों के नाम बोर्ड तीन भाषाओं में जिसमें क्रमानुसार प्रादेशिक भाषा, हिंदी तथा सबसे नीचे अंग्रेजी में होने चाहिए।
45. राजभाषा के रूप में हिंदी दिवस 14 सितम्बर को मनाया जाता है।
46. राजभाषा नीति के कार्यान्वयन हेतु वार्षिक कार्यक्रम गृह मंत्रालय से जारी होता है।

47. स्टेशनों के नाम में सबसे ऊपर क्षेत्रीय भाषा का प्रयोग होता है।
48. राजभाषा नियमानुसार द्विभाषी रूप में प्रश्न पत्र देना अनिवार्य है।
49. केन्द्रीय सरकार के कार्यालयों में रबड़ की मोहरें द्विभाषी (हिंदी और अंग्रेजी में) होनी चाहिए।
50. क्षेत्रीय रेल प्रशिक्षण संस्थान, भुसावल के वाचनालय का नाम श्री जयशंकर प्रसाद पुस्तकालय एवं दूर संचार केन्द्र है।



## लिप्यांतर किए जाने वाले शब्द (Transliterated Words)

| अंग्रेजी शब्द                 | हिंदी लिप्यांतर                         |
|-------------------------------|-----------------------------------------|
| Accepted Provisionally        | अनंतिम रूप से स्वीकृत                   |
| Action has been already taken | कार्रवाई की जा चुकी है                  |
| Annexer                       | अनुलग्नक                                |
| Appendix                      | परिशिष्ट                                |
| Approved                      | अनुमोदित                                |
| Autonomous                    | स्वायत्तशासी                            |
| By no means                   | कभी नहीं/कदापि नहीं                     |
| Call for an explanation       | जवाब-तलब किया जाये                      |
| Case has been closed          | मामला समाप्त कर दिया गया है             |
| Case under investigation      | मामले की जाँच-पड़ताल की जा रही है       |
| Comments                      | टीका-टिप्पणी                            |
| Consideration                 | विचारार्थ                               |
| Corrigendum                   | शुद्धिपत्र                              |
| Delegation of power           | अधिकारों का प्रत्यायोजन                 |
| Discuss with paper            | संबंधित कागज लेकर चर्चा करें            |
| Discuss with Papers           | संबंधित कागजात के साथ विचार-विमर्श करें |
| Draft approved as sanctioned  | संशोधित रूप में मसौदा अनुमोदित          |
| Embezzlement                  | गबन                                     |
| Employer                      | नियोक्ता                                |
| Ex parte judgement            | एक पक्षीय निर्णय                        |
| Expedite action               | कार्य शीघ्र करें                        |
| Findings                      | निष्कर्ष (जांच परिणाम)                  |
| Fix up date for the meeting   | बैठक के लिए तारीख निश्चित की जाय        |

|                                |                                 |
|--------------------------------|---------------------------------|
| For information                | सूचनार्थ                        |
| For signature                  | स्ताक्ष                         |
| Gazette                        | राजपत्र                         |
| Give details                   | विस्तृत जानकारी दें             |
| Held in obedience              | अस्थगित रखा जाय                 |
| I agree                        | मैं सहमत हूँ                    |
| I agree with घAड above         | मैं उपरोक्त घकड से सहमत हूँ     |
| I do not agree                 | मैं सहमत नहीं हूँ               |
| I would like to see            | मैं देखना चाहूँगा               |
| Immediate action please        | तत्काल कार्रवाई करें            |
| In addition to                 | के अतिरिक्त                     |
| In case of                     | की स्थिति में                   |
| In fact                        | वास्तव में                      |
| In like manner                 | समान रीति से                    |
| In partial modification of     | आंशिक संशोधन करते हुए           |
| Inauguration                   | उद्घाटन                         |
| Inform all concern             | सर्वसंबंधितों को सूचित करें     |
| Initiative                     | पहल करना                        |
| Interim relly may be give      | अंतरिम उत्तर भेजा जाय           |
| Invigilation                   | अन्वीक्षण                       |
| Issue today                    | आज ही जारी करें                 |
| Juducial                       | न्यायिक                         |
| Keep pending                   | निर्णयार्थ रोक रखें             |
| Law officer for opinion please | विधि अधिकारी अपनी राय दें       |
| Locate the the irregularities  | अनियमितताओं का पता लगाएं        |
| May please see                 | कृपया देखें                     |
| Modification                   | संशोधन                          |
| No action necessary            | कोई कार्रवाई आवश्यक नहीं        |
| No coment to make              | कोई टिप्पणी नहीं करनी है        |
| No need to send reply          | उत्तर भेजने की आवश्यकता नहीं है |

|                                         |                                           |
|-----------------------------------------|-------------------------------------------|
| Please circulate and file               | कृपया परिपत्रित करें और फाइल कर दें       |
| Please expedite reply                   | कृपया शीघ्र उत्तर भेजें                   |
| Please prepare a precis of the case     | कृपया मामले का सार तैयार करें             |
| Please put up a self contained note     | कृपया स्वतः पूर्ण टिप्पणी प्रस्तुत करें   |
| Please see me                           | कृपया मिलें                               |
| Please speak/ discuss                   | कृपया बात/चर्चा करें                      |
| Priority                                | प्राथमिकता                                |
| Proceeding                              | कार्यवाही                                 |
| Regretted proposal can not be agreed to | खेद है प्रस्ताव स्वीकार नहीं किया जा सकता |
| Reimbursement                           | प्रतिपूर्ति                               |
| Reminder may be sent                    | अनुस्मारक भेज दें                         |
| Request to acceded                      | प्रार्थना स्वीकार की जाए                  |
| Sanction as a special case              | विशेष मामले के रूप में मंजूर              |
| What delays                             | देरी क्यों हो रही है                      |
| What is the position                    | क्या स्थिति है                            |
| Yours faithfully, sincerely             | आपका                                      |



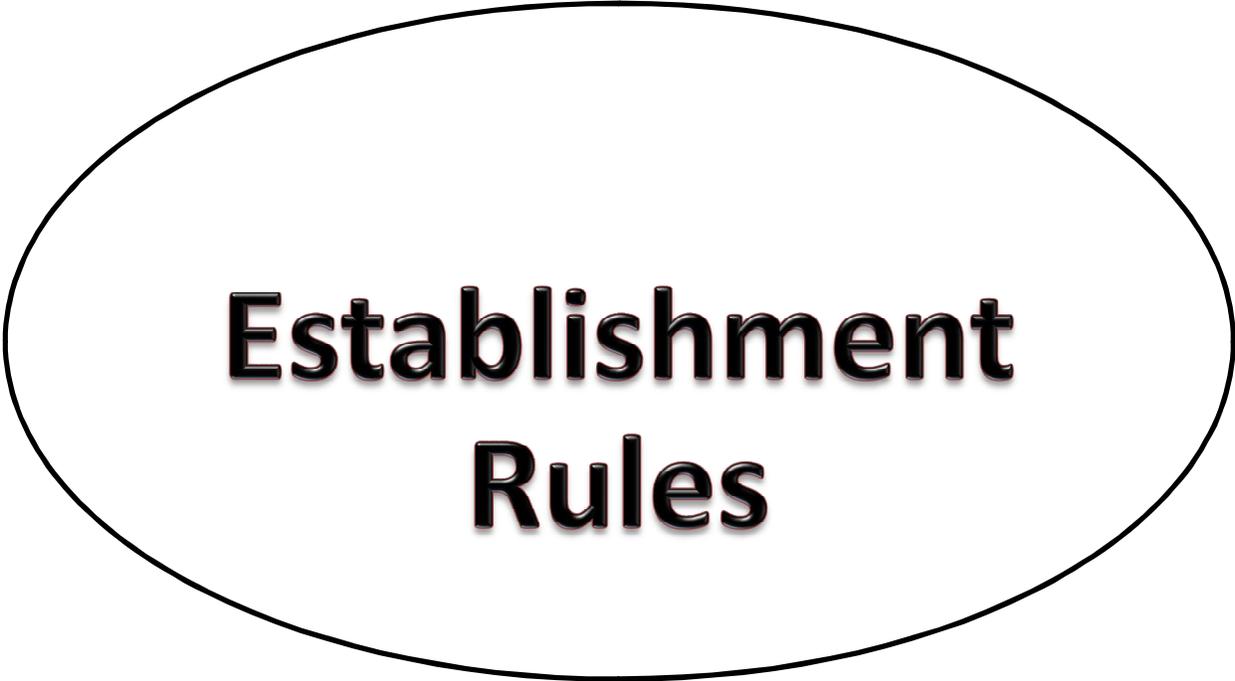
## संकलन एवं टंकण :- ज्वाला प्रसाद

मुख्य यातायात प्रशिक्षक  
 क्षेत्रीय रेल प्रशिक्षण संस्थान  
 मध्य रेल, भुसावल।  
 ई-मेल पता :-  
 jwalaprasad.cti@gmail.com

अक्टूबर - 2013

प्राचार्य  
क्षेत्रीय रेल प्रशिक्षण संस्थान  
भुसावळ द्वारा प्रकाशित





**Establishment  
Rules**

### **Railway Board: -**

The Railway board is the Chief Administrative and Executive body assisting the Minister of Railway in the discharge of his functions. The Railway board as at present constituted consists of: -

1. Chairman Railway board
2. Financial Commissioner Railway
3. Five Members Each In Charge Of Traffic, Staff, Mechanical, Engineering, Civil Engineering, Electrical Engineering.

### **Functions of Chairman: -**

The chairman Railway board is Ex- officio Principal Secretary to the Government of India in the ministry of Railway. He is solely responsible under the Ministry of Railway for arriving at decisions on technical questions and advising the Govt. of India on the matters of Railway policy.

### **Functions of Financial Commissioner: -**

Financial commissioner for Railway represents the ministry of finance on the Railway board and also functions as Ex-officio Secretary to Govt. of India in the ministry of Railway in the financial matters. He has direct contact with the Finance Minister whom he keeps informed of development in minister of Railway. In case of any disagreement with chairman or Railway minister on any financial aspect, he has the right to refer to the Finance Ministry.

### **Function of Railway Board Members: -**

Each of the members is responsible for dealing with all aspect of the technical subject of which he is in charge. In order to he able to effectively discharge the duties and responsibilities. There are also additional members in Railway board for smooth & effective working.

### **Other Members of Railway Board: -**

Several Directorates each under an Adviser assists Railway Board, such as Adviser Works, Mechanical, Traffic, Commercial and Civil Engineering. Executive Directors assist such Adviser. For further coordination there exists Directors, Joint Direct, Deputy Directors and Assistant Director.

The Advisers are responsible for issuing instructions direct to Railway administration including production units and other units controlled by Railway Board and receive and deal with reference from general public and other ministry, of Govt. of India with their respective jurisdiction.

- i) Attached Offices
- ii) Subordinate Offices
- iii) Railway Recruitment Boards.
- iv) Railway Zones & Management.

**i) Attached Offices: -**

The Railway Board has the following attached and subordinate offices

- i) The Research, Designs & Standards Organization (R.D.S.O/ Lucknow) which has provided the status of Zonal Railway
- ii) Office of the Railway Liaison Office with Directorate General of Supplies and Disposal. (D.G.S &D)

**ii) Subordinate Offices: -**

1. Railway Recruitment Boards : 20 in nos
2. Railway Staff College, Vadodara
3. Indian Railway Institute Of Civil Engineering (IRICEN)- Pune.
4. Indian Railway Institute Of Electrical Engineering (IRIEEN)- Nasik
5. Indian Railway Institute Of Mechanical Engineering (IRIME)- Kharakpur
6. Indian Railway Institute of Signal Engineering and Telecommunication (IRISSET) - Secundrabad.

**iii) Railway Recruitment Boards: -**

|    |            |     |             |     |             |     |             |
|----|------------|-----|-------------|-----|-------------|-----|-------------|
| 1. | Ahmedabad  | 6.  | Bhubneshwer | 11. | Gorakapur   | 16. | Mumbai      |
| 2. | Ajmer      | 7.  | Bilaspur    | 12. | Guhati      | 17. | Patna       |
| 3. | Allahabad  | 8.  | Chandigarh  | 13. | Jammu       | 18. | Ranchi      |
| 4. | Banglore   | 9.  | Chennai     | 14. | Malda       | 19. | Secundrabad |
| 5. | Bhopal     | 10. | Colcutta    | 15. | Mujjafarpur | 20. | Trivendrum  |
| 21 | Silliguri* |     |             |     |             |     |             |

\* Rly Bds notification No. E(RRB)2009/25/25 dtd 07/10/2009.

**v) Zonal Railway And Their Head Quarters: -**

On operational and management consideration, the Indian Railway has been divided into sixteen zones in order to have smooth and efficient working. General Manager is the Chief Administrative Officer answerable to Railway Board for all matters affecting the working of Railway. These are as under.

| Sno. | Zonal Railways     | Head Quarter | Subordinate Organization                                     |
|------|--------------------|--------------|--------------------------------------------------------------|
| 1.   | Southern Railway   | Chennai      | Chennai, Madurai, Palakaad, Salem, Tiruvanataparam, Trichur  |
| 2.   | Central Railway    | Mumbai (CST) | Bhusawal, Mumbai CST, Nagpur, Pune, Solapur                  |
| 3.   | Western Railway    | Mumbai (CHG) | Ahmedabad, Baroda, Bhavnagar, Mumbai Central, Rajkot, Ratlam |
| 4.   | Eastern Railway    | Kolcutta     | Asansol, Hawara, Maldatown, Siyaldaha                        |
| 5.   | Northern Railway   | New Delhi    | Delhi, Firozpur, Lucknow, Moradabad, Ambala                  |
| 6.   | North East Railway | Gorakhpur    | Izatnagar, Lucknow, Varanasi                                 |
| 7.   | NE Frontier Rly.   | Guhati       | Alipurduar, Katihar, Lumbding, Rangiya, Tinsukiya,           |
| 8.   | SE Rly.            | Colcutta     | Adra, Chakradharpur, Kharagpur, Ranchi                       |

|     |                  |             |                                                                 |
|-----|------------------|-------------|-----------------------------------------------------------------|
| 9.  | SC Rly.          | Secundrabad | Gantur, Guntakal, Hyderabad, Nanded<br>Secunderabad, Vijaiwada, |
| 10. | NW Rly.          | Jaipur      | Ajmer, Bikaner, Jaipur, Jodhpur                                 |
| 11. | EC Rly.          | Hajipur     | Danapur, Dhanbad, Mughalsarai,<br>Samastipur, Sonapur           |
| 12. | SW Rly.          | Hubli       | Banglore, Hubli, Mysore,                                        |
| 13. | WC Rly.          | Jabalpur    | Jabalpur, Bhopal, Kota                                          |
| 14. | NC Rly.          | Allahabad   | Allahabad, Jhansi, Agra                                         |
| 15. | SEC Rly.         | Bilaspur    | Nagpur, Bilaspur, Raipur                                        |
| 16. | East Costal Rly. | Bhubneshwar | Khurdaroad, Waltair, Sambalpur                                  |

In order to discharge the administrative work smoothly & effectively there exists Addl. General Manager, Senior Deputy General Manager, Deputy General Manager, Chief Public Relations Officer, and the Heads of Department for its functioning: -

- 1) Operating - Chief Operation Manager. (COM)
- 2) Engineering - Principal Chief Engineer (PCE)
- 3) Mechanical - Chief Mechanical Engineer (CME).
- 4) Electrical - Chief Electrical Engineer. (CEE)
- 5) S&T - Chief Signal And Telecommunication Engineer. (CSTE)
- 6) Account - Financial Adviser And Chief Account Officer. (FA&CAO)
- 7) Commercial - Chief Commercial Manager. (CCM)
- 8) Personnel - Chief Personnel Officers. (CPO)
- 9) Store - Controller Of Store. (COS)
- 10) Medical - Chief Medical Director. (CMD)
- 11) Security - Chief Security Commissioner. (CSC)

The above mentioned Head of department are responsible for functions of their department efficiency and are direct responsible for all matter concerning to their development. They have been provided with Deputy, Senior and Junior scale officer to assist them in discharging of their duties efficiently.

\*\*

## **Function of Personnel Branch**

In order to overcome the personnel problems faced by Railway administration as well as Railway employees a personnel branch has been set up at Head quarters level of each zonal Railway and also at the divisional level including in Railway workshop. The branch at Head quarters is placed under the supervision of chief personnel officer and in division and workshop under the supervision of Sr. Personnel officer and personnel officer respectively.

1. Arranging recruitment, selection and creation of post, training of staff, promotions and demotion, transfer, suspension, discharges, granting retirement benefits.
  2. Payment of pay, allowances and incentive, hours confirmation, maintenance of seniority, record of service, leave account, grant of educational assistance and medical facilities.
  3. Dealing with recognized union, arranging meeting of permanent negotiating, PREM and JCM, settling the grievances of staff.
  4. Dealing with the provisions of various laws and acts. Such as industrial disputes act, factory act, workman's compensation act, payment of wages act, minimum wages act, HOER etc. D&A rules and conduct rules, CAT matters.
  5. Interpretation of rules and orders received from Railway board, if necessary with the constitution of Account Branch.
  6. Dealing with welfare matters concerning staff, such as provision of residential accommodations, lantern holiday homes, consumer's societies, school, clubs, Institutes etc.
  7. All other matters concerning Railway employees and circulating all orders and Railway board's letters concerning personnel function to all departments and unions.
- Personnel department is always made equip itself with all rules and regulations for expeditious disposal of grievances of staff and cases affecting other likewise matters.

## **PERSONNEL MANAGEMENT AND OBJECTIVES OF PERSONNEL DEPARTMENT**

From a small beginning in 1853, Indian Railway Network today, is the largest Public Sector Undertaking in our country where around 16 lakhs of employees are working. With the increase in the size of the Railways and growth consciousness of the workers, Men have become the most important factor in Railways. Unlike Machines, Human beings act and react favorably or otherwise when engaged in diverse working conditions and in tiresome jobs.

This may be for want of scope of advancement in one's career, for want of due attention from supervisors in matters connected with service conditions or while facing situations, favorable or unfavorable off the job conditions. Background of all these actions and reactions, favorable or unfavorable is personnel problems. In order to face the problems with Human approach, it is desirable that a Personnel Department manned by experts on personnel matters would function in big organizations.

## **Functions of Personnel Management**

- Man power planning.
- Recruitment.
- Training and development.
- Placement.
- Transfer.
- Performance Appraisal.
- Promotions and demotions.
- Guidance on disciplinary matters.
- Wage and salary administration.
- Industrial peace.
- Grievances redressal and welfare activities.
- Incentives and financial aids.
- Settlement and pension.
- Arranging and maintaining post retirement benefits.

Personnel managers control the human factor in an Industry intelligently for getting the best result from the workers by developing their capabilities. Personnel Manager aims at creating a team spirit and sense of discipline amongst workers.

Personnel Officers will relieve the departmental officers from the workload in personnel matters to the extent possible. However, the departmental officer should have the main say in the placement of workers to ensure best utilization, economy and efficiency.

The Personnel Officer is also receptive to suggestions given by Departmental Officers on transfer to maintain efficiency and discipline. The Personnel Officers and Departmental Officers are jointly responsible for the efficient working of the administration.

Although the Departmental officers are relieved of Personnel work to a great extent after setting up of Personnel Department, they should also maintain close touch with their employees, receive their grievances on personnel matters and arrange to dispose of the same with the help of Personnel Officer duly keeping in view the rules and regulations laid down.

The Personnel Officers are also Welfare Officers who will concentrate on various Welfare activities such as promotion of sports, management of Holiday Homes, Institutes, Co-operative societies and canteens etc. Personnel Officer should see that the legitimate interest of the workers is protected and none of the workers feel that his needs remain unattended to. Personnel Officers should take utmost care and interest in maintaining Industrial peace, keeping good

relations with trade unions and help in maintaining congenial atmosphere for smooth working.

## **MANPOWER PLANNING**

Manpower planning is a strategy for the acquisition, utilization, improvement and presentation of manpower of an enterprise. Its objective is to ensure optimum use of manpower currently employed and to provide for the future manpower needs of enterprise in terms of skills, number and age i.e. to provide the right number of employees, with right level of talents and skills, in the right jobs, at the right time performing the right activities to achieve the right objectives to fulfill the corporate enterprises.

Railway is a Government concern having commercial value, run on commercial basis as it sells transport and earn profit. For the efficient and effective management of a gigantic organization like Railways in a smooth efficient and economic way, one of the prime requirements is large number of personnel with requisite qualifications and training in various disciplines.

The cost of staff on railways amounts to approximately 60-% of the total working expenses. Therefore, it would be necessary to plan its manpower in such a way that adequate staffs are made available for the new assets without incurring any additional expenditure. This is being achieved by locating the excess manpower in the existing system and making available for additional assets after giving necessary training.

Recently, in this huge organization, due to rapid increase in traffic and also change in system, in introducing essential mechanization, modernization and computerization, it has become essential on the part of Railways to plan its manpower suitably, in order to cope up with the increased volume of workload competently, efficiently and economically. More so, a large section of Railways has been electrified and is under progress, requiring skilled staff has also added/contributed for the assessment of qualified and skilled staff to manage the operation of railways efficiently, so as to satisfy its accountability to the public for whose comfort the management has to ensure.

Manpower planning means establishment of job specifications or the qualitative requirements of jobs to determine the number of people required and to find supply source.

Manpower recruitment is related to matching the personal qualities of employees with the job requirements.

### **Job analysis and Job description**

**Job analysis** means analyzing the corporate plans, objectives, finance, investments, products, marketing etc. with the trend of turnover, promotion patterns, transfers, qualifications, training, experience, performance standards and performance actual.

**Job description** includes job design, job specifications, job enlargement, job enrichment, job responsibilities etc. When these elements are co-related, the job demand is known. Job analysis, job specification and job design are the important factors involved in human resource development and manpower planning.

### **Assessment of Manpower in Railways**

In open line, factors like normal wastage, death, deputation, dismissal, creation of assets and posts, leave reserve, rest givers, yardsticks etc., influences the assessment of manpower.

In construction projects, performance evaluation and review technique, phasing of work etc., are used to assess the manpower.

There have been dynamic change in the technology and modernisation, electrification, computerisation, mechanisation of track maintenance etc. are taking place at fast rate to meet the challenges of traffic requirements in Indian Railways. To meet the challenges of the changing environment, systematic manpower planning is essential. Therefore a category-wise analysis of staff should be carried out, to identify surplus and to arrange manpower in the areas of need. This adjusts the surplus in one category to other categories, where there is demand. Manpower planning ensures that the existing manpower is utilised to the maximum possible extent.

Manpower planning emphasise on training to different categories of staff to improve the skill and to increase productivity. This step reduces the availability of unskilled staff, increase productivity and maximise manpower utilisation. Regular conversion training programmes reduce the wastage of manpower due to changeover. The staffs are also deputed for refresher course, conversion course, promotional course etc. with the aim to develop organisationally effective personnel with pride in their work and faith in management.

**The primary objective of the manpower planning is to ensure the availability of the required skill and to reduce wastage.** When the manpower availability is clearly known arrangements can be easily made to cater to the additional needs of manpower as indicated in the forecasts. Normally, the field officers responsible for executing the job are responsible for the manpower planning.

In order to achieve these objectives, to arrest the bottlenecks and to ensure smooth working of Railways, the Ministry of Railways (Railway Board) have planned its manpower suitably as under:

- a) Recruitment of staff with proper and suitable educational and technical qualification by upgrading the limit of educational and technical qualifications for most of the categories;
- b) Arranging training, frequent refresher courses, promotional courses, technical courses and catering orientation courses in Government and Non-Government institutions.
- c) Plan filling of vacancies, advance indents to RRBs, Ordering departmental selections, Absorption of surplus staff, Screening of CLs in advance. Manpower also helps to reduce the problems associated with sudden surpluses and over sight surrenders.

In regard to (a) above, technology and modernization of Railways, has warranted improvements in manpower with the changing needs of operations in field for various categories of staff. Likewise Financial Planning, it also requires long term planning manpower resulting in up-gradation of educational and technical qualifications for recruitment. Thus, the educational qualification of even Group D staff have been upgraded, as they have to operate their working with changed modern technology specifically in S&T Workshops, Loco Sheds, Diesel/Electric, Engineering and Mechanical Workshops. For recruitment of such staff, the minimum educational qualification is matric or equivalent with IIT or completion course under Apprentice Act. Railway Board have considered the up-gradation of qualification for recruitment of casual labour, who have to be absorbed under the rules, in the time scale, in the near future. Similarly such changes have been made in the most of the categories.

In regard to (b) above, initial and management training to gazetted officers is catered in the following institutions-

1. Railway staff College, Vadodara.
2. Indian Railway Institute of Civil Engineering, Pune.
3. Institute of Signal & Telecommunication, Secunderabad.
4. Institute of Mechanical & Electrical Engineering, Jamalpur.
5. Institute of Electrical Engineering, Nasik Road.
6. Workshop & Technical School, Kharagpur.

In order to develop quality and quantity, refresher courses on management and technical subjects, are being catered in these institutions as well as in other private institutions.

Training of non-gazetted staff is arranged for initial courses, refresher courses, and promotional courses in Zonal Training Schools/Basic Training Schools, System of Technical Institutes, as well as in other private institutions in order to gain sufficient knowledge of technical capability on personnel subjects and on financial matters.

## **CADRE CREATION OF POSTS, UNSACTIONED POSTS, REVIEW OF THE CADRE AND BAN ON CREATION OF POSTS**

### **Creation of Posts**

Railway Board have banned creation of posts of gazetted and non-gazetted staff in the Open Line i.e. on Revenue Account, subject to the following:

- i) Creation of posts of running staff category, as a result of half yearly power plan;
- ii) Creation of stipendiary posts of apprentices to be absorbed against regular vacant posts, at the end of apprenticeship period;
- iii) Creation of posts for dealing with claim cases arising out of a major railway accident to the extent permitted by Railway Board &
- iv) Trainee reserve posts for initial recruitment are allowed to be created for the categories of diesel/electric Assistant/ASMs.

General Managers have full powers for the creation of non-gazetted posts for operation and maintenance of new/additional assets with matching surrender. Posts required for operational purposes, posts required to meet statutory obligations and security organization, need hereafter Board's sanction even with matching surrenders and Finance concurrence.

#### **Vacancy Banks**

For the purpose of dealing with matching surrenders, a Vacancy Bank should be operated at the Divisional level and Headquarters level.

### **Divisional Vacancy Bank**

This will be operated by Sr.DPOs/DRMs and vetted by DAO/Sr.DAOs concerned. This account is credited with 50% money value of the surplus posts surrendered as a result of inspection and work-study undertaken by the Divisions for locating pockets of surplus staff/posts. 25% of money value of such posts shall be credited to the Headquarters Vacancy Bank and 25% to Railway Board Vacancy Bank. However, the entire amount on account of closure of steam locos sheds, goods-sheds, parcel office, yards or induction of tie-tamping machines shall be transferred to Headquarters Vacancy Bank. DRMs are permitted to create provisionally with the concurrence of associated finance, new posts in the Divisions for operation and maintenance of new/additional assets, through Divisional Vacancy Bank. However, post-facto sanction of General Manager with FA&CAO's concurrence shall be required in every case. A monthly report duly signed by Sr.DAO/Sr.DPO and DRM shall be sent to CPO and FA&CAO.

### **Headquarters Vacancy Bank**

All proposals for creation of new posts through Headquarter Vacancy Bank shall be examined by HODs concerned and vetted by AGM before they are sent to FA&CAO for finance concurrence. The HODs shall duly take into account the effect of innovation and sophistication in technology and the need for the additional manpower. He shall give due regard to the need for improvement in productivity in the context of progressive modernization and sophistication. All proposals will require prior sanction of General Manager. This account will be credited by the amount received from Divisional Vacancy Bank as well as money value of the posts surrendered from the Organization controlled by Headquarter. No post can be created unless matching surrender/money value is made available from Divisional/Headquarter Vacancy Bank. The proposals for which the Zonal Railways cannot offer matching surrenders shall be referred to Railway Board after obtaining FA&CAO's concurrence and personal approval of General Manager. To keep a proper account of surplus posts and their utilization, a Bank of surplus (Vacancy Bank) should be maintained as under:

- a. The bank of surplus posts will be operative from 01.04.1987 and earlier bank net credit may be added as opening balance of the new account as on that date;
- b. All posts (excluding posts, which were/are created for specific short term purpose e.g. those created for summer rush) identified as surplus and surrendered on or before 01.04.87 will be credited to this Bank;
- c. Matching surrender already reckoned for creation of posts after 01.04.87 (including opening balance from the previous balance) and surrenders to be made in future, will be debited to the balance in the Banks;
- d. The account in this Bank will be maintained Department-wise and grade-wise though for matching surrender posts can be drawn from this Bank irrespective of department to which they pertain and
- e. The account of Bank will be maintained by CPO as per practice on the individual railway under the overall supervision of AGM.

### **Railway Board Vacancy Bank**

25% of the money value of all posts surrendered in the Zonal Railways, such as Divisions, Workshops and the Divisional Units, shall be transferred to Railway Board for crediting to the Railway Board Vacancy Bank.

## **Appointment on Compassionate Ground**

### **1. Compassionate Ground Appointment Mean: -**

Appointments on compassionate ground are those appointments that can be made to the dependents of Railway servants.

Who lost their lives in the course of duty. Or die in harness,

Or became crippled while in service.

Or medically incapacitated or de-categorized

Or dues to sickness like heart troubles, cancer.

Or such a diseases where no alternative appointment on reasonable emolument could be offered. Due to such incidents the appointment that are given to family member of deceased Railway employees are called as appointments on compassionate ground.

### **1. Circumstance under which the appointments on compassionate ground are to be given: -**

i) Dependents of the employee who die or permanently crippled in course of duty.

ii) Who die in harness as a result of Railway accidents while off duty.

iii) Who die in harness while in service.

iv) Who are declared medically unfit or medically de-categories.

v) Dependants of the employees whose whereabouts are not known for a period of 7

years. A request to grant the benefit of compassionate appointment can be consider after a lapse of one year from the date from which the FIR has been lodged in police station.

### **3. Eligibility for appointment on compassionate grounds: -**

i) Widow or Widower

ii) Son/ daughter (eldest son/ daughter)

iii) Dependents in case of Railway servant who died or got medically de-categorized as bachelors/spinster.

iv) Both husband and wife are Railway employees, in case of death of mother or father, compassionate appointment will be available either on death of the husband or wife whichever event occurs first.

v) Dying leaving more than one widow along with children born to the 2<sup>nd</sup> wife the appointment on compassionate grounds to the 2<sup>nd</sup> widow and her children are not to be considered unless administration has permitted the second marriage taking into account the personal law.

- vi) Dependent of casual labor appointment on compassionate ground will be given as casual labor only irrespective their qualification.(dies due to accident while on duty.)

## **2. Age: -**

There is no restriction in upper age limit, but in lower age limit the G. M. is empowered to relax for one year.

## **3. Educational Qualification: -**

The educational qualification prescribed for the post to be offered should not in case be relaxed. However, if on the merits of an individual case, if G. M. feels that such a relaxation of the minimum educational qualification is absolutely necessary, then such cases may be referred to the ministry of Railway with the stipulation that the candidate has to acquire qualification with the prescribed time limit.

Note: for compassionate appointment to the non-technical popular categories the minimum of 50% marks in matriculation need not be insisted. Candidate should have only metric pass.

## **ANNUAL CONFIDENTIAL REPORTS**

Annual Confidential Report - To assess the working of staff during the year ending March, the ACR in prescribed forms are prepared by Sr. Supervisors working in Gr.Rs.6500-10500 in respect of staff up to Gr. Rs.4500-7000(RSRP) provided the staff should have worked under him at-least for a period of 3 months. It contained character and habits of the employees such as Integrity/Tact/Temper/ Conduct/Attendance/Physical fitness/ Departmental Disabilities/Special Aptitudes/ Relation with others/Reliability to work/Adverse Remarks/Penalty imposed/ Rewards/ Training - Refresher etc.

The staff working in Gr. Rs.5500-9000 & above will have to fill up their self-appraisal. J.S. officer to initiate their CRs. Section II shall be filled by SS or JS having Independent Charge. No adverse remark is given in the CR unless written warnings are given to RS for improvement in working or in particular incidence but assessment should be on whole year period/performance. Tick mark may be avoided and brief remarks be given. Doubtful integrity -After 6 months observations only be given. On adverse remarks, representation within one month may be considered.

## **4 officials are involved in preparation of ACRs -**

1) Concerned RS (2) Reporting (3) Reviewing (4) Accepting  
ACR forms are distributed in 5 Sections:

Section 1 - Name, Design. Rate of Pay, Grade, DOB, DE, Office,

Section 2 - Behaviour character, Knowledge of subject, Relation with others,  
Drafting Noting, Educational Qualifications

Section 3 - Remarks of Reporting officer

Section 4 - Remarks of Reviewing Officer

Section 5 - Remarks of Accepting officer

Remarks for grading - O/S- 10, V/ Good - 8, Good - 6, Average -4, Below Average - 2

Adverse Entries shall be communicated to the employee & his representation, if any, shall be considered by the Accepting Authority who will pass a speaking order if representation is to be rejected. If accepted, the adverse remarks shall be expunged. Non-communication of adverse entries or considering them without disposing of the representation, if any, is not permitted. DPC will direct the concerned authorities to follow the procedure, whenever any lapse is found. It will consider the case only after the formalities of communication etc. have been completed. The CRs are in two parts - Part I & II

- Entries in Part II are not communicated. Now the entry regarding "Fitness for promotion" has been removed from both Parts I & II in respect of Group 'C' staff. Instead, a column on "Special Attributes" has been included as sub-section w.e.f. 22.4.87. An additional column "whether he/she is fit for posting as trainer

in training institute" may be included in Part III as Item No.16A in Annexure I, Item No.24A in Annexure II and Item No.32 in Annexure II. (RBE - 175/2001 dated 24.8.2001.

## **6.1 PERFORMANCE APPRAISAL**

The above appraisal requires the senior subordinate and officers to be given targets in advance and the work is reviewed periodically. At the end of the year he/she gives his/her self-assessment along with a resume of good work and reasons for not doing the allotted work.

The reporting officer must fill up each column very carefully and his/her overall assessment must be based on assessment in each column. He/she should take into account the letters/warning given during the year. His/her must be an objective assessment based on actual performance and matters on record. The form covers general qualities, professional abilities, integrity, intelligence, tact, industry, keenness, attitude to SC/ST, to superiors, equals and subordinates, general conduct and character, sociability aptitudes and shortcomings etc. Wherever an entry is based on an actual incident, it should be indicated. The resume given by the officer should be duly considered. The reporting officer will submit the report to Reviewing Officer, who may make his own assessment and record changes, if necessary. The report is finally put up to the accepting authority.

## **HOER EMPLOYMENT & REGULATION-1931**

1. Hours of employment & regulation: Chapter VI-A of the I.R. Act. 1890 amended time to time, The Rly. servant (Hours of employment) Rule 1931 made there under and the subsidiary instruction commonly referred to as Hours of Employment Regulation. Amended in the year 1961 on the report submitted by Justice G.S.Rajdhyaiksha ICS, Adjudicator, and later Shri. N.M.Miyabhoy, Retd. Chief Justice High Court Gujarat was appointed as Chairman of R.L.T 1969 & the recommendation was implemented from 1.08.1974

Latest Amended in the year 2005 as Hours of work & Period of Rest -2005

### **Defination**

2. **Hours of Employment:** Time during which an employee is roistered for duty. It also included period if in-action but does not included interval and time taken by an employee in going to and coming from his residence or vice versa.
3. **Duty Roster:** It is a document which above the duration of hours of employment and period of rest of the employee.
4. **Periodic Rest:** The rest which is granted to Rly. servant each week periodically. It does not include permission to leave head quarter station.
5. **Interval/Split shift:** Period between two or more spells of duty during which an employee is free to leave his post/place of work.
6. **Period of inaction:** Period of time during which the employee must remain present on duty at the place of work although not exercising physical activity or sustained attention.
7. **Long on:** Period of duty over 8 hrs. in the case of "Intensive" workers, over 10 hrs. in the case of continuous workers and over 12 hrs. in the case of "Essentially Intermittent" workers.
8. **Short off:** Period of rest which is less than 12 hrs. in a Roster of 6 hrs. duty, less than 14 hrs. in a mixed roster of 6 hrs & 8 hrs. duty in case of "Intensive" workers, less than 10 hrs. in case of "Continuous" worker and less than 8 hrs. in case of "E.I." workers. [RB No. E (Adj) 48 (HER) 6, dated 09.04.51]
9. **Full night in bed:** A person will be said to have had a full night in bed, if he has get a continuous rest of 8 hrs. Between 10 PM to 6 AM (22 hrs. 6 hrs.). Any part of roster hrs. of duty which falls between the hrs. of 10 pm to 6 am, shall be treated as night duty. [RB No. E (Adj) 48 (HER) 6, dated 23.06.49]
10. **Preparatory & Complementary Work:** Preparatory and / or complementary work which include taking out & handing over charges, the work which is to be carried on out side the limit laid down for the general working of a shift. This concept may be even in case of single shift workers where there may be no handing over or taking over. If period of P&C less than 15 minutes per day may not be mentioned in the Roster of such workers, if between 45 minutes & one hour per day be considered as one hour as period of duty.
11. **Sustained Attention:** The terms mean mental efforts.

### **CLASIFICATION:**

All Rly. Servant governed by the HOER are classified under any one of the following heads. :-

**Chart showing Hours of Employment Regulations**

| <b>Categories</b>         | <b>Description</b>                                                                                                                                                                                                                               | <b>Posts</b>                                                   | <b>Statutory limits</b> | <b>Rostered limit</b>                         | <b>Shift duty</b> | <b>Weekly rest</b>                                                    |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------|-----------------------------------------------|-------------------|-----------------------------------------------------------------------|
| Intensive                 | The staff whose work is of strenuous nature involving sustain attention & physical exertion in such a way that the period of in action or relaxation do not aggregate 6 hrs or more in a cycle of 24 hrs or atleast 1 hr in shift duty of 8 hrs. | SCOR, Signalers, Telephone & wireless operators etc.           | 45 hrs per week         | 42 hrs per week                               | 6 hrs             | 30 consecutive hrs                                                    |
| Essentially intermittence | The staff whose duties are of an intermittence nature                                                                                                                                                                                            | Waiting Room bearers, Gateman, safaiwala saloon attendant etc. | 75 hrs per week         | 72 hrs per week                               | 12 hrs            | 24 consecutive hrs                                                    |
| Excluded                  | Stock working in confidential capacity, certain staff of medical and health department staff of railway school, supervisor staff etc.                                                                                                            | Steno, C.A., Matrons sister ic. Asst. surgeons etc.            | No limit                | No limit                                      | -                 | For group 'D' staff 1 rest of 48 hrs or 2 rest of 24 hrs in fortnight |
| Continuous                | Staff not coming under any of the above categories Clerical Staff, Staff Of Locos, Drivers, Guards, TTE                                                                                                                                          | Clerical Staff, Staff Of Locos, Drivers, Guards, TTE           | 54 hrs in a week        | 48 hrs in week on avg in a month 9 hrs. daily | 9 hrs.            | 30 hrs at a stretch                                                   |

Remark : Essential intimated workers not provided with Railway Qtrs. Within 0.5km.from place of work have to work 10 hours a day or 60 hours a week

Payment of overtime:

For extra hours work overtime @ 1 ½ times of the ordinary wages per hour above roster hours up to statutory limits and 2 times of the ordinary wages per hour beyond statutory limit.

No hrs. of work prescribed for Excluded worker but shall be granted a rest of not less than 48 consecutive hrs. each month or a rest not less than 24 consecutive hrs. each for night.

### **SPECIAL INSTRUCTION REGARDING RUNNING/TRAVELLING STAFF**

The hrs. of work of Loco & Traffic running staff should be calculated from "signing on" to "signing Off" for the purpose departure of calculating total hrs. of work for Over Time Payment.

#### **BASES OF REST:**

Rest for running staff is based on total duty performed which should be reckoned from "signing on" to "signing off"

##### **At Head Quarter -**

For duty of less than 8 hrs.      **12 hrs.**

For duty of 8 hrs. or more      **16 hrs.**

##### **If out station -**

For duty of less than 8 hrs.      **06 hrs.**

For duty of 8 hrs. or more      **08 hrs.**

For duty of less than 5 hrs.      Equivalent to the hrs. of duty performed plus one hrs.

If any staff employed on duties at Hd. Qrs. Such as shunting operation, sub urban train, Ballast train have fixed roster hrs. will not be eligible to the liberalized Hd. Qrs. rest.

**Duty at a stretch:** The duty hrs. at a stretch of the running staff from the time of "signing on" to "signing off" should be restricted to 10 hrs. The staff will not claim relive within 10 hrs. of there duty at a stretch which running, In exceptional Circumstances duty at a stretched can be of 12 hrs. but relief is to be provided after 12 hrs.

Running staff should not normally be away from head quarters for more than three days at a stretch.

Ceiling limit of a trip: The ceiling limit of a trip should be kept within 14 hrs. including the time of "Signing on" & "Signing off"

## **FACTORY ACT 1948 (23<sup>rd</sup> September 1948)**

### **Introduction:**

Factory Act has given effect from 01.01.1949. It regulates the various obligations that an "Occupier" has to fulfill in connection with Health, Welfare, safety, Hours of employment, Leave, O.T., Rest etc.

### **Applicability:**

This Act applies to all Railway Workshops & Production Units but does not extended to Loco Sheds & C&W Depots.

### **Aims & Object :**

To protect workers subject to unduly long hours of bodily strain as well as to make provisions regarding

- 1.welfare
- 2.safety
- 3.health
- 4.working hours
- 5.payment of overtime etc

### **Defination:**

**FACTORY :** Factory means any premises -

1. Where ten or more workers are working, or were working on any day of the preceding twelve months and in any part of which a manufacturing process is being carried on with the aid of power., or
2. When twenty or more workers are working or were working on any day of preceding twelve months and in any part of which a manufacturing process is being carried on without the aid of power.

**MANUFACTURING PROCESS :** Means any process for Making, Altering, Repairing, Ornamenting, Finishing, Packing, Ceiling, Washing, Cleaning, Breaking up or Adopting any article or substance with a view to it's use, role, transport, delivery or disposal, or

1. Pumping oil, water, sewage or any other substance, or
2. Generating, transforming or transmitting power.

**OCCUPIER :** Occupier of a factory means the person who has ultimate control over the affairs of factory. Every occupier shall ensure, so far as is reasonably practicable, the health, safety and welfare of all workers while they are at work in the factory.

### **Main Provisions :**

#### **HEALTH :**

1. Every factory shall be kept clean and the floors of every workroom shall be cleaned at least once in every week.
2. All inside walls and partitions, all ceilings of rooms, sides and tops of passages and staircases shall be repainted or revarnished at least once in every period of five years and in other cases, be kept whitewashed, or color - washed at least once in every period of fourteen months.

3. All doors and windows shall be kept painted at least once in every period of five years.

**II. VENTILATION & TEMPERATURE :**

Effective and suitable provision shall be made in every factory for adequate ventilations and temperature.

**III. DUST & FUME : Section 14**

In every factory effective measures shall be taken to prevent accumulation of dust and fume in any workroom and necessary exhaust appliances shall be applied.

**IV. ADRTIFICIAL, HUMIDIFICATION : Section 15**

In respect of all factories in which the humidity of the air is artificially increased, the water used for the purpose shall be taken from a public supply or other source of drinking water.

**V. OVER CROWDING : Section 16**

No room in any factory shall be overcrowded to an extent injurious to the health of the workers and there shall be in every workroom of a factory in existence of the date of commencement of this act at least 9.9 cubic meters and of factory built after the commencement of this act at least 14.2 cubic meters of space for every worker employees therein.

**VI. LIGHTING : Section 17**

In every part of a factory where worker are working or passing, there shall be provided and maintained sufficient and suitable lighting, natural or artificial, or both.

**VII. DRINKING WATER : Section 18**

In every factory effective arrangements shall be made to provide at suitable points a sufficient supply of drinking water. All such points shall be legible marked "Drinking water" in a language understood by a majority of the workers and no such point shall be situated within six meters of any Washing place, urinal etc. and where more than two hundred and fifty workers are ordinarily employed, provision shall be made for cool drinking water during hot weather.

**VIII. LATRINES & URINALS : Section 19**

In every factory sufficient latrine and urinals accommodation, separately for male and female, shall be provided conveniently situated and accessible to workers. All such accommodation shall be adequately lighted, ventilated and be maintained in a clean and sanitary condition at all time.

**IX. SPITTOONS : Section 20**

In every factory there shall be provided a sufficient number of spittoons in convenient places.

## **SAFETY**

### **I. FENCING OF MACHINERY : Section 21**

In every factory every moving part of a prime mover, every fly wheel connected to a prime mover and every dangerous part of any machinery shall be securely fenced by safeguards.

### **II. WORK ON OR NEAR MACHINERY IN MOTION:Section 22 & 23**

While the machinery is in motion, operations shall be made or carried out only by a specially trained adult male worker wearing tight fitted clothing and no woman worker or young person shall be allowed on such machines.

### **III. STRIKING GEAR & DEVICES FOR CUTTING OF POWER : Section 24**

In every factory suitable devices for cutting off power in emergencies from running machinery shall be provided in every workroom.

### **IV. PROHIBITION OF EMPLOYMENT OF WOMEN & CHILDREN NEAR COTON APENER : Section 27**

No women or child shall be employed in any part of a factory for pressing cotton in which a cotton apener is at work.

### **V. HOISTS & LIFTS : Section 28**

Every hoist and life shall be of good mechanical construction, properly maintained and shall be thoroughly examined by a competent person at least once in every period of six months.

### **VI. LIFTING MACHINES, CHAINS, ROPES & LIFTING TACKLES : Section 29**

All parts, Including working gear of every lifting machine and every chain, rope shall be of good construction, properly maintained and thoroughly examined by a competent person at least once in every period of twelve months.

### **VII. PRESSURE PLANT : Section 31**

If any factory is operated at a pressure above atmosphere pressure, effective measures shall be taken to ensure that the safe working pressure of such plant is not exceeded.

### **VIII. FLOORS, STAIRS & MEANS OF ACCESS :**

In every factory all floors, steps, stairs, passages and gangways shall be sound construction, properly maintained and shall be kept free from obstructions and substance likely to cause persons slip.

### **IX. EXCESSIVE WEIGHT : Section 34**

No person shall be employed in any factory to lift, carry or more and load so heavy as to likely to cause him injury.

### **X. PROTECTION OF EYES : Section 35**

Goggles shall be provided for the protection of persons employed in respect of any such manufacturing process carried on risk to the eyes by reason of exposure to excessive light as fragments thrown off.

Section 38 : In every factory all practicable measures shall be taken to prevent out break of fire and spread, both internally and externally.

Effective measures shall be taken to ensure that in every factory all  workers are familiar with means of escape in case of fire and have been adequately trained in the routine to be followed in such cases.

## **WELFARE**

### **I. WASHING FACILITIES : Section 42**

In every factory adequate and suitable facilities for washing, separately for male and female workers, shall be provided and maintained for the use of the worker therein.

### **II. FACILITIES FOR STORING & DRYING CLOTHS : Section 43**

Suitable places should be provided for keeping clothing not worn during working hrs. and for the drying of wet clothing.

### **III. FACILITIES FOR SITTING : Section 44**

In every factory suitable arrangements for sitting shall be provided for all workers obliged to work in a standing position, in order that they may take advantage of any opportunities for rest.

### **IV. FIRST-AID & APPLIANCES : Section 45**

There shall in every factory be provided first aid boxes. The number of such boxes shall not be less than one for every one hundred and fifty workers and where more than five hundred workers are employed there shall be provided an ambulance room containing the prescribed equipment and medical and nursing staff.

### **V. CANTEENS : Section 46**

Factory wherein more than two hundred and fifty workers are employed, a canteen shall be provided by the occupiers for the use of workers.

### **VI. SHELTERS, REST ROOMS & LUNCH ROOMS: Section 47**

In every factory wherein more than 150 workers are employed, adequate and suitable shelters or rest rooms and a suitable lunch room with provision for drinking water where worker can eat meals brought by them, shall be provided for the use of the workers.

### **VII. CRECHES: Section 48**

In every factory wherein more than 30 women workers are ordinarily employed there shall be provided suitable room or rooms for the use of children under the age of six yrs. Of such women. The crèches shall be made under the charge of women trained in the care of children.

### **VIII. WELFARE OFFICER : Section 49**

In every factory wherein 500 or more workers are employed the occupiers shall employ in the factory such number of welfare officer as may be prescribed.

## **PAYMENT OF WAGES ACT 1936 ( 28/03/1937 )**

### **Introduction :**

The Payment of Wages Act 1936 was enacted on the recommendation of Whitley committee & came into force from 28.3.1937 & latest amended in the year 2005

### **Aim & Objects: -**

1. To secure prompt and regular payment of wages.
2. To prevent unauthorized deduction.
3. To fix up the wage period.

### **Applicability:**

The act extends to whole of India including J&K

This act applies to all Establishment, which engage 20 or more workers.

This act also applies to all workers whose monthly emolument do not exceed Rs.6500/- (**RBE No: 216/2005**) (Basic + all allowances except TA)

### **Main provisions:**

The wage period is fixed to the extent of one month.

In Railway the following wage periods are prescribed.

1. For administrative of the staff - Calendar month i.e. from date of month to last date of month.
2. For running g staff, 11<sup>th</sup> of the month to 10<sup>th</sup> of the following month.
3. For S&T /Engg. Gang staff, 19<sup>th</sup> of the month to 18<sup>th</sup> of the following month.

In practice, the pay sheets are prepared on the basis of two types of attendance

(a) Actual attendance (b) assume attendance.

Assumed attendance should not exceed 15 days.

### **Obligation:**

For full fulfillment of the objective, following provisions are to be made by the employer.

- 1) If the number of workers in as establishment is less than 1000, their wages should be paid within 7 days from expiry of wage period. And if the number of workers is 1000 or more within 10 days on expire of wage period.
- 2) In case of casual labour, discharge from Rly. service his wages should be paid within 02 days excluding Sundays & Holidays.
- 3) Payment should be arranged on working day only.

Payment should be arrange only in prevailing legal currency, notes and coins. However Bank payment facility can be granted to employee on his written request.

The deductions are classified into following three types: -  
(a) **Compulsory deduction**: - P.F., Income Tax, NGIS, Prof. Tax, court attachment, overdrawn wages, A/Cs , Audit debits, store debits. Etc.  
(b) **Voluntary deduction**.- VPF, M.D. LIC Premium, PRSS etc.  
(c) **Obligatory deduction**. - House Rent, Elect. Charges, Diet charges, Inst. Fees, repayment of loans and advances etc.

Normally all deductions put together, could not exceed 50% of total emoluments which may be further extended up to max. 75% in case of deduction of co-op society involved.

### **Machinery for redresses of Grievances:**

The following machinery is available for this purpose.

1. Head quarter staff will approach to Sr. Personal officer.
2. Divisional staff- Divisional Personal Officers.
3. Workshop staff works Manager/ Dy. Chief mechanical Engineer.

If there is no response from the above authority, employee may approach to LEO and if however there is no response from LEO employee may approach to Labour Court.

### **Notices:**

The employer for information of purpose in premises should exhibit following information on notice board. (In Hindi or In English & regional language).

1. Wage period.
2. Date & Time of appointment.
3. Name & Residential address of LEO
4. Main aspect of this Act.

### **Penalties:**

For violation of any of the provision of this act, employee may be fined with a sum of Rs.1500/- which may extend upto Rs. 7500/- for first time and Rs.3750/- to Rs.22500/- or and six month's simple imprisonment made for II<sup>nd</sup> and subsequent time.

For unauthorized deduction with the intention of financial harassment, the employer may be fined a sum equal to 10 times of the amount of unauthorized deduction.

## **The Minimum Wages Act 1948 (15.03.1948)**

### **Introduction**

The Act is called Minimum Wages Act 1948 came into force from 15.03.1948 & amended in 1961. It extends to whole of India except J&K.

### **Aims and Objects.**

#### **This act aims at**

- i) Fixing the minimum wages in certain employments where wages are low in order to prevent exploitation of un-organized labour,.
- ii) Payment of wages without any unauthorized deduction.
- iii) Periodical review of the rates of minimum wages & establishment of machinery for proper implementation & enforcement of the act.
- iv) Procedure for regulating hours of work & payment of wages including overtime.

#### **Applicability:**

So far as Railway are concerned this act applies to the following :

- i) labor working under IOWs, engaged in Road Construction, Building Operation, Maintenance of buildings.
- ii) Labour engaged in stone crushing or breaking.
- iii) Labour engaged in loading & un-loading operation in goods shed & godowns etc.
- iv) Casual labors employed on permanent way are also governed by this act.

#### **Obligation:**

The act holds Employer in charge as responsible for payment of wage to person employed under him & also to make the following provisions:

- i) Fixing of wage period, which should not exceed 01 month.
- ii) Wages to be paid in working day within 07 days/10 days if less than/more than 1000 persons are employed.
- iii) Discharge wage to be paid not later than 2<sup>nd</sup> working day.

#### **Provisions:**

The rates of minimum wages are fixed by the Ministry of Labor and are subjected to review from time to time but not exceeding five years.

The rates are fixed according to the cities which are grouped & distributed in respective zones. Over- time will be paid for extra work done by the worker.

**Minimum Wage Fixation:** There exists 05 zones viz A,B-1, B-2, C, D& all the cities are grouped there after. If the rates appear to be less than the prevailing rates at neighbor hood. DRM & GM's are empowered to sanction daily

rates by 20% & 33 1/2 % respectively over the rates notified by Ministry of Labour.

The rates will be fixed taking into account the cost of living index and cash value of the concessions in respect of supplies of essential commodities to the worker.

Wages will include all remuneration capable of being expressed in terms of money, except house rent allowance, gratuity etc.

**Working Hours:**

Per Day work - Max 09 hrs.

Shift - Maximum 12 hrs.

Continuous work- Max 5 hrs.

Weekly Work- Max 48 hrs.

Rest- On continuous 6 days working 7<sup>th</sup> day shall be paid rest normally on Sunday but the employer can fix any day of the week.

**Penalties:**

For violation of any of the provision of this act employer shall be punishable with fine of Rs. 500/- or & simple imprisonment upto 6 months.

## **EMPLOYEE'S COMPENSATION ACT 1923 (01.07.1927 )**

### **Introduction**

This Act is called as employee's compensation Act 1923. The bill was passed by the legislature which received the Royal assent & It came into force on the First Day of July, 1924 and it has been amended in the year 1995. It extends to the whole of India.

### **Aims & Object:**

Under this Act, an employer is liable to pay compensation to the employees working under him subject to the following conditions. :

1. If personal injury is caused to a workman.
2. This injury should be by accident.
3. The accident should be arisen out of and in the course of employment.
4. The injury results death of workmen or any type of disablement of workmen.

### **Applicability:**

So far as Railways are concerned this act applies to all such workers who are connected with the operations and maintenance of vehicular traffic or a movement of vehicular traffic for detail schedule no. 1 may be referred.

The following employees are not coming under the provision of this act.

1. Persons in Workshop governed by Factories Act.
2. Apprentices not governed by apprentices Act, 1961.
3. Persons employed in the Armed forces.
4. The worker who is not connected with the trade of business of the employer.

**Section (3):**The employer shall not be liable to pay compensation to employees in the following cases.:

1. In respect of any injury which does not result in the total or partial disablement of the workmen for a period of three days.
2. In respect of any injury, not resulting in death, permanent total disablement caused by an accident which is directly attributable to.:
  - (a) the workmen having been at the time thereof under the influence of drink or drugs, or
  - (b) the willful disobedience of the workmen to an order expressly given, or to a rule expressly framed, for the purpose of securing the safety of workmen, or
  - (c) the willful removal or disregard by the workmen of any safety guard or other device which he knew to have been provided for the purpose of securing the safety of workmen.

### **Provisions :**

Under the act the following Schedule exists as concern to payment of

Compensation, List of workmen etc, which is as below.

- A) Schedule-I : List of Injuries & % of Loss
- B) Schedule-II : List of persons defined as Workmen
- C) Schedule-III : List of Occupational Diseases
- D) Schedule-IV : Relevant Factor

### **KIND OF INJURY**

For the purpose of compensation under the Workmen's Compensation act, the injury has been divided into four categories.:

1. Death
2. Permanent total disablement
3. Permanent partial disablement
4. Temporary disablement, it may be total or partial disablement.

### **Obligation:**

#### **AMOUNT OF COMPENSATION ( Sec.4 )**

The amount of compensation under this Act shall be as follows.:

#### **1. Where Death results from the injury :**

An amount of average pay (max Rs. 8000) multiplied by 50 and multiplied by age factor divided by 100 or Rs. 120000/- which ever is more.

$$\frac{AP \times 50 \times RF}{100} \text{ or Rs. 120000/- which ever is more}$$

#### **2. Where permanent total disablement results from the injury :**

An amount at average pay (max Rs. 8000) multiplied by 60 and multiplied by age factor divided by 100 or Rs. 140000/- whichever is more.

$$\frac{AP \times 60 \times RF}{100} \text{ or Rs. 140000/- which ever is more}$$

#### **3. Where permanent partial disablement results from the injury :**

(a) in the case of an injury specified in Part-II of Schedule-I, such percentage of the compensation which would have been payable in the case of permanent total disablement as specified therein as being the percentage of the loss of earning capacity caused by that injury, and

(b) in the case of injury not specified in Schedule-I, such percentage percent of compensation payable in the case of permanent total disablement as is proportionate to the loss of earning capacity (as assessed by the qualified medical practioner)

permanently caused by the injury.

$$\frac{AP \times 60}{100} \times \frac{RF \times \% \text{ of PPD}}{100}$$

### **Payment of Wages:**

4. Where temporary disablement, where total or partial results from the injury : A half monthly payment of the sum equivalent to twenty five percent of monthly wages of the workman to be paid in accordance with provisions of this Act.

#### **DUTY OF SUPERVISOR IN CASE OF INJURY**

The following are the duties of supervisor in case of injury caused to a workman by accident arising out of and in the course of employment.:

1. He should immediately render first Aid and call doctors.
2. Give message to all concerned with in 48 hours.
3. He should take two eye witnesses/statements where possible.
4. He should prepare accident report including small diagram.
5. He should take down the particulars of leave taken during last 12 months.
6. He should get medical report of injured workmen.
7. He should make findings of inquiry.

#### **COMPENSATION TO BE PAID WHEN DUE & PENALTY FOR DEFAULT**

Under this Act, compensation shall be paid as soon as it falls due. In case where the employer does not accept the liability for compensation to the extent claimed, he shall be bound to make provisional payment based on the event of the liabilities which he accepts and such payment shall be deposited with the commissioner or made to the workman, as the case may be, without prejudice to right of the workman to make any further claim. For non submission of papers to the commissioner's office within the month or for violation of any of the provisions, employer may be fined a sum upto Rs.5000/-

Where any employer is in fault in paying the compensation due under this Act within one month from the date it fell due. The commissioner may direct that in addition to the amount of the arrears, simple interest at the rate of 12% per annum on the amount due together. If in the opinion of the commissioner there is no justification for the delay, a further sum not exceeding 50% of such amount, shall be recovered from the employer by way of penalty.

\*\*

## SCHEDULE

Under the Workmen's Compensation Act, there are four schedules as appended below:

### SCHEDULE-I

This schedule indicates the percentage of loss of earning capacity and accordingly payment of compensation is arranged on production of certificate of doctors.

### SCHEDULE-II

Under this schedule, a list has been mentioned. Under this list details of persons have been given who are included in the category of "workmen" and entitled for payment of compensation under this Act.

### SCHEDULE-III

Under this schedule, occupational diseases have been shown.

### SCHEDULE-IV

Under this schedule IV, details regarding factors for working out lump sum equivalent of compensation amount in case of permanent disablement and death have been given.

Payment of compensation shall be made through Workmen's Compensation Commissioner. Under this Act, Workmen's Compensation Commissioner is appointed by the State Govt. through notification in the official Gazette. The State Govt. may appoint more than one Commissioner for any area. Every Commissioner shall be deemed to be a public servant within the meaning of the Indian Penal Code.

Appeal - The appeal against the decision of Workmen's Compensation Commissioner shall lie with High Court. (18)

## **INDUSTRIAL DISPUTE ACT 1947( 01.04.1947 )**

### **Introduction:**

This act is based on the principle of social security and justice. It came into force on the first day of April, 1947 and is called as "Industrial Dispute Act 1947".

### **Aims & Objects:**

This act aims making provisions for the investigation & settlements of industrial disputes.

### **Applicability:**

This act extends to whole of the India

## **SOME IMPORTANT DEFINITIONS:**

### **1. Industrial Dispute :**

Industrial Dispute means any dispute or difference between employees and employers or between employers and workmen or between workmen and workmen, which is connected with the employment or non employment or the terms of employment or with the conditions of labour, of any person.

### **2. Industry:**

Industry means any systematic activity carried on by co-operation between employer and his workman for the production, supply or distribution of goods or services with a view to satisfy human wants.

### **3. Lay Off :**

Lay off means the failure, refusal or inability of an employer on account of shortage of coal, power or raw material or the accumulation of stock or the breakdown of machinery or natural calamity or for any other connected reason to give employment to a workman whose name is borne on the muster rolls of his industrial establishment and who has not been retrenched.

### **4. Lock Out :**

Lock out means the temporary closing of a place of employment or the suspension of work, or the refusal by an employer to continue to employ any number of persons employed by him.

### **5. Strike :**

Strike means cessation of work by a body of persons employed in any industry acting combination, or a concerted refusal, or a refusal under a common

understanding of any number of persons who are or have been so employed to continue to work or to accept employment.

## **6. Public Utility: (Sec.2)**

Public utility service means any Railway service or any transport service for the carriage of passenger or goods by air. Any section of industrial establishment on the working on the safety of the establishment of workman employed there in depends. Any postal, telegraph or telephone service. Precedent can declare any industry as public utility service in emergency.

### **Main Provision:**

## **SETTLEMENT MACHINERY/AUTHORITIES UNDER I.D.ACT**

**1. Works Committee :** Where more than 100 workers are employed in any industrial establishment, the works committee are formed of equal no. of representatives of workman and employer to promote good Industrial between workmen & employee

### **2. Conciliation Officer :**

The appropriate Govt. may by notification in the official gazette, appoint such number of persons as it thinks fit, to be conciliation officer, for mediating in & promoting settlement.

### **3. Boards of Conciliation :**

Appointed by the appropriate govt. with a chairman and two or four members for promoting settlement of the dispute.

### **4. Court of enquiry :**

The court of enquiry is constituted by the appropriate Govt. which consists of Chairman with one or more member to enquire into any matter appearing to be connected with or relevant to an industrial dispute.

### **5. Labour courts :**

One or more labour courts may be constituted by the appropriate Govt. for adjudication of industrial disputes, shall consist of one person known as Presiding Officer.

### **6. Tribunal :**

The appropriate Govt. may constitute one or more Tribunals for adjudication of industrial disputes in accordance with the provisions of this act.

### **7. National Tribunals :**

This will be constituted by the central government for the adjudication of the industrial dispute which involves questions of National importance & shall consist



one person only, the Govt. may appoint 02 persons as assessor to advise the Tribunal in the proceedings before it, if think fit so..

### **PROCEDURE SHOULD BE FOLLOWED TO DECLARE STRIKE & LOCK OUT**

:

Strike and lock out shall be illegal if it is declared or commenced in contravention of section 22 and 23 of this act i.e.

1. Without giving six weeks notice before commencing strike.
2. Before 14 days of given such notice.
3. Before the expire of the date specified in such notice.
4. During the pendency of any conciliation proceedings before conciliation officer and 07 days after the conclusion of such proceedings.
5. During the pendency or proceedings before a tribunal or national tribunal and 02 months after the conclusion of such proceedings.
6. During the pendency of arbitration proceedings before an arbitrator and two months after the conclusion of such proceeding, where a notification has been issued.
7. During any period in which a settlement or award is in operation in respect of any of the matter covered by the settlement or award.

### **Procedure for layoff :**

Whenever a workman whose name is born on muster roll of an industrial establishment & who has completed not less than 1 year of continues service is laid off whether continuously or intermittently he shall be paid for all days during which he is laid off except for such weekly holidays, compassion which shall be equal to

50 % of total basic wages & D A that would have been payable to him had he not been laid off.

### **RETRENCHMENT :**

Retrenchment means the termination by the employer of the service of workmen for any reason whatsoever, otherwise than as a punishment inflicted by was of disciplinary action but does not include. :

1. Voluntary retirement
2. Retirement on reaching the age of superannuation.
3. Termination of service of workmen as a result of non renewal of the contract.
4. Termination of service of a workmen on the ground of continued ill-health.

### **Procedure for Retrenchment :**

No workman employed in any industrial establishment who has work continuously for not less than 1 year shall be retrenched until the workman has given three months notice indicating reasons for retrenchment. On the principle of last man should go first & after obtaining prior permission of appropriate government.

**Penalties:**

For illegal strike - Imprisonment upto 01 month & fine upto Rs 1000/- or both

For Illegal Lockout - Imprisonment upto 01 month & fine upto Rs 1000/- or both.

Lay off/ Retrenchment- Without prior permission/ notice - Imprisonment upto 01 month or fine of Rs. 1000/- or both.

## **The Railway Service (Conduct) Rules 1966 (21.03.1966)**

The Railway servants are governed by the Railway Service Conduct Rules 1966, which lays down the standard of conduct expected of every Railway Servants and member of their family.

### **Rule 3 : General**

1. Every Railway servants shall at all time
  - i. Maintain absolute integrity
  - ii. Maintain devotion to duty and
  - iii. Do nothing which is unbecoming of a Railway or Railway employee
  
2.
  - i. Every Railway employee holding a supervisory post shall take all possible steps to ensure the integrity and devotion to duty of Railway servant who are under this control.
  - ii. No Railway servant shall in the performance of his official duties or exercise of powers conferred on him act otherwise than in his best judgement except when he is acting under.
  - iii. The direction of his official. Superior and shall where he is acting under the such direction, obtain the direction in writing wherever practicable and where it is not possible he shall obtain confirmation.
  
3. **(A) Promptness and courtesy.**  
No Railway servant shall
  - i. In performance of his official duties act in a discourteous manner.
  - ii. In his official dealing with the public or otherwise adopt dilatory tactics or will fully cause delays in disposal of the work assigned to him.
3. **(B) Observance of Govt's policies**  
Every Railway servant shall at all times.
  - i. act in accordance with the Govt's policies regarding age of marriage, preservation of environment protection of wildlife and cultural heritage.
  - ii. Observe the Govt's policies regarding prevention of crime against women. 3.
- (C) Prohibition of Sexual harassment of Working Women**
  - i. No Govt. servant shall involve him self in any activity of sexual harassment of any employee at the work place.
  - ii. Every Govt. servant holding supervisory post shall take all steps to prevent the commission of such act of sexual harassment of women.

Explanation:

For this purpose it includes such unwelcome sexually determined behavior, whether directly or by other ways i.e.

- (a) Physical contacts and advances
- (b) A demand or request for sexual favors
- (c) Sexual colored remarks
- (d) Showing pornography

(e) Any other unwelcome physical, verbal or non verbal conduct of sexual nature.

**Rules 4 : Prohibition of Employment of near relatives :**

No Railway servant shall use his official position or influence directly or indirectly to secure employment for any member of his family in any company or firm having official dealing with him.

No Railway servant shall in the discharge of his official duties deals with the matter or give or sanction any contract to any company or firm or any other person if any member of his family is employed in that company every such type of cases further shall be sent to his supervisor authority.

**Rule 5 : Taking part in Politics & Election :**

No Railway employee shall be a member of or otherwise be associated with any political party or any other organization.

It shall also be duty of every employee to endeavor to prevent any member of his family to association in any way with such movement or activity.

**Rule 6 : Joining of Association or Unions :**

No Railway servant shall join or to be member of an association or union the object of which are prejudicial to the interest of sovereignty, integrity and security of India.

When any staff is promoted to gazetted rank he shall resign the union of nongazette staff but in case joining such union is beneficent he may continue with such association provided he satisfies the GM.

**Rule 7 : Demonstration & Strike :**

No Railway servant shall engage himself or participate in any demonstration which is prejudicial to the interest of sovereignty and integrity of India, the security of the state, friendly relation with foreign state or which involves contempt of court defamation or incitement of an office.

**Rule 8 : Connecting with Press or any other Media :**

No Railway servant shall except with the prior sanction of the Govt. connected with press, Radio, TV editing a news paper or publishing a book and other media except in literary, artistic and scientific matter.

**Rule 9 : Criticism of Government :**

No Railway servant shall in any radio broadcast or in any document published his own name or any other name or any communication to press or any other media make any statement of fact or opinion which has effect of an adverse criticism of any current policy of Central/State Govt. or embarrassing the relation ship between Central and State Govt.

**Rule 10 : Evidence before any Committee/Authority**

No Railway employee shall except with the previous sanction of Govt. give evidences in connection with any inquiry conducted by any person, committee or authority or in course of giving such evidence not criticize the policy or any action of a Stage Govt.

**Rule 11 : Unauthorized commutation of Informatuion :**

Communication of official information - Every Railway servant shall in performance of his duties in good faith, communication formation to a person in accordance with the right to information Act, 2005 (2) of 2005 and the rules made there under. (RBE No. 22/06)

**Rule 12 : Subscription :**

No Railway servant shall except with the previous sanction of Govt. ask for or accept contributions to raising of any funds or other collection in case or in kind in pursuance of any object whatsoever.

**Rule 13 : Gifts :**

No Railway servant shall accept or permit any member of his family or any other person on his behalf to accept any gift. Accepting lavish hospitality or frequent hospitality from any individual having official dealing with him.

On following occasions Railway servant may accept gifts from his near relatives but he shall where he accepts any such gift make a report of such acceptance to the Govt. if the value of any gift exceeds.

|                                              | Group A | Group B | Group C | Group D |
|----------------------------------------------|---------|---------|---------|---------|
| Weddings anniversaries functions or religion | 7000    | 4000    | 2000    | 1000    |
| Other matter                                 | 1500    | 1500    | 500     | 500     |

**Rule 13 (A) : Dowry :**

No Railway servant shall give or take or abet the giving or taking of dowry or demand directly or indirectly from the parents or guardian of a bride or bride groom.

**Rule 14 : Public demonstration in honor of Public servant :**

No Railway employee shall except with the previous sanction of Govt. receive any complimentary or valedictory address or accept any testimonial or attend any meetings on entertainment held in his honor.

**Rule 15 : Private Trade & employment :**

No Railway employee shall except with the previous sanction of the Govt. engage directly or indirectly in any trade or business or any other employment.

A Railway employee may under take any honorary work of a social or charitable nature or occasional work of a literary, artistic or scientific work.

**Rule 15 (A) : Subletting & Vacation of Rly. Accommodation :**

No Railway servant shall sub let, lease or otherwise allow occupation by any other person of Govt. accommodation which has been allotted to him.

A Railway servant shall after the cancellation of his allotment of Govt. accommodation vacate the same within the time limit prescribed by the allotting authority.

**Rule 16 : Investment Lending & borrowing :**

No Railway employee shall speculate in any stock share or other investment.

No Railway employee shall make or permit any member of his family or any other person acting on his behalf to make any investment, which is likely to embarrass or influence him in the discharge of his official duties.

No Railway employee shall have in the ordinary course of business with a bank or public limited company either him self or through any other person.

- i. A. Lend or borrow or deposit money as a principal or an agent to or from or with any person or firm, company with whom he is likely to have official dealing or otherwise places him self under primary obligation to such person or firm or private limited company.  
B. Railway employee may give or take from a relative or any personal friend a purely temporary loan free of interest.
- ii. No Rly servant involved in the decision making process of fixing of IPO or follow-up public offering of share of a Central public sector enterprises

**( RBNNo: E(D&A) 2009/GS 1-4 ttd. 14.07.09 )**

**Rule 17 : Insolvency & Habitual indebtedness :**

A Railway servant shall so manage his private affairs as to avoid habitual indebtedness or insolvency. A Railway servant against whom any legal proceeding is initiated for the recovery of any debt due from him or for adjudging him as an insolvent shall forth with report the full fact of the legal proceeding to Govt.

**Rule 18 : Movable & Immovable Property :**

Every Railway employee shall on his first appointment submit a return of his assets and liabilities in prescribed form.:

- i. Group A and Group B officers shall submit an annual return in such form.  
Supervisory staff who are working in PB-2 Rs.9300-34800 with GP 4600/- will also now have to submit annual return of their immovable property

**( RBNNo: E(D&A)2007/GS1-1 dtd. 17.06.2009 )**

- ii. Commercial staff in all grades should besides submitting a property return at the time of their every promotion.
- iii. Where a Railway employee enter into a transaction of moveable property either in his

name or any other member of his family, shall submit the report  in one month from the date of such transaction, if the value of such property exceeds

**two months basic pay.**

As concern to receipt of gift by member of family of Rly. Servant in the form of Stridhan, Gifts, inheritance etc, Rly. Servant is not required to give provision knowledge or seek prior permission subject to provision of clause 13 of the said rule.

**( RBNNo: E(D&A)2007/GS1-2 dtd. 18.06.2009 )**

- iv. No Railway servant shall except with the previous knowledge of the Govt. acquire or dispose of any immovable property by lease, mortgage, purchase, sale, gift either in his own name or in the name of any member of his family, if the transaction is through reputed firm.
- v. Otherwise previous permission of Govt. is required.
- vi. A Railway employee can purchase share and debenture, security bond, mutual fund. Employee shall submit the report with in one month from the date of such transaction, if the value of such property exceeds **two months basic pay.**

**Rule 18 (A) : Movable & Immovable Property outside India :**

Prior sanction is required to purchase or sale of immovable property, outside India or with foreigners.

**Rule 19 : Vindication of Acts & Character of Govt. servants :**

No Railway servant shall except with the prior sanction of Govt. have recourse to any courts or to the press for vindication of any official act which has been subject matter of adverse criticism or an attack of defamatory character.

**Rule 20 : Canvassing of non-officials or other influence :**

No Railway servant shall bring or attempt to bring any political or other influence to bear upon any superior authority to further his interests in respect of matter pertaining to his service under the Govt.

**Rule 21 : Restriction regarding Marriage:**

No Railway employee shall enter into, or contract a marriage with a person having spouse living and having a living spouse shall enter into or contract a marriage with any person, In other words it means that no Railway servant who has a wife/husband shall contract another marriage without first obtaining the sanction of Govt.

- A Railway servant who has married or marriage a person other than of India shall forthwith intimate the fact to Govt.
- Govt. may permit a railway servant to enter into or contract any such marriage is permissible under the personal law and there are other grounds for so doing.

**Rule 22 : Consumption of Intoxicating drinks & drugs :**

A Railway servant shall strictly abide by the law relating to intoxicating drinks or drug in force in any area in which he may happen to be for time being.

- A Railway servant shall not be under the influence of any intoxication drink or drug during the course of his duties and shall also take due care that the performance of his duties at any time is not affected in any way by the influence of such drink or drug.
- A Railway servant if he belongs to the running category (both Loco and Traffic) or is directly connected with train passing duty have taken or used any intoxicating drink/drug within eight hours of the commencement of duty or take such drinks or drug during the course of duty.

**Rule 22 (A) : Child Labour employment :**

No Railway servant shall employ to work a child below the age of 14 years.

**Rule 23 : Interpretation**

If any question arises relating to the interpretation of these rules, it shall be referred to the Government whose decision thereon shall be final.

**Rule 24 ;Delegation of powers**

The Government may, by general or special order, direct that any power exercisable by it or any Head of Deptt. Under these rules ( except the powers under Rules 23 and this Rule) shall, subject to such conditions, if any, as may be specified in the order, be exercisable also by such officer or authority as may be specified in the order.

**Rule 25 :Repeal and Saving**

Any rules corresponding to these rules in force immediately before the commencement of these rules and applicable to the Government servant to whom these rules apply, are hereby repealed -

Provided that any order made or action taken under the rules so repealed shall be deemed to have been made or taken under the corresponding provision of these rules.

Provided further that such repeal shall not affect the previous operation of the rules so repealed and a contravention of any of the said rules shall be punishable as if it were a contravention to these rules.

**Rule 26**

**DISCIPLINE AND APPEAL RULES - 1968**  
**(w.e.f. 01.10.1968)**

DEFINITIONS :

APPLICATION (Rule-3) :

These rules shall apply to every railway employee but shall not apply to -

1. Any member of the all India services.
2. Any member of RPF.
3. Any person for whom special provision is made.
4. Any person in casual employment.

The president may by order exclude any class of railway servant.

**A. APPOINTING AUTHORITY (Rule-2 (a)) :**

1. The authority empowered to make appointments to the service of which the railway servant is for time being, a member to the grade of the service in which the railway servant is for time being included, or
2. The authority empowered to make appointments to the post which the railway servant for the time being holds, or
3. The authority which appointed the railway servant to such service, grade or post as the case may be or
4. Where the railway servant having been a permanent member of any other service or having substantively held any other permanent post has been in continuous employment under the Ministry of Railway, the authority which appointed him to that service or to any grade in that service or to the post.

Whichever authority is the highest authority.

**DISCIPLINARY AUTHORITY Rule- 2 ( c )**

The authority competent under these rules to impose the penalty as per schedule-I, II & III of D&A Rules as amended from time to time.

**SUSPENSION (Rule-5) : S F-1**

Suspension means the suspension of official activities of the railway employee. The suspension is not a penalty.

- (1). A railway servant may be placed under suspension.
  - (a) Where a disciplinary proceeding against him is contemplated or is pending, or
  - (b) Where in the opinion of the authority competent to place a railway servant under suspension, he has engaged him self in activities prejudicial to the interest of the security of the state, or
  - (c) Where any criminal offence is under investigation, inquiry or trail.

**(2). Deemed to have been placed under suspension : SF-2**

- (a) w.e.f. the date of his detention, if he is detained in custody for a period exceeding forty eight hours.,
  - (b) w.e.f. the date of his conviction, if in the event of a conviction for an offence, he is sentenced to a term of imprisonment exceeding forty eight hours and is not forth with dismissed, removed or compulsorily retired consequent to such conviction.
- (3). Where a penalty of dismissal, removal or compulsory retirement from service is set aside in appeal or on revision under these rules and the case is remitted for further inquiry or action or with any other direction. The order of his suspension shall be deemed to have continued in force from the date of his removal, dismissal or compulsory retirement.
- (4). Where a penalty of dismissal, removal, compulsory retirement from service is set aside or declared void by a decision of a court of law and disciplinary authority decide to hold a further inquiry against him. The railway employee shall be deemed to have been placed under suspension by the competent authority from the date of the dismissal, removal or compulsory retirement.
- (5) (a) An order of suspension made or deemed to have been made under these rules may at any time be modified or revoked by the competent authority or higher authority.
- (b) Where a Railway servant is suspended or is deemed to have been suspended and any other disciplinary proceeding is commenced against him during the continuance of that suspension the authority competent to place him under suspension may, for reasons to be recorded by him in writing, direct that the Railway servant shall continue to be under suspension until the termination of all or any of such proceedings.
- (c) An order of suspension made or deemed to have been made under this rule, may at any time be modified or revoked by the authority which made or is deemed to have made the order or by any authority to which that authority is subordinate.
- (6) Not with standing any thing contained in sub rule 5, an order of suspension made or deemed to have been made under sub rule (1) or sub rule (2) of this rule shall not be valid after a period of ninety days unless it is extended after review in the manner provided in sub rule (7) of this rule, for a further period before expiry of ninety days.
- (7) The review of an order of suspension shall be done by the authority which is competent to modify or revoke the suspension, on the recommendation of the review committee constituted for the purpose, and such competent authority shall pass order either extending or revoking the suspension before expiry of ninety days from the date of order of suspension. Subsequent review shall be made before expiry of the extended period of suspension, Extension of suspension shall not be for a period exceeding one hundred and eight days at a time.

**(RB LNo: E (D&A) 2004/RC-6-8 dt. 18.07.2006) RBE No. 94/04**

**Note :**

An employee under suspension is not required to attend his work but he cannot leave his HQR. Without prior written permission of the competent authority. His where about must be fully known to the officer Incharge so that any communication can be made with him, if required. During the period of suspension a directive to employee to attend office and mark attendance in the office daily during working hrs. is illegal. One should remember that the very purpose of suspending an employee is to keep him away from the official premises and deprive him of his official powers.

**ENTITLEMENTS DURING SUSPENSION**

**An employee placed under suspension will be entitled for :-**

1. Subsistence Allowance
2. Review of subsistence Allowances ( 1<sup>st</sup> only after 3 months)
3. D.A. on subsistence Allowances
4. Outdoor and indoor medical treatments.
5. Hostel subsidy/ Education Assistance/ Reimbursement of tuition fees.
6. Half the number of passes/ PTOs in cases of gazetted officers and one in case of non-gazetted in a calendar year. If this has already been availed of, no further passes/ PTOs should be issued.
7. P.L.B. (Productivity Linked Bonus) payable after revocation of suspension and resumption to duty.
8. T.A. in cases where he has to attend DAR inquiry beyond 8 kms. from his head quarters.
9. A suspended employee can also be considered for confirmation and promotion but will not be promoted during the period of suspension. In such cases the sealed cover procedure should be resorted to.
10. 10. He can be allowed to leave headquarters at the discretion of the Disciplinary authority subject to the condition he asked for the same in writing.
11. 11.A suspended employee being a Union Member he can participate in Meetings and stand for election for the office bearer post.

**SUBSISTENCE ALLOWANCE**

A subsistence allowance at an amount equal to the leave salary on half average pay on half pay and in addition Dearness allowances on the basis of such leave salary. The first review is to be conducted after 3 months and then the amount

of SUBSISTENCE allowances may be increased or decreased by an amount not exceeding 50% of the subsistence allowances admissible during the period of the first 3 months. This is depending upon the discretion of the disciplinary authority taking into consideration as to whether the suspended employee has been co-operating or not for early finalization of the case. It is, therefore, obligatory for the competent authority to review each case in which the period of suspension is likely to exceeds 3 months and specific orders are to be passed placing on record the circumstance under which the decision had been taken. There is no bar to make further review/ reviews after the first review as such can be made any time after the first review. The rate of dearness allowances will be based on the revised rate of subsistence allowances.

### **Compulsory deductions and Optional deductions.**

#### **Compulsory Deductions.**

1. House rent and allied charges.
2. Income Tax and Super Tax.
3. Monthly contribution towards group insurance scheme.
4. Station debits, stores debits, etc.
5. Diet charges and fees payable to medical officers on contract system.
6. Excluding P.F. advance, repayment of all other advances and loans availed.

Besides the above the other deduction that can be made with the written consent of the suspended employee are...

#### **Optional Deductions.**

1. Advances from P.F.
2. Railway Institute/ club monthly membership/fees.
3. Dues of Railway co-op. Credit societies and stores.
4. Refund of loans taken from SBF etc.
5. Premium due on L.I.C./ postal life insurance.
6. Railway school fees.

#### **Non deductible:**

At no cost should the following deductions be made from the Substance Allowances.

- i. Provident fund subscription.
- ii. Fines imposed on the Railway servant
- iii. Amount due on court attachments.
- iv. Penal deductions on account of loss to Government for which the Railway servant is held responsible.

## **PENALTIES (Rule 6)**

### **MINOR PENALTIES:**

- I. Censure
- II. With holding of his promotion for a specified period.
- III. Recovery from his payoff the whole or part of any primary loss caused by him to the Govt. or Railway Administration by negligence or breach or orders.
  - III(a) With holding of the Privilege Passes or Privilege Ticket orders or both
  - III(b) Reduction to a lower stage in the time scale of pay by one stage for a period not exceeding three years., without commutative effect and not adversely affecting his pension.
- IV. With holding of increments of pay for a specified period with further directions as to whether on expiry of such period this will or will not have the effect of postponing the future increments of his pay.

## **PENALTIES (Rule-6) :**

### **MAJOR PENALTIES :**

- V. Reduction to lower stage in the time scale of pay for a specified period with further directions as to whether on the expiry of such period, the reduction will or will not have the effect of postponing the further increment of his pay.
- VI. Reduction to a lower time scale of pay, grade, post or service, with or without further direction regarding conditions of restoration to the grade or post or service from which he was reduced and his seniority and pay on such restoration to that grade, post or service.
- VII. Compulsory retirement.
- VIII. Removal from service.
- IX. Dismissal from service-which shall ordinarily be a disqualification for employment under the Government.

In case of collisions of railway train one of the penalties specified in clauses VIII & IX shall be imposed.

In case of passing railway signal at danger one of the penalties specified in clause V to IX shall ordinarily imposed.

If no such penalty is to be imposed, the reasons there of shall be recorded in writing.

## **PROCEDURE FOR IMPOSING MINOR PENALTIES (Rule-11) :**

### **Charge sheet for Minor Penalties. SF-11**

1. Charges should be framed against the delinquent employee and communicated to him on prescribed form (Standard Form No. 11)
2. The charges must be specific and not vague,
3. A statement of allegations should also supply along with the charge sheet.
4. Charge sheet must be acknowledged by D.E.

### **INSPECTION OF DOCUMENTS**

After receiving the charge sheet the delinquent employee may request the disciplinary authority for permission to inspect and take extracts from the original RUDS documents.

### **WRITTEN STATEMENT**

After having inspected the documents the charged officer should submit his written statement of defence to the disciplinary authority within 10 days. The written statement should not contain anything irrelevant or disrespectful but must be precise and to the point.

### **CONSIDERATION OF THE WRITTEN STATEMENT OF DEFENCE**

After considering the written statement of defence the D.A. may impose a minor penalty and if it is proposed to impose a penalty of Reduction in time scale more than one stage below, W.I. of Increment for a period exceeding 3 years, W.I. of Increment with commutative effect for any period or if the penalty of W.I. is likely to affect adversely the amount of pension or special contribution to P.F. payable to the employee, an inquiry shall invariably be held. ( SF 11-b )

While communicating orders the disciplinary authority should indicate brief reasons (Reasoned Speaking Order) for coming to the final decision.

## **PROCEDURE FOR IMPOSING MAJOR PENALTIES (Rule-9) :**

### **Procedure for imposition of Major Penalty. (Rule 9) 1.**

#### **Issue of charge sheet**

The disciplinary Authority shall frame definite charges on standard form no. 5 and deliver to the Railway servant, a copy of article of charges, as statement of allegations. A statement of all relevant facts and list of documents by which and list of witness by whom the charges are proposed to be proved. While framing the charges name & designation of delinquent employee station/office, date & time of occurrence and the conduct rule for violation of which the allegation are made must be specifically mentioned in the charge sheet.

#### **2. Submission of written statement of defence by the delinquent employee.**

The delinquent employee must submit his written statement of defence within a period of 10 days from the date of receipt of SF5.

#### **3. Permission to inspect and take note from documents**

The Railway Servant shall for the purpose of preparing his defence be permitted to inspect and take note from the documents as he may specify, but such permission may be denied by the competent Authority on the ground

Not relevant to the case.

Against the public interest.

In such cases the disciplinary Authority shall record the reason in the written and shall deliver to the delinquent employee on SF6.

#### **Order of Inquires**

On receipt of written statement of defence or where no written statement of defence is submitted by the delinquent employee if it proposed to inflict any of the major penalty an inquiry has to be ordered by the disciplinary Authority for providing the charges which are not admitted.

#### **4. Appointment of Inquiry Officer**

The disciplinary Authority may itself inquire into the case or may appoint an inquiry officer or a Board of Inquiry. The appointment of Inquiry Authority is done on SF7. Inquiry Authority must be one grade higher than the delinquent employee.

#### **6. Appointment of Presenting Officer**

The disciplinary Authority may when consider necessary nominate any Railway Servant as presenting officer, to present the case in support of charges before the Inquiry Authority. The presenting officer is mainly appointed in complicated cases where the employees of different departments are involved (common proceeding) or in serious vigilance cases. Nomination of Presenting Officer is done on SF8.

#### **7. Nomination of Assisting Railway Servant by the delinquent employee.**

The delinquent employee is also given the facility to present his case with the Assistance of another Railway Servant (known as ARE) of the same zonal Railway. ARE may be a Retired Railway employee or an Office bearer of Railway trade union, but ARE should not be a professional Lawyer,

#### **8. Inquiry**

Preliminary Inquiry

Examination in Chief (main Inquiry )

##### **Preliminary Inquiry .**

The Inquiry officer should put up the following five questions to the charged employee which should be answered by the charged employee and not by his defence Council.

Q.1. Have you received charge sheet?

Q.2. Have you received/ inspected document mention in the charge sheet?

Q.3. Have understood the charges framed/ leveled against you?

Q.4. Do you accept the charges leveled against you?

Q.5. Are you prepared to commence with Inquiry?

If the charged employee gives the reply of all the above five questions in affirmation then disciplinary Authority will proceed for main Inquiry otherwise he will provide the required Assistance to the charged employee

## **Examination in Chief (main Inquiry )**

The Inquiry officer will call witnesses for examination and cross-examination one by one.

Examination of witness is done by the Inquiry officer/ presenting officer and after the examination, cross-examination is done by the delinquent employee or ARE. When the cross-examination is over, if the Inquiry Officer/ presenting officer wants to reexamine the witness then after reexamination of the witness the delinquent employee / ARE must be given opportunity to re-cross examine the witness, when the examination and cross examination of all the witnesses is over the delinquent employee must be asked to produce his defence witnesses. Defence witnesses will be examined by the delinquent employee or his ARE and cross-examined by the Inquiry Officer/ presenting Officer. During the course of Inquiry all relied upon documents shall be exhibited. After exhibiting all the relied upon documents the delinquent employee/ ARE should be asked to produce his defence documents if he has any.

The Inquiry officer should particularly bring to the notice of the charged employee of the evidence that has gone against the charged employee during the course of Inquiry and whether he has anything to say against it. At the end of the Inquiry, the Inquiry officer should provide an opportunity to the charged employee to submit a defence, which may be oral or written. He can also be given a 10 days time for submission in case he wishes to give in writing. On receipt of delinquent employee defence the Inquiry should bear in mind that he has no Authority to suggest the gravity of offence or penalty to be imposed.

## **9. Submission of Inquiry report and finding**

The Inquiry officer will submit his Inquiry report and finding to disciplinary Authority in Two copies.

## **10. Forwarding of Inquiry report and finding by the disciplinary Authority to the delinquent employee for submission of his oral/ written final defence. Rule-10**

After going through the Inquiry report and findings of Inquiry officer, if the disciplinary Authority wants to impose any Minor/Major penalty upon the delinquent employee then he should forward a copy of Inquiry report and finding to the delinquent employee with a 15 days notice to submit his oral/written final defence.

## **11. Order of disciplinary Authority (speaking order)**

On receipt of the final defence of the delinquent employee or where no defence is submitted than the disciplinary authority should wait for 15 days and after passage of 15 days disciplinary Authority should go through the entire Inquiry report, findings written defence , if any submitted as after proper application of mind shall pass speaking order for imposition of penalty, if he wishes to impose any penalty.

### **Speaking order should contain in brief.**

- i) The charges laved against the delinquent employee.
- ii) The basis on which each and every charge alleged has been proved or not proved.
- iii) The reasons which make the disciplinary Authority conclude that imposition.
- iv) The particular penalty commensurites date with the gravity of the offence and that meets the ends of Justices.

## **12. Communication of penalty to the delinquent employee. (Rule12)**

The penalty imposed upon the delinquent employee shall be communicated to him on standard form along with a copy of the speaking order. Employee shall also be advised the period within which the appeal lies and to whom the appeal lies.

### **APPEALS**

#### **ORDERS AGAINST NO APPEAL LIES (Rule-17) :**

1. Any order made by president.
2. Any order of an interlocutory nature.
3. Any order passed by I.O. in the course of an inquiry.

#### **ORDERS AGAINST WHICH APPEAL LIES (Rule-18) :**

1. An order of suspension
  2. An order imposing any of the penalties under Rule-6.
  3. An order enhancing any penalty.
- (a) Denies or varies to his disadvantage his pay, allowance, pension, P.F. benefits & service gratuity.

- (b) Interprets to his disadvantage the provision of any such rule or allegation.
4. An order -
- (a) Stopping him at the efficiency bar in time scale of pay on the ground of his unfitness to crossbar.
  - (b) Reversion otherwise than a penalty.
  - (c) Reducing or with holding the pension.
  - (d) Reducing or with holding of the government contribution and special contribution to P.F. or gratuity.
  - (e) Determining the subsistence allowance or other allowances to be paid to him.
  - (f) Determining his pay and allowances.
    - (i) For the period of suspension.
    - (ii) For the period from the date of his dismissed, removal or compulsory retirement from service to the date of his restatement.
  - (g) Determination of period from the date of his suspension or from the date of his dismissal, removal or compulsory retirement to the date of his reinstatement shall be treated as a period spent on duty for any purpose.

**APPEAL AUTHORITY RULE (Rule-19) :**

A railway servant including a person who has ceased to be in railway service may prefer an appeal against all or any orders specified in Rule-18 to the authority specified in schedules.

1. It shall always be the authority next higher above the D.A.
2. Where such lower authority itself become the appellate authority due to it's promotion, then the appeal shall lie to the next authority.
3. Subsequent transfer of railway servant will not change the appellate authority.
4. Where the punishment has been enhanced on appeal, appeal shall lie to next higher authority.
5. Higher authority who may have directed suspension is not barred to act as appellate authority.

**TIME LIMIT FOR APPEAL (Rule-20) :**

The appeal should be filled with in 45 days of the delivery of punishment of orders to the railway servants however the appellate authority may entertain a time barred appeal, if the railway servant can show sufficient reason for delay.

### **CONTENTS OF APPEAL Rule-21 :**

The appeal must be addressed to the appropriate appellate authority only. Every person preferring an appeal shall do so separately and in his own name. It shall contain all material statements and arguments on which the appeal relies, shall not contain any disrespectful or improper language.

The disciplinary authority shall on receipt of a copy of appeal forward the same with its comments thereon together with the relevant record to the appellate authority without any delay.

### **CONSIDERATION OF APPEAL (Rule-22) :**

The A.A. has a right to reject the appeal if it does not contain all material statement or not in proper and respectful language the appellate in such cases may be directed to submit a properly worded appeal for consideration.

1. In the case of an appeal against order of suspension, the A.A. shall consider whether the order of suspension is justified or not and also under the provision of rule and confirm or revoke the order accordingly.
2. In case of an appeal against the penalty imposed under the said rule the A.A. shall consider.

- (a) Whether the procedure laid down in rule has been followed or not.
- (b) Whether the finding of the disciplinary authority are warranted by the evidence on the record.
- (c) Whether the penalty or the enhanced penalty imposed is adequate /inadequate and pass orders -

Confirming, enhancing, reducing or setting aside the penalty.

If the A.A. proposes to impose the enhanced penalty in one of the penalty specified in clauses V to IX of Rule-6 and an inquiry under Rule-9 has already been held the A.A. shall make such order after giving an opportunity of making representation.

If an inquiry under Rule-9 has not already been held in the case, itself hold such inquiry or direct that such inquiry be held and there after on a consideration of the proceeding of such inquiry pass such order as it may deem fit.

### **IMPLEMENTATION OF ORDER IN APPEAL (Rule-23) :**

The authority which made the order appealed against shall give effect to the order passed by the A.A.

### **SPECIAL PROVISION FOR NON GAZETTED STAFF (Rule-24) :**

1. Where the penalty of dismissal, removal, compulsorily retired, reduction or with holding of increment has been imposed the appellate authority may at

it's discretion and if it considered it necessary, give the N.G. Railway servant a personal hearing before disposing of the appeal.

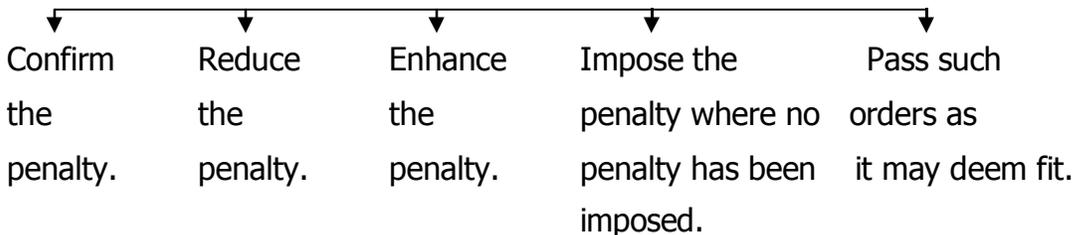
2. A group "C" railway servant who has been dismissed, removed or compulsorily retired from service after his appeal has been disposed of within 45 days there after may apply to the G.M. for revision. In this application he may, if he chooses, request the G.M. to refer the case to the Railway Rates Tribunal for advice before he disposes of the revision petition.

3. A group "D" railway servant who has been dismissed, removed or compulsorily retired from service after his appeal has been disposed of within 45 days there after may apply to the DRM & where he is not under control of any DRM to the senior most administrative grade officer under whose control he may be working for a revision of the penalty. The revising authority shall there after dispose of the revision.

### **REVISION AND REVIEW**

#### **REVISION (Rule-25) :**

Revision in disciplinary cases, only Railway Board G.M. & officer not below the rank of Deputy Head of Department or DRM are empowered to revise any order passed by an authority subordinate to them the revising authority may act as under-



An action to enhance the penalty shall not be initiated more than 06 months after the date of orders and more than one year after the date of the orders to be revised in case where it is proposed to reduce or cancel the penalty.

Reversionary power can be exercised both suo-moto or on consideration of a revision petition, however, suo-moto revision can be done subject to the time limits prescribed in Rules 25 (5).

Appellate authority can also exercise reversionary power when in case no appeal has been preferred in terms of Rule 25 ( I ) ( IV ) However for an appellate authority to exercise reversionary power, this authority has to be of the rank of DRM and above an authority up to the rank of ADRM can't exercise reversionary powers if it happens to be the appellate authority in the case reversionary

powers will be exercised by the appellate authority only for conducting suo-moto revision. The time limits laid down in Rule 25 (5) also apply in cases of revision done by the appellate authorities.

The revising authority has to be higher in rank than the appellate authority where

- i. an appeal has been preferred or
  - ii. where the time limit prescribed for revision to be made by the Appellate Authority as laid down in Rule 25 (5) or RS (D&A) Rules has expired.
- The above stipulation does not apply to the revision made by president.

### **REVIEW (Rule-25 A) :**

The president may at any time either in his own motion or otherwise review any order passed under these rules-

### **STANDARD FORMS FOR USE IN DISCIPLINARY PROCEEDING**

| S.F No. | SUBJECT                                                                                |
|---------|----------------------------------------------------------------------------------------|
| 1.      | Order of suspension.                                                                   |
| 2.      | Order of deemed suspension.                                                            |
| 3.      | Certificate to be furnished by suspended Railway employee.                             |
| 4.      | Revocation of suspension.                                                              |
| 5.      | Charge sheet for major penalty.                                                        |
| 6.      | Refusing of permission to inspect the documents.                                       |
| 7.      | Appointment I.O./Board of Inquiry.                                                     |
| 8.      | Appointment of presenting officer.                                                     |
| 9.      | Deleted                                                                                |
| 10.     | Disciplinary action in common proceeding.                                              |
| 10.(a)  | Appointment of inquiry officer in common proceeding.                                   |
| 10.(b)  | Appointment of presenting officer in common proceeding Charge sheet for minor penalty. |
| 11.     | Charge sheet for minor penalty.                                                        |
| 11.(b)  | Charge sheet for initiation of minor penalty in case where inquiry is essential.       |

- 11.(c) For making disciplinary action for minor penalty where the charge sheet for major penalty was initially issued.
12. Memorandum where action is proposed under Rule-14 ( i ).
13. Permission from president for action taking against the retire Rly. Employee.
14. Charge sheet for retired Railway employee.

\*

CENTRAL ADMINISTRATIVE TRIBUNAL & COURT CASES WITH SPECIAL REFERENCE TO FILING OF REVIEW PETITIONS, SLPS

CAT - Established on 1.11.1985 - It is a forum appointed by a statute having powers to adjudicate on the matters falling within its jurisdiction. Only service matters are entertained after exhausting all departmental remedies.

Chairman - Sitting HC Judge (Judicial), 1 Administrative Member = 2 Members minimum structure

Aim - (1) Expeditious disposal of cases (2) Economical -

Excluded - Armed Forces, SC/HC/Secretariat staff of parliament

Principal Bench at NDLS - MAS SBC BOMBAY GUWAHATI CHANDIGARH JAIPUR JBP COCHIN CCC PATNA ADI JODHPUR KUTTACK HYB ALD LKO

Action on receipt of application by Admn. -

- 1) To see limitation
- 2) To send it to concerned Branch for remarks
- 3) After receipt of remarks from concerned branch scrutinize it in view of law points/procedural lapse
- 4) To send it to Rly. Advocate for final draft
- 5) Attend dates for hearing

Send it to RB if SLP is to be filed

Writ Petition in HC - from Nov. 98 - When CAT judgement is against Rly. Administration, writ petition can be filed in High Court.

Spl. Leave Petition is filed along with application for stay condonation of delay within a period of 3 months from the date of judgement of HC where appeal is to be filed in SC against judgement of HC.

Review Petition - When there occurred apparent mistakes in judgement, such petition is not heard in open court but disposed of by circulation and decision is intimated to the parties. Such petition should be filed within a period of one month from the date of judgement.

Engagement of advocates - High Courts - Enquiry from Ministry of Law and Justice/Sr. Central Govt. Council/ President of Bar Association/Eminent council practicing in HCs/Advocate General. Separate panels for Senior and Junior Advocates. Once in 3 years panel be drawn according to workload. 1 ½ times Advocates be recommended to RB for empanelment

Qualification/Age/Experience/Performance of Advocate should be indicated. Zonal Rly. Should forward recommendation to the Legal Advisor of Board and make appointments out of these panels only.

Appointment of Advocates in Subordinate courts

On the basis of independent enquiry

Cross check with DM or Sr. Most Judge or Government Advocate

GM will be the final authority

Payment of fees to them

Original Suit in Sub-Ordinate Court and High Court

Contested cases - Fee payable as per Court Schedule

Cases settled out of court

Rs. 30/-per adjournment subject to maximum of 50% of schedule if settlement is made before Issue

-do- after Issue before recording of evidence

75% of the Schedule if settlement of suit is made after recording evidence

Full fee settled after the hearing of the case is concluded and before judgement is declared.

Appeals in Sub-ordinate Courts and High Courts

Contested cases - Fee payable as per Court Schedule

Cases settled out of Court

1/3 of the fee if settled before argument

2/3 -do- during argument

Full Fee if settled after hearing of the case is conducted and before judgment is delivered.

Civil Revision Petitions in HCs

Contested cases - Payment shall be fixed by HC subject to Minimum of Rs.500/-

Cases settled out of Court - Same as above

Writ Petitions/Appeals in High Courts

Contested cases - Fee Rs. 350/- for each Writ Petition/Appeal. If Writ Petition/Appeal is heard together in batches, the fee payable shall be Rs.350/- for the Main Petition/Appeal and Rs.50/- for each of other Petition/Appeal.

**STAFF BENEFIT FUND & OTHER WELFARE ACTIVITIES**

|                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------|-----------------------------------|
| (1)                                                                                                                                                                                            | <b>Objects :</b> - On Railway, for Rly. Employees & their family members the staff Benefit Fund was introduced in 1931. The staff benefit fund provides financial assistance for Recreation, Education, Sports, Scout & guides, Relief of distress, Natural Calimity etc. to Rly. employees as well as their family members those who are dependent to their as per instruction contained in Pass manual (Para 802-R-1) The benefit from SBF is exclusively available for group 'C' & 'D' Railway employees. |                                                      |                                |                                   |
| (2)                                                                                                                                                                                            | <b>Working of SBF :-</b> The working of the Staff Benefit Fund is being managed by the Central Staff Benefit Fund Committee at Zonal Rlys' HQ office under the Chairman ship of Chief Personnel Officer & Secretary ship of Senior Personnel Officer / Dy chief personnel officer (welfare ) Besides this Dy General Manager (G) & Chief Medical Director of the Zone shall be member of the committee & there will be representation of 07 member each of both the recognized trade unions.                 |                                                      |                                |                                   |
| (3)                                                                                                                                                                                            | <b>Activities :-</b> The working of the Central Staff Benefit Fund committees as well as doubts raised by sub - committees will be completely controlled by the Staff Benefit Fund committee it shall be final & the annual budget shall be finalized by CSBFC.<br>In case of any dispute on any point the decision of the Genl. manager (Patron) shall be final.                                                                                                                                            |                                                      |                                |                                   |
| (4)                                                                                                                                                                                            | <b>Constitution of the committee :-</b> The constitution of the Central Staff Benefit Committee on the Railways shall be as under                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                |                                   |
| I                                                                                                                                                                                              | Chairman (Ex officio)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Chief Personnel Officer                              |                                |                                   |
| II                                                                                                                                                                                             | One nominated officer member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Chief Medical Director                               |                                |                                   |
| III                                                                                                                                                                                            | Another nominated officer member                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Dy Genl. Manager (G)                                 |                                |                                   |
| IV                                                                                                                                                                                             | Secretary & nominated officer member (Ex officio)                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dy.C. P.Officer (Welfare)                            |                                |                                   |
| V                                                                                                                                                                                              | Staff representative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 14 member(7 each) each of both the recognized union. |                                |                                   |
| (Authority No. E(W)67-FU-23 dtd. 28.05.1968 (Para 8.7 & 8.8 [RI])                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
| (5)                                                                                                                                                                                            | The Sub Committee at HQ Division level, Divisional level & Work Shop Level shall be constituted as under                                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                |                                   |
|                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Divisional level                                     | HQ Divisional level            | Work Shop level                   |
| i                                                                                                                                                                                              | Chairman (Ex officio)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Sr.DPO / DPO                                         | SPO(L&w)                       | SPO                               |
| ii                                                                                                                                                                                             | Secretary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | APO(W)                                               | APO                            | S&WI                              |
| iii                                                                                                                                                                                            | Officer Member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Sr.DMO /DMO to be nominated by CMS                   | Sr.DMO/DMO to be nominated CMS | Sr.DMO/DMO to be nominated by CMS |
| Besides above there will be 04 members of both the recognized union ie 02 from each union will be nominated as members.                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
| ( Authority E(W) 68-FU-1-5 dtd. 30.04.68 & 12.12.75 )                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
| Note :- The Suspended members will not be allowed to participate in the meeting un till they become eligible the another members can participate in the meeting                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
| ( Authority :- RBE No. E(W)60-NMI-31 dtd. 01.11.60 & Para 8-8 [RI] )                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
| Note :- The Tenure of the members of the Central & Sub Committee shall be one year but such members will be eligible for re nomination . The members can be nominated for three years maximum. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |
| (Authority RBE No. (W)61-FU-1-14 dtd.14.03.62 & E(W)65-FUI-M dtd.11.08.65)                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                |                                   |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                              |                         |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------|
|     | Note:- In case of retirement, death, resignation & transfer of any members of both the recognized union, the another member shall be nominated by the concerned union to fill the resultant vacancy .                                                                                                                                                                                                                                                                                                                        |                              |                         |
| (6) | <b>Meetings -</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              |                         |
|     | <p>The meeting of the CSBFC shall be held every after 03 months (04 meetings in the year) such meeting will be held for 02 days duration</p> <p>As regards meetings at the HQ division , Divisional &amp; Work shop level will be held every months thus (12 meetings every year) The duration of the meetings of sub committees will be 01 day.</p> <p>The corum for any meeting will be 50% of the members However chairman can call the meeting at any time besides this on the request of the 2/3 Nos of the members</p> |                              |                         |
| (7) | <b>Source of income of staff benefit fund -</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                              |                         |
| i   | Annual Grant at per capita rate of Rs. 35/- (AdhocGrant) for the year 2009-10 is credited to SBF from the Rly Revenue                                                                                                                                                                                                                                                                                                                                                                                                        |                              |                         |
| ii  | All amounts received an account of the fines.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                              |                         |
| iii | Forfitted Provident fund, Bonus of the non gazetted staff .                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                              |                         |
| iv  | Receipts from Un-Paid wages beyond the period of 3 yrs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              |                         |
| (8) | <b>Allocation of fund from SBF -</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |                         |
|     | For various purpose the amount from the fund will be allotted as under however the amount can be Increased / Decreased as per instruction of the Rly. Board. Present rates are as under                                                                                                                                                                                                                                                                                                                                      |                              |                         |
|     | Head / activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Rates in Rs.                 |                         |
| I   | Genl. activities viz. Education, recreation, amusement, cultural, relief, of distress, sickness and miscellaneous item.                                                                                                                                                                                                                                                                                                                                                                                                      | Regular Grant w.e.f.01.04.07 | Adhoc Grant for 2010-11 |
| a   | Education.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4.75                         | 72.75                   |
| b   | Scholarship for higher edu. of Girl child for employees Gp 1800<br>Scholarship for higher edu. of Girl child for employees Gp 1800                                                                                                                                                                                                                                                                                                                                                                                           | 00                           | 100.00                  |
| c   | Recreation other than Sports                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.25                         | 60.00<br>22.25          |
| d   | Promotion of Cultural Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.50                         | 10.50                   |
| e   | Relief, sickness, distress<br>Relief, sickness, distress for employees working in 1800 GP                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10.50                        | 50.00<br>50.00          |
| f   | Women Empowerment Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.50                         | 23.00                   |
| II  | Miscellaneous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.50                         | 10.50                   |
| III | Sports Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5.00                         | 20.00                   |
| IV  | Scouts Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.50                         | 13.50                   |
| V   | Indigenous system for medicine including homeopathy                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.50                         | 22.50                   |
| VI  | Immediate relief for natural calamities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3.00                         | 18.00                   |
| VII | Training for development of Occupational skill of Physically / Mentally Retarded Child especially girls                                                                                                                                                                                                                                                                                                                                                                                                                      | 2.00                         | 27.00                   |
|     | <b>TOTAL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 35.00                        | 500.00                  |

|      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|      | However the amount of fund are spent according to the following proportion.                                                                                                                                                                                                                                                                                                                                           |                                    |
|      | S No                                                                                                                                                                                                                                                                                                                                                                                                                  | Head                               |
|      | a.                                                                                                                                                                                                                                                                                                                                                                                                                    | Relief of distress,sickness        |
|      | b.                                                                                                                                                                                                                                                                                                                                                                                                                    | Education                          |
|      | c.                                                                                                                                                                                                                                                                                                                                                                                                                    | Recreation of staff                |
|      | d.                                                                                                                                                                                                                                                                                                                                                                                                                    | Miscelloneous                      |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | Percentage                         |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | 41%                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | 31%                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | 21%                                |
|      |                                                                                                                                                                                                                                                                                                                                                                                                                       | 07%                                |
| (9)  | <p><b>Education :-</b> Technical Education such as Degree in MBBS, BE, Vet nary Science etc will be considered as Tech. education<br/>The following % age of the scholar ship will be taken in to consideration for various groups of the staff.</p>                                                                                                                                                                  |                                    |
| a    | Group 'D'                                                                                                                                                                                                                                                                                                                                                                                                             | <b>5%</b>                          |
| b    | Schedule caste                                                                                                                                                                                                                                                                                                                                                                                                        | <b>15%</b>                         |
| c    | Schedule tribe                                                                                                                                                                                                                                                                                                                                                                                                        | <b>7.5%</b>                        |
| (10) | <p><b>Scholarships</b> - Scholar ship for Tech. education will be awarded for the following degree courses</p>                                                                                                                                                                                                                                                                                                        |                                    |
| I    | Name of courses                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Amt. Per annum</b>              |
| a    | Degree/Diploma in various branches of Engg/Medical etc & continue Scheme. ( Maxi 02 child)                                                                                                                                                                                                                                                                                                                            | <b>Rs.3000/-</b>                   |
| b    | Financial assistance                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Rs. 2000/-</b>                  |
| II   | Other than Tech. degree courses The applications for other courses will be considered grant-in-aid by the local sub-committees as such all application for the following courses for educational session will be sanctioned as per rates mentioned below                                                                                                                                                              |                                    |
| a    | Cash Prize for Passing Bsc /Bcom /BA Final year (Ist Attempt)                                                                                                                                                                                                                                                                                                                                                         | <b>Rs. 2000/- (One Time)</b>       |
| (11) | Financial Aid to Deaf, Dumb, Blind & Mentally Retarded child ( Maxi 02 child )                                                                                                                                                                                                                                                                                                                                        | <b>Rs. 5000/- (p.a)</b>            |
| a.   | Education Assistance for the Ward of Deceased employee (Maxi. 02 child) upto SSC or any member gets Comp. Appointment.                                                                                                                                                                                                                                                                                                | <b>Rs.10,000/- (p.a) Per Child</b> |
| b.   | Scholorship for Higher Education for Girl child of Gp 'D' employee for Dip./ Degree course                                                                                                                                                                                                                                                                                                                            | <b>Rs. 1200/- (p.m)</b>            |
| (12) | <p><b>Handicraft Centre:-</b> For the families of the Railway employees at Divisional / Workshop level. The HCC can be started in Rly. Colonies so as to enable the family members of staff to utilize their extra time in beneficial work.<br/>In these HCC the ladies members of the families &amp; also the lady dependent members of the staff are provided opportunities to stitch the uniform of the staff,</p> |                                    |

|      |                                                                                                                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | trained in Weaving, kintting etc. by doing these work in the HCC . the ladies are earning some additional amount for their families. Grant is given by SBF @ Rs.10/- per member subject to submission of Audit report of previous year.                                                                            |
| (13) | <b>Recreation &amp; amusement :-</b> The requisite annual grant for recreation & amusement is granted to promote the activities of Railway Institute, clubs, cultural centre, & sports activities etc. Grant is given by SBF @ Rs.10/- per member subject to submission of Audit report of previous year.          |
| (14) | <b>Cultural Centre :-</b> For promoting of cultural activities among employees & their families viz Drama Music & dance etc. SBF provides aids for various events.                                                                                                                                                 |
| (15) | <b>Women Empowerment Activities:</b> The Divin/Workshops will be conducting seminar.A grant of Rs.5000/- will be given to Gp 'D' employee for passing SSC & to Gp.'C'' employee for passing Graduation/PG while in service.                                                                                        |
| (16) | <b>OpenAir School :</b> For Children of Rly. Employees at way side station where no facilities of Primary education exists, within a radius of 1.6kms & where minimum 20 students are available.<br>Rate of Honorarium to Teacher : Rs.5000/- p.m                                                                  |
| (17) | <b>Aid to Bal Mandir:</b> For encouraging National & Cukural activities among small children of Rly. Employee studying in Bal Mandir aid of Rs.10/- per child is given.                                                                                                                                            |
| (18) | <b>Maintainence Grant :-</b> SBF provides financial relief to Rly. Employee who are on LWP due to Sickness, monthly grant is paid in following as under :-<br>i) For Cancer,HIV,Thalesamia, Kidney etc : <b>Rs. 3000/- P.M</b><br>ii) For other cases : <b>Rs 2000/- P.M</b>                                       |
| (19) | <b>Reimbursement of the cost of spectacles :-</b><br>The reimbursement for the cost of spectacles @ Rs. 500/- will be made from SBF once in 05 yrs.                                                                                                                                                                |
| (20) | <b>Reimbursement of the cost of Dentures :</b><br>Group 'C' & 'D' staff who purchase the set of artificial denture will be provided financial assistance at the following rates. Once in entire Service.<br>Full set of artificial denture - Half set of artificial denture<br><b>Rs. 2000/-</b> <b>Rs. 1000/-</b> |

| (21)                                 | <p><b>Indigenous system of medicines :-</b> Under the scheme of Indigenous system medicines the Ayurvedic / Homeopathic dispensaries are being run from SBF in these dispensaries the cost of Medicine &amp; Honorarium of Doctors are being arranged per month from SBF as bellow in Rupees. (RBE NO. 06/09)</p> <table border="1"> <thead> <tr> <th><b>GROUP</b></th> <th colspan="2"><b>Rate of Honorarium (P.M) To Doctor's</b></th> <th><b>Monthly Subs. On Medicine.</b></th> </tr> </thead> <tbody> <tr> <td>Ayurvedic</td> <td>Rs.15000/-</td> <td>08 hrs. duration</td> <td>Rs.8000/-</td> </tr> <tr> <td>--- do ---</td> <td>Rs.9000/-</td> <td>04 hrs duration</td> <td>-</td> </tr> <tr> <td>Homoeop-athic</td> <td>Rs.15000/-</td> <td>08 hrs. duration</td> <td>Rs.4000/-</td> </tr> <tr> <td>--- do ---</td> <td>Rs.9000/-</td> <td>04 hrs duration</td> <td></td> </tr> <tr> <td>Subscription to Ayurvedic Dispencer.</td> <td>Rs.5000/-</td> <td>-</td> <td>Rs.1000/- pm to Dispencer if required</td> </tr> </tbody> </table> | <b>GROUP</b>     | <b>Rate of Honorarium (P.M) To Doctor's</b> |  | <b>Monthly Subs. On Medicine.</b> | Ayurvedic | Rs.15000/- | 08 hrs. duration | Rs.8000/- | --- do --- | Rs.9000/- | 04 hrs duration | - | Homoeop-athic | Rs.15000/- | 08 hrs. duration | Rs.4000/- | --- do --- | Rs.9000/- | 04 hrs duration |  | Subscription to Ayurvedic Dispencer. | Rs.5000/- | - | Rs.1000/- pm to Dispencer if required |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------|--|-----------------------------------|-----------|------------|------------------|-----------|------------|-----------|-----------------|---|---------------|------------|------------------|-----------|------------|-----------|-----------------|--|--------------------------------------|-----------|---|---------------------------------------|
| <b>GROUP</b>                         | <b>Rate of Honorarium (P.M) To Doctor's</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | <b>Monthly Subs. On Medicine.</b>           |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| Ayurvedic                            | Rs.15000/-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 08 hrs. duration | Rs.8000/-                                   |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| --- do ---                           | Rs.9000/-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 04 hrs duration  | -                                           |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| Homoeop-athic                        | Rs.15000/-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 08 hrs. duration | Rs.4000/-                                   |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| --- do ---                           | Rs.9000/-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 04 hrs duration  |                                             |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| Subscription to Ayurvedic Dispencer. | Rs.5000/-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -                | Rs.1000/- pm to Dispencer if required       |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| (22)                                 | <p><b>Employees Camp &amp; Children Camp ( Hqr's &amp; Division):</b></p> <p><b>(a)Employees Camp:</b> Organized in Winter for seight seeing &amp; visit to historical places. Employees who will be retiring before the next camp will be given the priority. The minimum age for male is 45 yrs. &amp; 40 yrs &amp; above for female employee. The ratio of male &amp; female will be 3:1</p> <p><b>(b) Children Camp (Hqr's &amp; Division):</b> Organized during Deepavali vacation for the children upto 15 yrs of age. The ratio of boys &amp; girls will be 3:1. Fund is provided by Hqr's SBF committee for organizing the camp.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                             |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| (23)                                 | <p><b>Immediate relief in times of crisis arising out of natural calamities -</b> The ministry of Railway have further considered the matter regarding utilization of fund for immediate relief in times of crisis arising out of natural calamities and have decided to constitute the "SBF Calamity Relief Fund" for this purpose.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |                                             |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |
| (24)                                 | <p><b>Training for developing occupational skills of physically/ mentally challenged wards especially girls of railway employees -</b> For providing vocational training for developing occupational skills of physically/mentally challenged wards especially girls of railway employees. Utilization of this amount will be carried out by respective Zonal Railways, etc. under their extant procedures.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                             |  |                                   |           |            |                  |           |            |           |                 |   |               |            |                  |           |            |           |                 |  |                                      |           |   |                                       |

## STAFF WELFARE SCHEMES

### WELFARE MEASURES

Railways the biggest employer in the country maintains welfare organization to look after the welfare of the Railway Servants in all Zonal Railways and Production units. The welfare organization is functioning under the Personnel officers assisted by the Welfare Inspectors and Personnel Inspectors.

The welfare measures introduced in Railways may be broadly classified as Educational, Residential, Medical, Sports, Recreation and Miscellaneous facilities.

#### **School Facilities**

Education is the concern of State Govt., the policy of the Rly. Ministry is not to enter the enter the field except to the limited extent. Provision of ATP, Primary, High, and Higher Secondary Schools etc are run by Railway to cater to the educational needs of the wards of the employees.

#### **Subsidised Hostels**

Subsidised Hostels are run by Railway at important linguistic areas for the benefit of the children of the Railway employees whose parents are working at wayside and remote stations. In central Railway the Hostel exists at Pune.

#### **Residential Facilities**

Railway quarters is allotted for essential and non-essential staff depending on the availability. Nearly 35% of the Railway servants are provided with Railway quarters.

HBA is sanctioned to purchase a flat, plot and to construct houses. The IRWO is constructing houses for serving and retired Railway servants on no profit and no loss basis.

#### **Holiday Homes**

Holiday homes are provided at places of tourism importance for the benefit of the Railway servants. In Central Railway Holiday homes are available at Matheran, Lonavala, Igatpuri, Mahabaleshwar, Pandharpur & Dadar, employees can also avail Holiday homes available in other Railways without any restriction.

#### **The charges of the H.H are as below.**

| Category         | Serving Emp. | Retired Emp.(Pre Day)                    |
|------------------|--------------|------------------------------------------|
| Gazettd. Officer | Rs.25/-      | Rs.75/-(Above JAG)<br>Rs.35/- (upto JAG) |
| Group 'C'        | Rs.12/-      | Rs.25/-                                  |
| Group 'D'        | Rs.5/-       | Rs.12/-                                  |

### **Medical Facility**

The Medical department of the Railway takes care of the health of both serving and retired employees including Re-imburement of Private medical expenses. Hospitals with sophisticated equipments and special facilities for treatment of particular illness are identified for expert treatment. Homeopathy/ Ayurvedic dispensaries are also available run by SBF Committee.

### **Reimbursement of Medical Expenses**

Railway employees and their dependents are eligible for free Medical facilities at Railway hospitals and Health units. In the absence of such Hospitals or Health Units near the place where they fall ill, they are eligible for treatment in Government and Recognised hospitals in exceptional situations. In such cases reimbursement of medical expenses is considered on adequate justification and recommendation of Authorised Medical Attendants and Chief Medical Director.

The GM is empowered to reimburse the Medical claim in full when the treatment is taken at Government Hospitals and can consider the reimbursement of medical expenses up to Rs. 400000/- when the treatment is taken in recognised Hospital or Dispensary run by the Philanthropic organisation. The GM is also empowered to consider the reimbursement of Medical expense when the treatment is taken in Private Hospitals in emergency. All other Medical claims are to be referred to Railway board.

### **Sports Facility**

Railway Sports Control Promotional Board (RSPB) and Railway Sports Associations look after the development of sports activities in Railways. Lump sum grants are given periodically to the sports associations from SBF.

### **Scouting**

Railway State Bharat Scouts and Guides are affiliated to the National Scouting Headquarters. Financial assistances are granted from SBF for scouting activities.

### **Recreational Facilities**

Railway Institutes and Clubs are functioning at various stations with an aim to encourage employees & families for recreation & entertainment & to participate in Health & physical exercise for their better future . Financial assistance is given from SBF for these institutes and clubs towards recurring and non-recurring expenditures.

### **Community Halls**

Marriage Halls / Community Centers are constructed by Railways at important Railway colonies for the use of Railway Employees at subsidized rates.

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Handicraft Centers</b></p> <p>Railways run Handicraft centers in major colonies. Classes are conducted to the female members of the Railway servant's family on stitching cloths. They are later allowed to stitch cotton Railway uniforms on payment. Thus the spare time of the family is better utilised and the income is augmented.</p> <p><b>Railway Minister's Welfare and Relief Fund</b></p> <p>Railway Employees are granted financial assistance from this fund for situations of exceptional nature like.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Premature death of Railway men.</li> <li><input type="checkbox"/> Death of Railway men in accident while on Duty.</li> <li><input type="checkbox"/> Sickness of Railway men or their dependents.</li> <li><input type="checkbox"/> Purchase of motorised equipment by physically Handicapped. <input type="checkbox"/></li> </ul> <p>Employees affected by natural calamities.</p> <p><b>Compensation and Pensionary Benefits</b></p> <p>Compensation in case of death or disablement due to accident under WCA, Pension, Family Pension, DCRG, encashment of Leave salary, Post retirement passes, RELHS etc. are some of the important benefits extended to the Railway servants.</p> <p><b>Family Welfare</b></p> <p>Maternity Leave, Paternity Leave, SCL for promoting small family norms, Family Planning Allowance and half percent reduction of interest in HBA are some of the incentives extended in family welfare area.</p> |
|  | <p><b>Provision of Rly. Canteen :</b><br/>Canteen in Rlys are of 02 types viz<br/>(a) Statutory &amp; (b) Non-Statutory :</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | <p>(a) Statutory Canteen: As per provision of section 46 of Factory act which impose statutory obligation to set up canteen in Rly. Establishment where more than 250 persons are employed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|  | <p>(b) Non-Statutory : The provision as required by the statute where more than 100 persons are employed, which should run on "No loss No profit basis".</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|  | <p><b>Co-Operative Societies:</b><br/>There are following three types of co-operative societies functioning on the Rly's. viz:</p> <ul style="list-style-type: none"> <li>(a) Consumer Co-op. Society</li> <li>(b) Co-op. Credit Society</li> <li>(c) Co-op. Housing Society</li> </ul> <p>Govt. policy is directed towards encouraging co-op. movement on Railways so that the employees are benefitted by the policies, which will release them with major worries &amp; will help in increase the production.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Different type of Advances

(Ch. XI th - IREM -Para 1101 to 1130 )

Different types of advances can be sanctioned to the Railway employee through Consolidated Fund of India & Railway Revenue. Some of the advances are recovered with interest and some of them are recovered without charging interest.

### [A]. Advances repayable without charging interest.

1. Advances for proceeding on tour.
2. Advance of Travelling allowance
3. Advances of Pay on transfer.
4. Advances on deputation to abroad.
5. Advances on return to India from deputation.
6. Natural Calamity advance.
7. Festival Advance.
8. Advance for children out fits
9. Advance for law suits.
10. Advance for treatment of cancer.
11. Advance for Cycle.
12. Advance for Warm Clothing.

### [B]. Advances repayable with interest on advance.

- (a) Advances for purchase of Conveyance.
  1. Advance for Motor Car.
  2. Advance for Motor Cycle/Scooter/Moped.
- (b) Advance for Personal Computer.
- (e) House Building advance.

### NON- INTEREST BEARING ADVANCE

| S No | Name of Advance                                                         | Eligibility                                                          | Amount Rs.                                              | Instal. Nos                                             | Remarks                                                                          |
|------|-------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------|
| 1.   | <b>Advance of Pay on Transfer</b>                                       | Transfer in Public Interest from one stn. To another                 | 01 month Pay including GP                               | 03                                                      | Advance is not granted in respect of Mutual/own request/Temp transfers           |
| 2.   | <b>Advance of Travelling allowance (TA) on Tour/Transfer/Retirement</b> | Proceed for journey on Tour including prolonged tour in the interior | TA for a period of 30 days including contingent charges | shall be adjusted against the claim of traveling allowa | Maximum claim for a period not exceeding 06 weeks, to the places in the interior |

|     |                                                     |                                                                                                                                                                   |                                                |                                                                      |                                                                                                                                                             |
|-----|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.  | <b>Advances on deputation to abroad.</b>            | deputation for a period of more than one month                                                                                                                    | 01 month Pay including GP                      | 03                                                                   | Temporary employees are also eligible on production of surety.                                                                                              |
| 4.  | <b>Advances on return to India from deputation.</b> | Returning from Leave other than LAP not exceeding 04 mths, on Deputation out of India                                                                             | 02 month Pay or Rs. 1000/- which ever is less  | 03                                                                   |                                                                                                                                                             |
| 6.  | <b>Natural Calamity advance.</b>                    | On declaring a Particular incident by Government as Natural Calamity affected Non Gaz. staff with the approval of General Manager                                 | Rs.5000/- 03 months pay, which ever is less    | 24                                                                   | <b>Categorized as INTEREST FREE Advance vide RBE NO: 171/08 dt. 07.11.08.</b>                                                                               |
| 7.  | <b>Festival Advance.</b>                            | All Non Gaz. railway employees who are drawing monthly Grade Pay (GP) less than Rs. 4800/-                                                                        | Rs. 3000/-                                     | 10                                                                   | To be ensured that NO installment should be balance while sanctioning the advance.                                                                          |
| 8.  | <b>Advance for Children out fits</b>                | <b>*The said Advance has been withdrawn due to introduction of Child Edu Allow. ( R B L.No: F(E) Spl 2005/Adv/6/1 dtd. 25.08.2009 )</b>                           |                                                |                                                                      |                                                                                                                                                             |
| 9.  | <b>Advance for law suits.</b>                       | for contesting of Law Suit in which government is one of the party. If a Non Government party files a suit against a railway employee in connection with his duty | 03 months salary or Rs. 500 which ever is more | Subject to adjustment against the amount, if any to be re-imbursed   | To indicate his conduct in court of law against allegation in press, advance Rs.500/- or 03 mths. Pay whichever is less, to be recovered in 24 installment. |
| 10. | <b>Advance for treatment of cancer.</b>             | employee or his family member is undergoing treatment of cancer in the recognized Hospital                                                                        | Rs. 1000/- or 04 months pay which ever is less | 02 equal installments or adjusted from medical reimbursements bills. |                                                                                                                                                             |

|     |                                                                                    |                                                                                                                                                                                     |                                                                     |    |                                                                                                    |
|-----|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------|
| 11. | <b>Advance for Cycle.</b><br><b>Second advance may become due after five years</b> | drawing Grade Pay less than Rs. 2800/- per month                                                                                                                                    | Rs. 3000/- or actual cost of cycle which ever is less               | 30 | <b>The advance has been categorized as INTEREST FREE Advance vide RBE NO: 171/08 dt. 07.11.08.</b> |
| 12. | <b>Advance for Warm Clothing.</b>                                                  | All Group 'C' and Group 'D' railway employee being transferred from Plain Area to Hilly Area for a period not less than 12 months or on first appointment is posted on Hilly Areas, | Rs. 3000/- However this advance is sanctioned in every three years. | 12 | <b>The advance has been categorized as INTEREST FREE Advance vide RBE NO: 171/08 dt. 07.11.08.</b> |

### **INTEREST BEARING ADVANCE**

| S No      | Name of Advance                                                            | Eligibility                                                                         | Amount Rs                                                                                                                                                                                                                                                                                       | Nos. of Instl. | Rate of Int. | Remarks                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.<br>(a) | <b>Advance for Purchase of Conveyance</b><br><b>Advances for Motor/Car</b> | Basic Pay Rs. 19,530/- (Exl.GP) or more<br><br><b>(RBE No: 42/2009 dt. 26.2.09)</b> | 1,80,000/- or 08 months basic pay or anticipated cost of Car/Motor which ever is less. Second occasion in which Rs. 1,60,000 or 08 months basic pay or anticipated cost of Motorcar which ever is less. It is admissible after 04 years of first purchase or deposition of full purchases cost. | 200            | 11.5%        | A certificate is taken from employee before sanctioning the advance that he has not been purchased any Vehicle before sanctioning of Advance.<br><br>After purchase of Motorcar it is to be mortgaged with the Government. This advance cannot be sanctioned by authority lower than H.O.D.<br>On sanctioning of advance for second time the Selling price of previous car will be deducted. |
| (b)       | <b>Advance for Motor Cycle/Scooter</b>                                     | Basic pay Rs. 8560/- (Exl.GP) or                                                    | Rs. 30,000/- or 04 months salary or actual cost of the                                                                                                                                                                                                                                          | 70             | 8%           | A certificate is to be taken before sanction the advance that                                                                                                                                                                                                                                                                                                                                |

|     |                                                     |                                                                                          |                                                                                                                                                                                                                                                                                                                       |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                  |
|-----|-----------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|     |                                                     | above                                                                                    | vehicle which ever is less. On second occasion Rs. 2,4000/- or 03 months pay or actual cost of Vehicle which ever is less will be sanctioned                                                                                                                                                                          |                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | he/she has not purchased any Vehicle before sanction of this Adv. After purchase of Vehicle it is to be mortgaged with the Govt. |
| (c) | <b>Advance for Purchase of Moped:</b>               | pay below Rs. 8560/- (Exl.GP) PM                                                         | Rs. 20,000/- of actual cost of the vehicle which ever is less.                                                                                                                                                                                                                                                        | 70                                                                             | 8%                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | One should purchase vehicle within 01 month of receipt of adv. & submit the zero of the receipt.                                 |
| (2) | <b>Advance for purchase of Personnel Computer :</b> | pay of Rs. 19,530/- per month or above                                                   | Rs.50,000 or actual cost of computer which ever less, at first occasion. After three years Rs. 40,000 or actual cost of computer which ever is less at second occasion                                                                                                                                                | 150                                                                            | 11.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                | One should purchase Computer within 01 month of receipt of adv. & submit the zero of the receipt.                                |
| (3) | <b>Advance for Purchase of Moped</b>                |                                                                                          |                                                                                                                                                                                                                                                                                                                       | The quantum of Advance has been withdrawn as per RBE No: 171/2008 dt.07.11.08) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                  |
| (4) | <b>Advance for purchase of Computer :</b>           | pay of Rs. 8,560/- & above                                                               | Rs. 30,000 or actual cost of computer which ever less                                                                                                                                                                                                                                                                 | 150                                                                            | 11.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                | One should purchase Computer within 01 month of receipt of adv. & submit the zero of the receipt.                                |
| (5) | <b>House Building Advance / Loan</b>                | All permanent Railway employees, other temporary railway employees than 10 years service | 34 months basic pay subject to max. of Rs. 7.5 Lakhs or Cost of the House/Flat, which ever is the least for new construction/purchase of new House/Flat. For Enlargement of existing house the amount of HBA will be limited to 34 months basic pay subjected to max. of Rs. 1.80 Lakhs or the cost of enlargement or | 180+<br>60=<br>240                                                             | UptoRs.50000/- 5%<br>Rs. 1.5 lac- 6.5%<br>Rs.5 lac- 8.5%<br>Rs.7.5 lac- 9.5%<br><b>Calculation of repaying capacity</b> is done as follows.<br><b>i)</b> Employee retiring after 20 years- 40% of the basic pay<br><b>ii)</b> retiring after 10 years but not later than 20 years-- 40% of the basic pay & remaining 65% may be adjusted from DCRG.<br><b>iii)</b> less than 10 years to retire -- 50% from the basic pay & remaining 75% may be adjusted from DCRG. |                                                                                                                                  |

|  |  |  |                                                                                                                                            |  |  |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  |  |  | which ever is less.<br>Cost ceiling Limit for the purpose of HBA will be 134 times the basic pay of the employee subjected to max 30 Lakhs |  |  |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------|--|--|

### **House Building Advance/Loan**

( Para 1132 IREM-I )

Grant of House Building Advance (HBA) is regulated in the terms of rules and regulations laid down from time to time by the Ministry of Urban Development for Central Government employees in general. The instructions apply to railway employees as it is.

**Eligibility :**

1. All permanent Railway employees.
2. All other temporary railway employees than 10 years service.
3. Members of all India Services deputed for services who are on deputation on railways for more than 06 years.
4. When Both husband and wife are railway employees and both are eligible for grant of advance the advance will be admissible to only one of them.
5. When both husband and wife are employee then cost ceiling limit pay of both husband and wife will be taken into account.
6. Suspended railway employees are also eligible for advance on witness of two collateral security.

**Conditions are required to be fulfilled :**

1. The applicant of his/her spouse/minor child should not already own a house in the Town/Urban area where the house is proposed to be constructed or acquired.
2. Area of Constructed house should not be less than 22 Sq. Metter.
3. The HBA for ready built house/flat is permissible on condition of out right purchase.
4. Employee has to submit a promissory note before taking on advance.
5. The official should not have availed of any loan or advance from other Government sources for the purchase. However if he undertakes to repay the outstanding Loan/Advance with interest in one installment he may allow to apply for advance under HBA.
6. Before advance is sanctioned employee must enter into an agreement and after that the property should be mortgage.
7. In individual cases, the cost ceiling limits may be relaxed up to a maximum of 25% .

**Purpose of Advance :**

The advance is admissible to the employees for only one of the following purpose. :-

1. Purchasing a plot and constructing a house there on.
2. Construction of a new house on a plot owned by the officials by himself of wife or both.
3. Enlarging living accommodations in an existing house owned by employee himself by both husband and wife.
4. Outright purchase of new ready build house/flat from Housing Boards, Development Authorities and other statutory or semi government bodies and also from private registered builders etc. but not from private individuals.
5. For construction of residential portion only of the building on a plot which is Earmarked as a shop cum residential portion.
6. Repayment of Loan or advance taken from a Government or Non-Government source to construct the house.
7. On purchasing of Flat from Corporative Group of Housing Society it will be paid as follows. :- 20% at the time of purchasing of plot from Housing Society and remaining 80% in the ratio as demanded by the society from time to time.

**( IV ) Quantum of Advance :**

1. 34 months basic pay subject to max. of Rs. 7.5 Lakhs or Cost of the House/Flat, which ever is the least for new construction/purchase of new House/Flat.
2. For enlargement of existing house the amount of HBA will be limited to 34 months basic pay subjected to max. of Rs. 1.80 Lakhs or the cost of enlargement or which ever is less.
3. The amount of advance will be restricted to 80% of the true cost of land and or cost of enlarging living accommodation in the case of construction in rural areas.

**( V ) Rate of Interest :**

The advance carries a simple interest on the House Building Advance. (R.B.E.No.104/03)

| S.No. | Amount of Advance  | Rate of Interest |
|-------|--------------------|------------------|
| 1.    | Up to Rs. 50,000   | 5.00 %           |
| 2.    | Up to Rs. 1,50,000 | 6.5 %            |
| 3.    | Up to Rs. 5,00,000 | 8.5 %            |
| 4.    | Up to Rs. 7,50,000 | 9.5 %            |

Sanctioned should stipulate the interest 2.5% over and above the scheduled rates with the stipulation that if condition of amount are fulfilled completely to

the satisfaction of the competent authority a rebate of interest to the extent of 2.5% will be allowed.

The rate of interest will be half percent less to be charged from employee who himself or his spouse undergoes sterilization and are receiving special pay ( VI )

Repaying Capacity :

For the purpose of calculating the eligibility of advances the repaying capacity of the employee is done as follows. :-

1. Employee retiring after 20 years - 40% of the basic pay.
2. retiring after 10 years but not later than 20 years - 40% of the basic pay & remaining 65% may be adjusted from DCRG.
3. less than 10 years to retire - 50% from the basic pay & remaining 75% may be adjusted from DCRG.

**( VII ) Cost ceiling Limit :**

Cost ceiling Limit for the purpose of HBA will be 134 times the basic pay of the employee subjected to max 30 Lakhs and min 7.5 Lakhs in case where the 134 times of the basic pay comes to the lower than 7.5 lakhs cost ceiling up to Rs. 7.5 will be permissible.

**( RBE No: 07/2009 tdd. 12.01.2009 )**

**( IX ) Period of utilizing the Advance :** (

a ) In case of Purchase of Land :

The mortgage deed must be submitted within 03 months of purchasing of Land.

( b ) In case of Purchasing of Ready Build House :

The mortgage Deed must be submitted within 03 months of sanctioning of advance.

( c ) In Case of purchase of New Flat/Construct :

The advance sanctioned must be utilized within on months of sanctioning of advance.

**( X ) Construction & Maintenance of House :**

1. The construction of house should be as per approved plan and it should be verified by HOD by inspecting before delivering next installment.
2. The house must be completed within 24 months of First installment.
3. Immediately on completion of construction/Purchase of the house/Flat, the Govt. servant shall insure the house at his cost against damage by fire, flood & lightening till the advance is returned in full.

**( XI ) Repayment of Advance :**

The entire amount of advance with interest thereon shall be repaid in full by monthly installment with a period not exceeding 20 years i.e. principal in 180 installment and interest in 60 installments.

- (a) In the case of advance for purchase of land and construction of house from the pay of the month following the completion of the house or from the pay of 24 the months after the date on which the advance for the purchase plot was sanctioned whichever is earlier.
- (b) In case of purchase of ready built house/flat from the pay of the month following that in which the advance was drawn.
- (c) If an employee expires after sanctioning of Advance the recover will be done from his settlement dues.
- (d) In the case of suspended railway employee the recovery will be made from the subsistence allowance, if the subsistence allowance is reduced to prolonged suspension, the recovery may be suitably reduced, if necessary by the Head of Department.
- (e) Failure to pay the advance for any reason what so ever by the Govt. servant or his successors as the case may be will entitle the Government to enforce the mortgage and take the action to recover the outstanding amount.
- (f) After all advance is returned with interest the mortgaged property will be returned to the concerned railway employee.

**( XII ) Competent authority to sanction advance of HBA**

|                                    |                         |
|------------------------------------|-------------------------|
| 1 Non Gaz Staff                    | HOD's / DRM's           |
| 2 Gazetted Officers (Except HOD's) | Addl. GM                |
| 3 HOD's including SDGM & ADDL GM's | GM's                    |
| 4 GM                               | Secretary Railway Board |

\*\*

**RETIREMENT BENEFITS**

1. Pension
2. Gratuity
3. P F
4. NGIS
5. Commutation
6. Leave Salary
7. Post Retirement Complimentary Pass
8. Composite Transfer Grant
9. RELHS
10. Retention Of Railway Quarter
11. Regularization Of Railway Quarter
12. Kit Pass
13. Settlement Pass Etc.
14. New Pension Scheme

- 15. Fixed Medical Allowance
- 16. Pension Adalat.

## **PENSION**

### **Extent of application**

- a) All non- pensionable railway servants who are in service on 15.11.1957 & who elect to come on to this rule, option extended from time to time.
- b) All persons entering Railway service on or after 16.11.57 except those whose terms of appointment provide to the contract.
- c) All CPF beneficiaries in service on 1.1.86 should be deemed to have come over pension scheme on that, unless they specifically opt out to continue under the CPF scheme.

### **Kinds of pensions:-**

- 1. Superannuation pension.
- 2. Retiring pension
- 3. Invalid pension
- 4. Compensation pension

### **Superannuation pension: -**

This pension is granted to a Railway servant in case of retirement on Superannuation i.e. on attaining age of 60 yr.

### **Retiring pension: -**

This pension is granted in case of retirement on completion of 30 yr. Qualifying services or attaining age of 55 yr. under FR 56,Rule 2405 (on attaining 50 yr. of age in case of officers appointed prior to age of 35 yr.) & such staff who Retires on Voluntary on completion of 20 yrs service.

**Invalid pension: -**

This pension is awarded to an employee on retirement due to any bodily or mental infirmity, which permanently incapacitates him for the services. Invalidation should be on medical ground and not due to the irregular or intemperate habits.

**Compensation pension: -**

This pension is granted to an employee who is discharge from service owing to abolition of a permanent post unless he is appointed to another post the condition of which are deemed to be at least equal to that of his old post.

Employee will be eligible for pension completion of 10 years qualifying service. Pension shall be calculated at 50% of average emoluments or Last Pay which ever is more (w.e.f 02.09.2008)

**(RBE No: 112/2008 dt. 15.9.08)**

**Average emoluments: -**

The term emolument means basic pay, which the Railway servant was receiving immediately before his/her retirement.

55% of pay for running staff, 30% of pay for LI's & 25% of pay for Doctors should be taken into account. Average emolument shall be determined with reference to emolument drawn by a Railway servant during last 10 months of service.

If during last 10 months of service, the Railway servant is absent from duty or on extraordinary leave or has been under suspension, the period whereof does not count as service, the aforesaid period should be disregarded in the calculation of average emoluments & an equal period before 10 months being included.

The stagnation increment should be treated as pay.

**Qualifying Service: -**

A. Total service in years, month & days

**Less**

B. i) Underage service

ii) Apprentice service.

iii) Leave without pay (other than medical certificate) iv) Strike.

v) Substitute service

vi) Suspension

C. Weightage of max. 5 years in case of voluntary retirement or retirement due to medical unfit has been abolished in 6 th P.C (RBE No: 38/2009 dt.18.02.09)

D. 50% of MRCL service.

**Net qualifying service = (A-B)+C**

With effect from 22.2.83 Group 'C' & 'D' employees who are required to undergo departmental training before they are put on regular employment, training period may be treated as qualifying service for pension if training is followed immediately by appointment.

**Pension Formula: -**

$$\text{Pension} = \frac{\text{Average Emolument ( 10 months)}}{2}$$

**Or**

50% of last pay whichever is more.

Minimum Rs.3500/- + Relief

Maximum 50% of highest pay Rs.90,000/- of Cabinet Secretary.

The amount of pension finally calculated should be rounded off to the next higher rupee.

As per 6<sup>th</sup> P.C recommendation, all employees who Retired on or after 1.1.2006, the full benefit of 33yrs. Qualifying service in case of Pension has been dispensed with. The employee with 20 yrs. Service will get 50% of last Pay or 10 months emolument which ever is more.

**(RBE No: 112/08 dt. 15.09.08) & ( RBLNo: F(E) 2008/PN1/13 dtd. 15.1209)**

**ADDITIONAL QUANTUM OF PENSION**

As per recommendation of 6<sup>th</sup> P.C the concept of Additional Quantum of Pension has been Introduced to the Retired Rly. Employees/ widow who will be paid additional % of pension to old Pensioner subject to reaching to the particular age which is as below.

| S No | Age Limit       | Additional % of Pension |
|------|-----------------|-------------------------|
| 01   | 80 to 85 yrs    | 20%                     |
| 02   | 85 to 90 yrs    | 30%                     |
| 03   | 90 to 95 yrs    | 40%                     |
| 04   | 95 to 100 yrs   | 50%                     |
| 05   | 100 yrs & Above | 100%                    |

**( RBE No: 105/2008 dt. 08.9.08)**

**CONSTANT ATTENDANT ALLOWANCE**

The scheme of constant attendant allowance has been introduced to such Pensioner who are drawing Disability Pension for 100% disability which attributed to or aggravated by service & who require the service of Attendant for at least 03 months. The allowance will be paid @ Rs. 3000/- pm only & no DA is paid in the allowance along with the Pension subject to submission of declaration form.

The Allowance shall not be paid during the pensioner is inpatient in Hospital.

**( RBE No: 112/08 dt.15.9.08, 149/08 dt. 10.10.08 & 72/09 dt. 29.4.09)**

**Family Pension** :- The scheme of family pension is in force of 1.1.64 The families of the Railway servant who appointed on & after 1.1.64 & opted for family pension shall be entitled for family pension.

The family pension will be admissible to widow/widower and in case widow/widower is not available. Unmarried Son up to the age of 25 yrs. Who are not Serving. In case of Daughter till she marries which ever is earlier. After attaining the age of 25 yrs the family pension to son shall only be admissible in case they are handicap mentally or physically & are unable to earn their living subject to certain condition.

wef 1.1.98 the parents (father/mother) of deceased employee are also entitled for family pension when no widow or children left by the deceased . For this the income of parents from all source should not be exceed 2550/- pm.

In case the Family pension has been allowed in the equal portion , If any one become ineligible due to any reason his share will also be paid to other one.  
(RB LNo. F(E)/11/85/PN/1/1 DT. 30.05.89)

The physically handicap/mentally retarded and dependent wards of railway employees, who are having no income, will be allowed Family pension till they survive. On production of necessary certificate issued from medical officer of senior Divl. Medical Officer level.

As regards widow/ Legally divorced daughter who are totally dependant on Rly. servant, the family pension shall be admissible subject to fulfilling of conditions.

**Family Pension in case of missing person** :-

Considering the great hard ship is being experienced by the family members of Missing person in getting family pension because the death of such missing person is confirmed after the a period of 7 years . This is based on section 108 of the Indian evidence Act, as such to avoid hard ship to the family the Rly. Board vide LNo. F(E)111/86/PNI/17 OF 19.09.86, 27.03.91 & 21.01.96 has decided as under .

The Govt. employees Kidnapped by Insurgents Terrorists may be sanctioned pension after a period of 06 months from the date of registration of FIR with the police ,as concern to payment of gratuity, the earlier instruction will apply.

**(RBLNo: F(E)II/2001/PN1/7 dtd. 30.04.2009)**

On receipt of the copy of the FIR Lodged with Police the railway administration should paid the amount at balance of the provident fund account of the missing person. The Payment of leave encashment & his salary if due immediately. In case of SR PF optee. The government contribution should be detained only self contribution in provident fund to be paid.

After one year from the date FIR lodged with police other benefit viz death gratuity , family pension, and government contribution of the provident fund if exists as regards the calculation of death gratuity it is mention that the same will be calculated as a case of death but pay went will be made assuming the missing person retired .The difference of death gratuity & Retiring gratuity will be made on confirmation of death of the missing person or after a period of 07 years however for relaxation of one year can be forwarded to Rly Board as per instructions contained in RB No. F(E)/II/2001 PNI/28 Dt. 28.09.04 RBE No. 212/2004.

The payment of Group Insurance Scheme will however be made after 7 Yrs though his date of due retirement comes earlier.

Before making all above payment in case of missing employee. The indemnity Bonds will be obtained from the family members.

No Payment on account of deposit link insurance will be admissible in case of missing person.

Rate of the Family Pension admissible

Presently the family pension is admissible at the rate of 30% of the last pay drawn plus G.P admissible there on subject to the minimum of Rs. 3500/- pm + Relief & maximum of Rs. 27000/-.

### **Enhance Family Pension**

Enhance family pension is admissible to the family of the deceased employee who dies with 10 years of qualifying service it will however be admissible for eligible person of the family at the enhanced rate form date of the death of the deceased for a period of 10 year or the deceased would have attains the age of 70 yrs which ever is earlier. In case of Retired employee the Enhanced pension to the widow will be eligible for a period of 07 yrs. or 67 yrs. of age which ever is earlier.

The enhanced rate will be admissible at the double rate of normal family pension but should not exceed the original pension of the deceased and should not be less than 50% of the last pay.

**( RBE No: 112/2008 dt. 15.09.08)**

## **GRATUITY**

Retirement gratuity shall be paid on retirement Railway servant who has completed 5 years qualifying service shall be eligible for retirement gratuity equal to  $\frac{1}{4}$  of his emolument for each completed six monthly period of qualifying service.

$$\text{Retirement Gratuity} = \text{Emolument} \times \frac{\text{Qualifying Service}}{2}$$

Emolument means last Pay drawn + GP plus DA

Maximum 16  $\frac{1}{2}$  month's pay.

Maximum amount Rs.10,0000/- ( Ten Lakh)

Benefit of 55% to running staff 30% to Loco Inspectors & 25% to doctors shall be given in basic pay.

Amount of retirement gratuity finally calculated shall be rounded off to next higher rupee.

## **DEATH GRATUITY**

In the event of death in harness of all permanent & temporary Railway servant while in service the death gratuity shall be paid to family members as under.

| <b>S.NO.</b> | <b>QUALIFYING SERVICE</b>               | <b>RATE OF DEATH QUANTITY</b>                                                   |
|--------------|-----------------------------------------|---------------------------------------------------------------------------------|
| 1.           | Less than one year                      | 2 times of emolument                                                            |
| 2.           | One year or more but less than 5 years. | 6 times of emolument                                                            |
| 3.           | 5 years or more but less than 20 years  | 12 times of emolument                                                           |
| 4.           | 20 years or more                        | Half of emolument for every completed six monthly period of qualifying service. |

Max: - 33 times of emoluments

Maximum amount Rs.10,0000/- ( Ten Lakh )

Emolument means last pay drawn plus DA benefit of 55% to running staff 30% to Loco Inspectors & 25% to doctors shall be given in basic pay.

Amount of death gratuity finally calculated shall be rounded off to next higher rupee.

## **LEAVE SALARY**

The benefit of encashment of balance LAP at the time of retirement or death while in service shall be granted subject to maximum of 300 days. The leave salary shall be calculated on the basis of last pay grown plus DA.

Consequent upon the decision taken by the Govt. on the recommendation of 6<sup>th</sup> CPC relating to encashment of leave in respect of both LAP & LHAP shall be considered subject to over all limit of 300 days. The cash equivalent payable for LHAP shall be equal to leave salary as admissible for LHAP + DA without any reduction on Account of pension or other retirement benefits payable.

The orders shall take effect from 01/09/2008.

**(RBE 148/2008 dtd. 08/10/2008)**

It has been decided to modified the date of effect of encashment of LHAP from **01/09/2008 to 01/01/2006**. The benefit will be now admissible in respect of past cases on receipt of applications to that effect from the pensioners concerned.

**(RB L.No.F(E)III/2005/PN 1/12 dtd. 23/11/2009)**

PF

In case of pension optee, the employee shall get his own contribution to PF & interest thereon. The present rate of interest is 8% p .a ( 2008-09)

**(RBE No: 181/08 dt. 18.11.08)**

### **GROUP INSURANCE SCHEME 1980**

This scheme being good social security without paying any insurance premium introduced on Railway vide R.B.LNO- PC-III-80/GIS/1 of 21.11.1980. This scheme provides twin benefits of insurance in the event of death while in service & lump sum payment on retirement on monthly subscription of Rs.15/-, 30/-, 60/-, 120/- with insurance cover of Rs.15,000/- Rs.30,000/- Rs.60,000/- & Rs.1,20,000/- respectively.

Monthly subscription is divided in to two part i.e. Insurance Fund & Saving fund at the rate of 30% & 70% respectively.

In case on employee died on the date of superannuation the benefit under the Group Insurance Scheme 1980 would be applicable.

### **COMMUTATION OF PENSION.**

A Railway servant shall be entitled to commute for lump sum payment up to 40% of his pension. A fraction of pension to be commuted result in fraction of rupee, such fraction rupee shall be ignored for the purpose of commutation.

An employee who applies for commutation of pension within year of the date of his retirement on superannuation or on voluntary retirement (i.e. before next birth date) will not be subjected to medical examination.

Employee will be eligible for lump sum payment of commutation as per table revised in 6<sup>th</sup> CPC with reference to date on which commutation becomes absolute.

**Commutation table at each birth year of age.**

**As per 6<sup>th</sup> PC , the Commutation value for a Pension of Re. 1/- per annum has also been revised. ( RBE No: 112/08) The present value for staff Retiring on Superannuation, ( 60 yrs.) (but the value of next year of retirement is calculated i.e 61 yrs) is 8.194 x 12= 98.378**

Maximum 40% of the pension can be commuted & only once in entire life & the relief (DA) on pension is paid on Total Pension including Commuted value.

**Commutation without Medical Examination.**

1. Superannuation pension.
2. Retiring pension.
3. Compensation pension.
4. Pension on absorption in public sector undertaking
5. Pension granted on finalization of department, judicial proceeding & issue of final orders thereon.

The employee has to appear for medical examination on completion of one year after retirement. The period of one year shall be reckoned from date of retirement for item 1 to 3, & date of issue of final orders for S.No. 5 .

**Commutation after Medical Examination.**

1. Invalid pension
2. Compulsory Retirement as a measure of penalty.
3. Compassionate allowance.
4. In case of commutation without Medical Examination if application not received by head of the office within one year.

If fraction of rupee exist in finally calculated amount it should be rounded off to next higher rupee.

The pensioners commuted portion will be restored on expiry of 15 years from date of commutation.

**Exgratia Pension :-** The SRPF optee employee those who were drawing pay up to Rs. 500/- pm & retired on 20 years QS prior to 01.04.57 are eligible for ex-gratia pension as per following revised scale wef 01.1.2006

| sno. | Pay range | Rate of exgratia pension per month |
|------|-----------|------------------------------------|
| 1    | Group A   | Rs.3000/-                          |
| 2    | Group B   | Rs.1000/-                          |

|   |         |           |
|---|---------|-----------|
| 3 | Group C | Rs. 750/- |
| 4 | Group D | Rs. 650/- |

**( RBE No: 65/2009 dt. 17.04.09)**

**Ex -gratia Payment :-** The widow & eligible family members of the SRPF optee employee are eligible for this ex -gratia payment at the rate of Rs.150/- pm + DR . further this rate of ex -gratia payment has been revised at the rate of Rs. 605/- + DR wef 01.11.97

For getting this ex -gratia payment the widow or family member should have applied on the prescribed Performa with death certificate of the employee & any other documents which proves the employment of the deceased employee. The family of employee who resigned or those who have been removed or dismissed are not entitled to get this payment.

The PF optee alive employee those who have retired between 01.04.57 to 31.12.85 with 20 years & more continuous service & also they were not removed / Dismissed nor resigned from service are entitled for ex -gratia payment of 01.11.97 at the rate of Rs. 600/- pm + Relief wef 01.04.04 . This amount is also admissible at the rate of 600/-+300/- = 900/- . The ex -gratia dearness Relief will be allowed @54% wef 1.07.08 & 64% wef 1.1.09, **73% w.e.f.**

**01.07.2009**

**(RBE No. 83/2004) & ( 65/2009 dt.17.4.09 )**

### **New Pension Scheme - 2004**

The employee recruited in to Rly. service on & after 01.04.2004 will be governed by this scheme . The 10% amount of the ( basic pay +dearness pay +dearness allowance) shall be contributed by the employee per month towards this scheme& equal amount is contributed by the Govt.

**(RB LNo. (NG)2/2004/CL/16/POLICY dt. 17.09.04)**

There exists Two Tire under the scheme viz

- 1) **Tire- I :** It is compulsory scheme to all employees under which 10% amount of the ( basic pay +dearness pay +dearness allowance) shall be contributed by the employee per month towards this scheme& equal amount is contributed by the Govt. The scheme is non-withdrawal with permanent lock in period till exist from the scheme.
- 2) **Tire II :** The scheme is based on Voluntary contribution.

**Unique 16 digit PRAN :** The unique PRAN (Permanent Retirement Account Number) will be allotted to all employees for identification.

**Exit from scheme :** On exit from the scheme on the following ground, the employee/family/dependent will be paid pension as per the value based on investment option -

- i) On Superannuation : 40% of the contribution balance in the account will be refunded & 60% will be invested in the financial institutions appointed by PFRDA, based on which the pension will be paid.
- ii) On Voluntary Retirement : 20% of the contribution balance in the account will be refunded & 80% will be invested in the financial institutions appointed by PFRDA, based on which the pension will be paid.

Govt. has appointed NSDL (National Securities Depository Limited) as Fund Manager for investment of money based on the option submitted by individual employee

Based on the report of HLTF (High Level Task Force Report) payment of pension to employee appointed on or after 1.01.2004 & who are Discharged on INVALIDATION GROUND / Disablement & to the Families of such employees who have Died during service since 1.01.2004 including Retirement Gratuity/ Death Gratuity/ Extraordinary Family Pension/ Disability Pension etc.

**(RB LNo. 2008/AC-11/21/19 dt. 29.05.2009)**

### **COMPLIMENTARY PASS**

This pass shall be granted to retired Railway servant for self family members & dependent widow mother of the same class for which employee was entitle while in service.

The number of sets to be issued per year depends upon qualifying serviced by the employee as under.

| S. NO. | Qualifying service                      | Gaz. Officers   | Group 'C'       | Group 'D'       |
|--------|-----------------------------------------|-----------------|-----------------|-----------------|
| 1.     | 20 years or more but less then 25 years | 2 sets per year | 1 set per year  | -----           |
| 2.     | 25 years or more                        | 3 sets per year | 2 sets per year | 1 sets per year |

The facility of companion in lieu of attendant can be granted to IA & I class pass holder above 65 years of age if no any other family member below 65 years of age is included in pass.

### **WIDOW PASS**

This pass shall be granted to widow of Railway servant after his death of the same class for which employee was entitle.

The widow of those Railway servant who were in service on 12-3-87 and opted for the scheme & those who entered Railway service on or after 12-3-87 shall be eligible for widow pass.

50% of post retirement complimentary pass for which employee was in receipt shall be granted to widow. In case of death while in service the date of death shall be assumed as date of retirement notional for calculation.

In case of death while in service if service rendered by the employee falls short than the prescribed service for post-retirement complimentary pass in such a case also widow shall be eligible for one set of pass in alternate years.

This scheme is also applicable to widower in case of death of male Railway servant.

### **COMPOSITE TRANSFER GRANT**

On retirement Railway servant shall also be eligible for composite transfer as applicable in case of transfer.

A) HQ to other place at a distance of 20 kms or more

i) Railway servant who have joined service on or after 1.05.76 shall be eligible for one month's basic pay & if these employees transport their personnel effects by VPU the CTG will be admissible at the rate of 80% of basic pay if no car is carried.

ii) In a case of employees who joined Railway service prior to 1.5.76 & are entitled for liberal scale of transportation of personnel effects by Railway the quantum of CTG will be,  
Group A, B & C - 80% of basic pay.  
Group D \_ 90% of basic pay.

B) HQ to other place within 20 kms or within same city/ urban agglomeration.  
1/3 of the one month's basic pay.

Note: change of residence must be involved.

No claim for composite transfer grant will be entertained until & unless the retired Railway employee vacates the Railway accommodation allotted to him.

CTG will not be payable to the retired Railway servant if he prefers to stay in the Railway accommodation regularized in the name of his family member after his retirement but if he prefers to live away from his family member in whose name the Railway accommodation has been regularized the CTG will be payable subject to condition of submission of documentary proof of change of residence.

A Railway servant who has joined Railway service prior to 1.5.76 may exercise on option to transport luggage by Railway on the same scale as admissible to Railway servant appointed on or after 1.5.76. The option may be exercised along with the application for kit passes for transportation of personnel effects.

### **RELHS-1997 (Retired Employee Liberalized Health Scheme) :**

The Retired railway employee can opt for the scheme subject to fulfilling of the minimum service condition of 20 yrs to become member of the said scheme for which he has to contribute 01 month last Basic +GP. The benefit of

the scheme are Medical facilities as admissible to serving Rly. Employee in respect of treatment, special investigation, diet & reimbursement claim for treatment etc. The benefit of the scheme can also be availed by widow of deceased employees.

As final chance the RELHS scheme is opened upto 31.03.2010 for all such employees having qualifying service & who have not yet joined.

**(RBE No 48/2009 dtd.16.03.2009)**

The scheme has been made MANDATORY to all employees, as such the Option to join the scheme on retirement will be obtained by such employees only who are not unwilling to join the scheme with a clear understanding that no further chance shall be given to join the scheme in future.

**(R B.LNo: 2003/H/28/I/RELHS dtd 08/07/2009)**

### **Fixed Medical Allowance:**

The pensioners/Family pensioner residing 2.5 km away from the nearest Railway hospital/Health unit/Dispensaries are entitled for grant of Fixed Medical allowance, subject to furnishing an option form and undertaking in a prescribed format, as to whether to draw FMA of Rs. 300/- per month Or avail the benefit of OPD medical treatment at railway hospital/dispensary. The existing pensioners can submit the option undertaking with the concerned Pension Disbursing Authority for payment. The future retirees/family of the ex employees, shall submit the option undertaking with the concerned Head of the department also with the other pension papers for obtaining the sanction of fixed medical allowance and the same will be endorsed in the Pension Pay Order.

Those pensioners/family pensioners who are eligible to become member of the RELHS scheme, are not actually enrolled, are also entitled for FMA subject to fulfilling the conditions and submission of undertaking forms.

**(RB L.No.PC-5/2006/A/Med/1 dated 15/9/2009)**

### **Pension Adalat:-**

Started in the year 1986 in order to expedite the payment of settlement dues and to examine the grievances of pensioners/family pensioners, pension adalat is held at HQs, Divisional & Workshop level.

At HQs level the pension adalat is held once in a year in the month December 15<sup>th</sup>. And at Divisional/Workshop level the adalat is held twice in a year i.e. on 15<sup>th</sup> June & 15<sup>th</sup> December.

A Notification is issued by HQs, Division Office/Workshop in the month of March/August every year and the last date of submission of application is 30<sup>th</sup> of April for June and 31<sup>st</sup> of October for December Adalat. All retired employees/family pensioner can submit their grievances in the prescribed format in triplicate to the concerned Division office/HQs where they were working.

The payment cases which are finalized are distributed to the pensioner/family pensioner on the day of Adalat and the policy matters are finalized on priority.

A l l o w a n c e s  
( I R E M V O I - I C h a p . V I I P a r a 7 0 1 - 7 1 2 )

| S.No. | Nature of Allowance                                         |                                    |
|-------|-------------------------------------------------------------|------------------------------------|
| 1     | Nursing Allowance                                           |                                    |
|       | (a)                                                         | Messing Allowance                  |
|       | (b)                                                         | Laundry Allowance                  |
|       | (c)                                                         | Uniform Allowance                  |
| 2.    | Washing Allowance                                           |                                    |
| 3.    | Composite Transfer Grant (CTG )                             |                                    |
| 4.    | Conveyance Allowance                                        |                                    |
| 5.    | Dearness Allowance (DA )                                    |                                    |
| 6.    | House Rent Allowance ( HRA )                                |                                    |
| 7.    | Travelling Allowance ( TA )                                 |                                    |
| 8.    | Night Duty Allowance (NDA )                                 |                                    |
| 9.    | Cycle Allowance                                             |                                    |
| 10.   | Overtime Allowance (OT )                                    |                                    |
| 11    | Deputation Duty Allowance                                   |                                    |
| 12.   | Transportation Allowance                                    |                                    |
| 13.   | National Holiday Allowance ( NHA )                          |                                    |
| 14.   | Non Practicing Allowance (NPA )                             |                                    |
| 15.   | Special Compensatory (Remote Area) Allowance                |                                    |
| 16.   | Bad Climate Allowance                                       |                                    |
| 17.   | Family Planning Allowance                                   |                                    |
| 18.   | Training Allowance                                          |                                    |
| 19.   | Children Education Allowance.                               |                                    |
| 20.   | Spl. Allowance for Child Care for Women with Disability     |                                    |
| 1.    | Running Allowance ( I R E M C h . I X P a r a 9 1 - 9 3 0 ) |                                    |
|       | a                                                           | Kilometer Allowance                |
|       | b                                                           | Allowance in lieu of RR Facilities |
|       | c                                                           | Breach of Rest Allowance           |
|       | d                                                           | Out Station detention Allowance    |
|       | e                                                           | Average Kilometer Allowance        |
|       | f                                                           | Accident Allowance                 |
|       | g                                                           | Trip Allowance                     |
|       | h                                                           | Offtg allowance                    |
|       | i                                                           | Leave Mileage Allowance            |

| <b>(1) Nursing Allowance</b>                                                                                                                                                                                                                                                                                                                           |                   |                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------|
| All Nursing staff working in Rly. Hospitals who have been registered in accordance with Indian Nursing Council act are entitled for the following Allowance. Mainly All nurses either male or female, sister in charges, matrons, midwives & Lady Health visitors etc. are considered as Nursing staff now these allowances are also admissible to ANM |                   |                                     |
| S.No.                                                                                                                                                                                                                                                                                                                                                  | Allowances        | Rate Per Month                      |
| a                                                                                                                                                                                                                                                                                                                                                      | Nursing Allowance | <b>3200/- p.m fromú 1.09.08 ÆÛê</b> |
| b                                                                                                                                                                                                                                                                                                                                                      | Laundry Allowance | <b>300/- p.m fromú 1.09.08 ÆÛê</b>  |
| c                                                                                                                                                                                                                                                                                                                                                      | Uniform Allowance | <b>6000/- p.a fromú 1.09.08 ÆÛê</b> |
| <b>( RBE No: 24/2009 dt. 06.2.09 )</b>                                                                                                                                                                                                                                                                                                                 |                   |                                     |
| Note : (1) In case leave period in one spell is more than 15 days No. Laundry Allowance is admissible. (2) In case Laundry Allowance is payable annually than leave period in one spell exceeds 4 months necessary recovery will be made on prorata basis.                                                                                             |                   |                                     |

**(2) Washing Allowance ( Pera 706 IREM I)**

In order to remain the group 'D' staff in neat & clean uniform in HQ. office or other offices concerned staff Viz cook, Asstt. Cook, Pantry man, Masalche, Dresser, X-Ray Attendant, Hospital Attendant, Ayha, Safaiwala, & Vehicle Driver etc will be paid washing allowance @ Rs.60/- Per Month. but Group "C" staff except . Staff car driver are not entitled for washing allowance wef 01.05.03

**(RBE 137/08 Dt, 30.9.08)**

In addition to above the Group "D" staff working in Statutory / Non Statutory canteen running on Rlys are also entitled for washing allowance for this the category of Halwai/ Asstt. Halwai will also be eligible .

**(RBE No: 174/08 dt. 14.11.08)** The Washing Allowance to Dresser/ OT Atted. Has been restored even they belong to Group C.  
Authority :-

RB No. F(E)1/75/AL-29/3 dt. 25.09.79  
RB No. F(E)1/99/AL-29/4 dt. 06.02.2000  
RB No. F(E)1/99/AL-29/4 dt. 10.05.2000  
RB No. F(E)1/2000/AL-29/2 dt. 09.02.2001  
RB No. F(E)1/2000/AL-29/2 dt. 18.02.2002  
RB No. F(E)1/2001/AL-29/2 dt. 05/12.05.2003

**(3) Composite Transfer grant :**

When a transfer of Railway servant Ex one place to another place in the interest of public they shall be entitled for transfer grant.

**(i) Officers in Pay Scale HAG+ & above -- 01 month Basic Pay**

**(ii) All other Officers & Staff -- 01 month Basic Pay + GP**

Those employee who have been appointed on after 01.05.76 & transferred to the place 20 Km. or more away from his previous station will be entitled for one month pay as transfer grant . In case the employee carry his luggage by VPU 80% of the pay will be admissible & where car is not carried 75% of the pay shall be admissible . In such transfer change of residence will be essential for grant of transfer grant.

Those employee who have been appointed prior to 01.05.76 & entitled for liberalized means of rail transport 80% & of the pay shall be admissible to group "A" "B" & "C" Railway servant & in case of group "D" 90% of the pay will be admissible .

The employee of all groups of transferred with in the radius of 20 Km. & change of their residence involved they shall be entitled for 1/3 of the pay as transfer grant .

On promotion the Railway servant will be entitled for grant of transfer grant on the basis of their old pay prior to promotion & not on the pay fixed on their promotion . The composite transfer grant shall be granted on pay plus G.P.

The person retiring can be granted such transfer grant in advance prior to their retirement subject to usual terms & condition.

**(RBE No: 193/2008 dt. 1.12.08)**

| <b>(4) Conveyance Allowance (Para 709 IREM-I)</b>                                                                                                                                                                                                                                                                                                                                            |                                                 |                                                                                                               |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------|
| When only Railway Servant occasionally goes on duty with in the radius of 8 km he will be allowed actual charges for the conveyance according to entitlement for this purpose any journey performed on duty from the residence & back to residence will also be included. Entitlement to pay scale are as unde :-                                                                            |                                                 |                                                                                                               |            |
| S.No.                                                                                                                                                                                                                                                                                                                                                                                        | Pay Scale                                       | Entitlement                                                                                                   |            |
| 1.                                                                                                                                                                                                                                                                                                                                                                                           | <b>Officers With GP Rs. 10000/- &amp; HAG+ú</b> | AC Bus /Taxi, Auto Rickshaw own auto rickshaw /Scooter /Motor cycle, moped etc. at the rate of Auto rickshaw. |            |
| 2.                                                                                                                                                                                                                                                                                                                                                                                           | <b>Officer in GP Rs.5400/- upto Rs. 8900/-</b>  | As above except AC Taxi.                                                                                      |            |
| 3.                                                                                                                                                                                                                                                                                                                                                                                           | <b>GP Rs.4200 to 4800/-</b>                     | As above except AC Bus & AC Taxi.                                                                             |            |
| 4.                                                                                                                                                                                                                                                                                                                                                                                           | <b>Gp Rs 2400/- &amp; below Rs.4200/-</b>       | All actual public bus, or Auto Rickshaw, Own Scooter, Motor Cycle or moped .                                  |            |
| 5.                                                                                                                                                                                                                                                                                                                                                                                           | <b>GP RS.2400/- &amp; below</b>                 | Rate of ordinary bus.                                                                                         |            |
| where no local rate has been prescribe by the transportation authority this allowance will be adjustable on the following rate                                                                                                                                                                                                                                                               |                                                 |                                                                                                               |            |
| 1.                                                                                                                                                                                                                                                                                                                                                                                           | Journey Performed by Own Car/Taxi               | Rs.16/- Per Km.                                                                                               |            |
| 2.                                                                                                                                                                                                                                                                                                                                                                                           | Journey Performed by Auto/Scooter               | Rs.08/- Per Km.                                                                                               |            |
| <b>( RBE No: 192/08 dt. 1.12.08 )</b>                                                                                                                                                                                                                                                                                                                                                        |                                                 |                                                                                                               |            |
| <b>(5) Dearness Allowance (Para 801 IREM-I)</b>                                                                                                                                                                                                                                                                                                                                              |                                                 |                                                                                                               |            |
| The all employee working on Indian Railway are eligible for compensation on account of increase in the price. This allowance is revised in accordance with the increase in All India Central price index base (1960-100) twice in the year i.e. from Ist Jan & Ist July As per 6th PC recommendation of 01.01.2006 it is admissible at par with all the central govt. employee & pensioners. |                                                 |                                                                                                               |            |
| <b>01.01.2006</b>                                                                                                                                                                                                                                                                                                                                                                            | <b>NIL</b>                                      | <b>01.07.2006</b>                                                                                             | <b>2%</b>  |
| <b>01.01.2007</b>                                                                                                                                                                                                                                                                                                                                                                            | <b>6%</b>                                       | <b>01.07.2007</b>                                                                                             | <b>9%</b>  |
| <b>01.01.2008</b>                                                                                                                                                                                                                                                                                                                                                                            | <b>12%</b>                                      | <b>01.07.2008</b>                                                                                             | <b>16%</b> |
| <b>01.01.2009</b>                                                                                                                                                                                                                                                                                                                                                                            | <b>22%</b>                                      | <b>01.07.2009</b>                                                                                             | <b>27%</b> |
| <b>01.01.2010</b>                                                                                                                                                                                                                                                                                                                                                                            | <b>35%</b>                                      | <b>01.07.2010</b>                                                                                             | <b>45%</b> |
|                                                                                                                                                                                                                                                                                                                                                                                              |                                                 |                                                                                                               |            |

**(6) House Rent Allowance (Para 1701 IREC-II)**

This Allowance is admissible to those Railway servant who have not been allowed Railway accommodation . This is admissible as per classification of the various cities as under.

| S.No. | Classification of City                      | % of Pay + GP |
|-------|---------------------------------------------|---------------|
| 1.    | "A" I Class cities<br>X                     | 30%           |
| 2.    | A2, BI & B2 Class cities<br>Y               | 20%           |
| 3.    | C Class cities & Unclassified cities--<br>Z | 10%           |

The Delhi, Kolkatta, Mumbai, Chennai, Hyderabad, Banglore has been classified as AI Class cities.

This allowance is admissible upto 120 days during all kinds of leave.

In case of Rly Servant suffering from any kind of diseases . Such as TB, Cancer of other deceases during on medical certificate HRA is admissible on full rate upto 240 days on medical certificate Person entitled for accommodation of any time refuses to accept the same they are not entitled for HRA.

**(RBE No: 110/2008 dt. 12.9.08)**

(10) Compensatory city Allowance

**( RBE No: 110/08 dt. 12.9.08) The CCA Allowance stands Abolished**

**(07) Traveling Allowance**

The all employee of Indian Railway performed journey beyond 8 Km. on duty necessary Travelling allowance is admissible.

Duration of journey will be counted from 0/- hrs. to 24 hrs. (mid night) & Traveling allowance shall be allowed for remaining out of HQ beyond 8 Km. for full day.

In case journey started & completed on the same calendar day the traveling allowance as per the following rates.

|   |                                                              |                                 |
|---|--------------------------------------------------------------|---------------------------------|
| 1 | If the absence from Head Quarter for 6 hrs. continuous       | 30% of the Traveling allowance  |
| 2 | In case absence from HQ is over 6 hrs. but less than 12 hrs. | 70% of the Traveling allowance  |
| 3 | In case absence from HQ is 12 hrs. & above                   | 100% of the Traveling allowance |

If the Railway servant avails leave / Restricted holiday while on duty NO traveling allowance shall be admissible.

When Rly. servant remains out of HQ. on duty and no facilities for meals of accommodation exists at such place the traveling allowance shall be admissible as under.

|   |                 |              |
|---|-----------------|--------------|
| A | First 180 days  | At full rate |
| B | beyond 180 days | Nil          |

**As regards rate of traveling allowance as per classification of cities wef 1.9.08 are as under**

|   |                             | <b>All cities / Stations</b> |            |            |
|---|-----------------------------|------------------------------|------------|------------|
|   | <b>Grade Pay Rs. ( G.P)</b> | <b>100%</b>                  | <b>70%</b> | <b>30%</b> |
| 1 | 10000/- & HAG +             | 520/-                        | 364/-      | 156/-      |
| 2 | 7600/- to 8900/-            | 460/-                        | 322/-      | 138/-      |
| 3 | 5400/- to 6600/-            | 400/-                        | 280/-      | 120/-      |
| 4 | 4200/- to 4800/-            | 340/-                        | 238/-      | 102/-      |
| 5 | Below Rs. 4200/-            | 210/-                        | 147/-      | 63/-       |

**(RBE No: 192/08 dt 1.12.08)**

**(08) Night Duty Allowance :-**

This allowance is admissible to staff working from 22 hrs. to 6 hrs. for this 10 mts. for each hour is reckoned for payment of NDA as waitage to Non gazetted staff . The rate of each waitage hour is fixed on the total of Pay ,GP & DA, as such when ever D.A. is revised the NDA rate is also revised on various classification of cities.

**(09) Cycle Allowance ( Para 1605 IREC II)**

The can GM sanction this allowance to such staff @ 60/- pm to staff who travel with in the radius of 8 Km. daily .  
In one time the competent authority may sanction this allowance maximum up to the period of 2 years subject to the condition that the maintenance of cycle is being done for this purpose & utilized for duty purpose.

**(RBE No: 115/08)**

**(10) Over Time Allowance :-**

When any Railway servant performed duty beyond duty hours under HOER the over time allowance is admissible for exceeding hours.  
The supervisory / managerial or confidential staffs are not entitled for this allowance.  
The staff working in workshop Printing Press & Sheds are not entitled for the how ever they can be sanctioned this allowance with the permission of General manager for working on holidays or Sunday.

**Payment of Over Time Allowance :-**

|   |                                                   |                          |
|---|---------------------------------------------------|--------------------------|
| 1 | Above roster Hours but less than statutory limits | 1 ½ of the ordinary rate |
| 2 | Above statutory limits                            | Double the ordinary rate |

**(11) Deputation Duty Allowance :-**

**(RBE No: 129/08 dt. 24.9.08)**

The all employee of the Indian Railways those who have been on deputation and deputation duty allowance has been sanctioned by the government will be entitled for the same at the following rates wef 01.09.2008

|   |                                                                                                        |
|---|--------------------------------------------------------------------------------------------------------|
| 1 | When posted on the same station on deputation Rs. 2000/- pm or 5% of the basis pay which ever is less. |
| 2 | In all other cases 10% of the basis pay or Rs. 4000/- pm which ever is less.                           |

In accordance with the recommendation of 6th pay commission the all employee have been sanctioned transport Allowance to meet with the expenses of transportation on the following rates wef 01.09.08

| SNo.                                | Grade Pay (G.P)                                                                          | A 1 Cities  | Other Cites |
|-------------------------------------|------------------------------------------------------------------------------------------|-------------|-------------|
| 1                                   | Rs. 5400 & above                                                                         | 3200/- + DA | 1600/- + DA |
| 2                                   | Rs. 4200/-, 4600/- & Rs. 4800/- & staff below GP Rs.4200/- & drawing Pay above Rs.7440/- | 1600/- -do- | 800/- -do-  |
| 3                                   | G.P below Rs. 4200/- & drawing Pay below Rs.7440/-                                       | 600/- -do-  | 400/- -do-  |
| <b>(RBE No: 111/08 dt.12.09.08)</b> |                                                                                          |             |             |

The employee residing in the area of 1-0 km from their duty place will also be entitled for this allowance.  
The handicapped employee shall be entitled for transfer grant at the double of the above rates subject to minimum Rs.1000/- this allowance is admissible to Graded scale Casual Labour & it is not taxable.  
In case the period of absence from duty leave or other reason exceeds 30 days the period falling in the same month this allowance is not due.

Officers availing facilities of Official Car are not entitled for the Allowance.  
Officers in GP 10000/-, 120000/-, & HAG+ if surrenders official Car will be paid Rs.7000/- + DA ( Ex Residence to office)  
Staff who are availing the facility of Residential Card Pass, such employees has also been allowed TPTG as per (RBE NO:16/09 dt.23.01.09)

**(13) National Holiday Allowance :-**

It is not possible for Railway administration to keep the employee away from their work on the national holidays due to their nature of work thus to such staff national holiday allowance is admissible in lieu of working on National holiday  
( 12 days in a year) when ever booked for the purpose.  
The Vth P.C. has appealed to keep strict control on the payment of this allowance & issued instruction that only in un- avoidable circumstances the NHA is to be paid to staff who have been booked to work on National holiday.  
The rates effective from 1.9.2008 are as under

| S No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Pay range (Excl GP)                 | Rate of NHA    |      |      |     |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------|------|------|-----|--|
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Upto Rs. 7260/-                     | 170/-          |      |      |     |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rs. 7261/- to 9700/-                | 212/-          |      |      |     |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rs 9701/- to all non-Gaz. employees | 280/-          |      |      |     |  |
| <b>(RBE No: 190/08 dt. 01.12.08 &amp;109/09 dt.16.6.09 )</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                |      |      |     |  |
| <b>14) Non Practicing Allowance :-</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                     |                |      |      |     |  |
| <p>The Doctors working in Rly. hospitals including dental doctor are entitled for Non practicing Allowance on account of not allowing them the private practice at the rate of 25% of the Pay +GP subject to the condition that pay + NPA should not exceed Rs. 85000/- pm These orders are effective of 1.9.08</p> <p>This allowance will be included for retirement /death benefits, Dearness allowance, Traveling allowance, Daily allowance &amp; other allowance</p> <p><b>(RBE No: 122/08 dt. 22.09.08)</b></p> |                                     |                |      |      |     |  |
| <b>(15) Spl. Compensatory (Remote Area) Allowance :-</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |                |      |      |     |  |
| As per 6th P.C. recommendation the staff working in the classified remote area of the various states has been allowed spl. compensatory (remote area) allowance at the following rates                                                                                                                                                                                                                                                                                                                                |                                     |                |      |      |     |  |
| S.No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Grade Pay range (w.e.f 1.09.08)     | Area Part wise |      |      |     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     | A              | B    | C    | D   |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rs. 5400/- & above & HAG+           | 2600           | 2100 | 1500 | 400 |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Less than Rs. 5400/-                | 2000           | 1600 | 1200 | 320 |  |
| <b>(RBE No: 119/08 dt. 22.09.08)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |                |      |      |     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |                |      |      |     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |                |      |      |     |  |
| <b>(16) Bad Climate Allowance :-</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                     |                |      |      |     |  |
| Those staff who are working in the area which have been considered bad climate area for health by the concerned State govt. are entitled for the Bad climate allowance. The rates are as under of 1.9.2008                                                                                                                                                                                                                                                                                                            |                                     |                |      |      |     |  |
| S No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Grade Pay range per month           | Rate per month |      |      |     |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rs 5400/- & HAG+                    | 400/- P.M      |      |      |     |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rs. 5400/- & less                   | 240/- P.M      |      |      |     |  |
| <b>(RBE No: 114/08 dt. 16.9.08 &amp; 116/08 dt. 18.9.08)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                |      |      |     |  |

|                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>(17) Family Planning Allowance :-</b>                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                                                                                                                                                                              | When any employee or his wife /husband having maximum two alive children under goes family planning operation like vasectomy or tubectomy, he/ she will be allowed an amount equal the amount as per prescribed Rate in his/her pay scale ( Revised on implementation of 6 <sup>th</sup> PC)from the first day of the following month of the day of his /her operation this allowance will not be counted for any purpose .<br>The age of the person under gone family planning operation in case of male between 20 to 50 yrs. & in case of female should be between 20 to 45 yrs. |                     |
| <b>( RBE No: 151/2008 dtd. 14.10.2008 )</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
| <b>(18) Training Allowance (Teaching Allowance) &amp; Sumptuary Allowance</b>                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                                                                                                                                                                              | Trainer working as Faculty Member of Central Training Institute are paid allowance @ 30% , Staff Working in Zonal Training School & Training School of Divl. Will get 15% training allowance on Pay + GP.<br>Sumptuary Allowance is raised to Rs.3500/- p.m for Directors & HOD's. Rs.2500/- to Course Director. Rs.2000/- to Counselor.                                                                                                                                                                                                                                            |                     |
| <b>( RBE No: 156/2008 dtd. 20.10.2008 )</b>                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
| <b>(19) Special Allowance for Child Care for women with disabilities:</b><br><b>The said Allowance has been newly introduce as per 6<sup>th</sup> CPC.w.e.f. 01/09/2008.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                                                                                                                                                                              | Women with disabilities shall be paid Rs. 1000/- p.m. as a special allowance for child care. This allowance shall be paid from the time of child birth till the child is two years old. The allowance paid maximum for two children.<br>Disability means a person having a minimum disability of 40% or above.                                                                                                                                                                                                                                                                      |                     |
| <b>(RBE No. 150/2008 dtd. 13/10/2008)</b>                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
| <b>(20) Night Patrolling Allowance to Trackman:</b>                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                                                                                                                                                                              | The rates of allowance has been revised from Rs. 3/- to Rs.6/- per night, which will also be paid to the Casual Labour with temporary status.(w.e.f. 01/09/2008)                                                                                                                                                                                                                                                                                                                                                                                                                    |                     |
| <b>(21) Hill Area Allowance(1000 meter above sea level):</b>                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |
|                                                                                                                                                                              | The rates of allowance has been revised wef 01/09/2008 which is as under:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |
| S.No                                                                                                                                                                         | Grade Pay (Rs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rate Rs.(per month) |
| 01                                                                                                                                                                           | GP 5400 & HAG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 600/-               |
| 02                                                                                                                                                                           | Less than GP 5400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 480/-               |
| <b>(RBE No. 113/2008 dtd 16/9/2008)</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |

|                                                                                                                                                                                                                         |                                                |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
| <b>(22) Production Control Organisation Allowance:</b>                                                                                                                                                                  |                                                |                      |
| The allowance is paid to all such staff of production units /workshops at the following rates w.e.f. 01/09/2008.                                                                                                        |                                                |                      |
| <input type="checkbox"/> 15% of Pay to staff working upto GP Rs. 4200/-<br><input type="checkbox"/> 7.5% of Pay to SE & SSE in GP Rs. 4600/-                                                                            |                                                |                      |
| * The PCO Allowance will not be reckoned for any benefit such as DA, HRA etc.                                                                                                                                           |                                                |                      |
| <b>(RBE No. 23/2009 dtd. 06/02/2009)</b>                                                                                                                                                                                |                                                |                      |
| <b>(23) Break Down Allowance:(w.e.f. 01/09/2008)</b>                                                                                                                                                                    |                                                |                      |
| Gr D staff                                                                                                                                                                                                              | PB1 GP 1800                                    | Rs.80/- p.m.         |
| Tech. III                                                                                                                                                                                                               | PB1 GP 1900                                    | Rs.120/- p.m.        |
| Tech. I/Supervisor                                                                                                                                                                                                      | PB1 GP 2400/2800                               | Rs.160/- p.m.        |
| Sr. Tech./JE                                                                                                                                                                                                            | PB1 GP 4200 & above                            | Rs.200/- p.m.        |
| <b>(RBE No. dtd 25/9/2009)</b>                                                                                                                                                                                          |                                                |                      |
| <b>(24) Risk Allowance:-</b>                                                                                                                                                                                            |                                                |                      |
| As per 6 <sup>th</sup> CPC recommendation risk allowance has been introduced in lieu of Hospital Patient Care Allowance(HPCA) & Patient Care Allowance(PCA), which will be replaced by Risk Allowance w.e.f.01/10/2009. |                                                |                      |
| <b>(RB L.No.E(P&amp;A)II/2008/AL-6 dtd. 02/09/2009)</b>                                                                                                                                                                 |                                                |                      |
| <b>(25) Conveyance Allowance to Railway Medical Officer:-</b>                                                                                                                                                           |                                                |                      |
| The revised rate of conveyance allowance to Medical Officers is as under:-                                                                                                                                              |                                                |                      |
| Mode of Conve.                                                                                                                                                                                                          | Maximum Rs per month                           | Minimum Rs per month |
| Own Car                                                                                                                                                                                                                 | 3300/-                                         | 160/-                |
| Scooter/ Motor Cycle                                                                                                                                                                                                    | 1080/-                                         | 80/-                 |
| No mode                                                                                                                                                                                                                 | 900/-                                          | 60/-                 |
| <b>(RBE No. dtd )</b>                                                                                                                                                                                                   |                                                |                      |
| <b>(1) Allowances admissible to Running Staff Para 901 IREM :-</b>                                                                                                                                                      |                                                |                      |
| On the Railways the running & other allowance admissible to running staff as per running allowance rules.                                                                                                               |                                                |                      |
| Running duty means the practical operation of the trains, shunting operation etc. The following categories of the staff will be considered running staff.                                                               |                                                |                      |
| S No.                                                                                                                                                                                                                   | LOCO                                           | TFC.                 |
| 1                                                                                                                                                                                                                       | Drivers including motor man Rail motor Dr.     | 1. Guards            |
| 2                                                                                                                                                                                                                       | Shunters                                       | 2 Asstt. Guards      |
| 3                                                                                                                                                                                                                       | Fire man, Dsl Asstt., Elect Asstt., Asstt Drs. | -                    |
| Running allowance means the allowance paid for practical work related with running train.                                                                                                                               |                                                |                      |
| The 30% of basis pay of running staff will be considered pay element representing the running allowance which will be counted as part of pay for the following purpose.                                                 |                                                |                      |
| 1                                                                                                                                                                                                                       | Entitlement for class of passes /PTO           |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |                                                     |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------|-----------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2     | Medical facilities & treatment                      |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3     | Educational assistance                              |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4     | Compensatory allowance                              |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5     | House rent allowance                                |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6     | Entitlement for type of Rly accommodation           |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7     | Recovery of rent for Rly accommodation              |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8     | Fixation of pay in non running post                 |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9     | Dear ness allowance                                 |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10    | Over time allowance                                 |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 11    | Leave en cashment                                   |           |
| for assumption of income tax 30% of the pay will be treated as part of pay but as regards calculation of retirement benefit 55% of the basis pay shall be included as part of pay how ever for the propose of leave encashment payment only 30% of pay shall be counted as pay eliment.                                                                                                                                                                                                                  |       |                                                     |           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | S No. |                                                     | Para IREM |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1     | Killometrage Allowance                              | 906       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2     | Allowance in lieu of running room facilities        | 908       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3     | Breach of rest allowance                            | 909       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4     | Out station detentation allowance                   | 910       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5     | Average Killometrage allowance                      | 914       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6     | Leave killometrage allowance                        | 914       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7     | Accident allowance                                  | 912       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8     | Trip allowance                                      | 923       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9     | Offtg allowance                                     | 1523 RII  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1     | <b>Killometerage Allowance (Para 906 IREM I) :-</b> |           |
| This allowance is admissible to running staff as time to time revision by government on every 100 km<br>The distance is being reckoned as per distance shown in working table in force time to time either actual of Kilometer distance.<br>The shunters & other Running staff working on shunting engine are paid KMA at the rate of 15 km per hours. The duty hrs. of Running staff will be counted from signing on to signing off. The running staff comes under the continous classification of HOER |       |                                                     |           |

| S No. | Category                                      | Scale                   | The rate of running allowance Per 100 Kms of 1.9.2008 | The rate of allowance of the distance Km of 1.9.08 per 160 Kms |
|-------|-----------------------------------------------|-------------------------|-------------------------------------------------------|----------------------------------------------------------------|
| (a)   | <b>Kilometer Allowance Loco Running Staff</b> |                         |                                                       |                                                                |
| 1     | Pilot Mail Express                            | 9300 - 34800 +4200 (GP) | 170.00                                                | 272.00                                                         |

|  |                                                                                                                                                                                                                                                                                    |                                        |                               |                        |        |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------|------------------------|--------|
|  | 2                                                                                                                                                                                                                                                                                  | L.P( Passenger)/Motorman               | 9300 - 34800 +4200 (GP)       | 169.00                 | 270.00 |
|  | 3                                                                                                                                                                                                                                                                                  | L.P ( Goods )                          | 9300 - 34800 +4200 (GP)       | 168.00                 | 269.00 |
|  | 4                                                                                                                                                                                                                                                                                  | L.P (Shunt-I)                          | 9300 - 34800 +4200 (GP)       | 130.00                 | 208.00 |
|  | 5                                                                                                                                                                                                                                                                                  | L.P (Shunt-II)                         | 5200-20200 +2400(GP)          | 126.00                 | 202.00 |
|  | 6                                                                                                                                                                                                                                                                                  | Sr.Ist FM, D/Sr ALP (Dsl/.& Elect.)    | 5200-20200 + 2400(GP)         | 126.00<br>81.00(Shunt) | 202.00 |
|  | 7                                                                                                                                                                                                                                                                                  | IstFM, D/ALP(Dsl/ Elect)               | 5200-20200 + 1900(GP)         | 121.00<br>78.00(Shunt) | 194.00 |
|  | 8                                                                                                                                                                                                                                                                                  | Sr.IInd FM                             | 5200-20200 + 1900(GP)         | 121.00<br>78.00(Shunt) | 194.00 |
|  | 9                                                                                                                                                                                                                                                                                  | II FM                                  | 5200-20200 + 1800(GP)         | 102.00<br>61.00(Shunt) | 163.00 |
|  |                                                                                                                                                                                                                                                                                    |                                        |                               |                        |        |
|  |                                                                                                                                                                                                                                                                                    |                                        | <b>Tfc. Running Staff</b>     |                        |        |
|  | 1                                                                                                                                                                                                                                                                                  | Guard Mail / Express                   | 9300 - 34800 +4200 (GP)       | 154.00                 | 246.00 |
|  | 2                                                                                                                                                                                                                                                                                  | Pass Guard                             | 9300 - 34800 +4200 (GP)       | 153.00                 | 245.00 |
|  | 3                                                                                                                                                                                                                                                                                  | Senior goods Guard                     | 9300 - 34800 +4200 (GP)       | 152.00                 | 243.00 |
|  | 4                                                                                                                                                                                                                                                                                  | Goods guard                            | 5200 - 20200 +2800 (GP)       | 151.00                 | 242.00 |
|  | 5                                                                                                                                                                                                                                                                                  | Sr. Asstt. guard                       | 5200 - 20200 +2800 (GP)       | 90.00                  | 144.00 |
|  | 6                                                                                                                                                                                                                                                                                  | Asstt. guard /Break man                | 5200 - 20200 +1900 (GP)       | 86.00                  | 138.00 |
|  |                                                                                                                                                                                                                                                                                    | <b>(RBE: 202/2008 dtd. 26.12.2008)</b> |                               |                        |        |
|  | <b>(b) Allowance in lieu of R. R. facilities</b>                                                                                                                                                                                                                                   |                                        |                               |                        |        |
|  | When the running room facilities for the running staff is not available for running staff the allowance in lieu of the running room facilities is admissible on the following rates for 24 hrs. or part. This is also allowed in the mid station The rates for 1.5.98 are as under |                                        |                               |                        |        |
|  | a                                                                                                                                                                                                                                                                                  | Loco Pilot                             | Rate 36.00 for 24 hrs or part |                        |        |
|  | b                                                                                                                                                                                                                                                                                  | Guard                                  | Rate 36.00 for 24 hrs or part |                        |        |
|  | c                                                                                                                                                                                                                                                                                  | L.P ( Shunter )                        | Rate 26.00 for 24 hrs or part |                        |        |
|  | d                                                                                                                                                                                                                                                                                  | Fire man/A L.P (DSL/EL) e              | Rate 22.40 for 24 hrs or part |                        |        |
|  |                                                                                                                                                                                                                                                                                    | Asstt. Guards                          | Rate 22.40 for 24 hrs or part |                        |        |

| <b>( RB No. E(P&amp;A) 11-2005/RS-34 Dtd. 1.10.2009 )</b>                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                    |                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>(c) Breach of Rest Allowance (Para 909 IREM) :-</b>                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                    |                     |
| The Breach of Rest allowance is admissible to running staff in the following circumstance                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                    |                     |
| 1                                                                                                                                                                                                                                                                                                     | After performing 8 hrs or more running duty they are allowed 16 hrs & In case they are again booked for duty before completion of 16 hrs rest at HQ station                                                                                                        |                     |
| 2                                                                                                                                                                                                                                                                                                     | When booked for duty before completion of 16 hrs rest at HQ station                                                                                                                                                                                                |                     |
| 2                                                                                                                                                                                                                                                                                                     | For the shunters & running staff deputed on Suburban trains                                                                                                                                                                                                        |                     |
| 1                                                                                                                                                                                                                                                                                                     | When booked before completion of 2 hrs rest after 8 hrs duty                                                                                                                                                                                                       |                     |
| 2                                                                                                                                                                                                                                                                                                     | When booked before completion of 8 hrs rest. As regards rate of BORA they will be paid for 2 hrs of OTA for each hour of the Breach of Rest . The less than ½ an hour of such period will be leave & more than ½ an hour & more period will be treated full hours. |                     |
| <b>(d) Out Station Detention Allowance (Para 910 IREM) :-</b>                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                    |                     |
| When running staff is detained more than 16 hrs from signing off at out station they will be entitled for OSDA at the rate of 70 km for each 24 hrs or part.                                                                                                                                          |                                                                                                                                                                                                                                                                    |                     |
| <b>(e) Average Killometrage Allowance (Para 907 &amp; 914 IREM) :-</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                    |                     |
| a                                                                                                                                                                                                                                                                                                     | On Railways the section shall be decided where there is no possibility for caring of adequate KM & for working on such section running staff will be paid 120 km per day as average killometrage allowance.                                                        |                     |
| b                                                                                                                                                                                                                                                                                                     | When running staff is deployed on non running duty on out station & HQ station they will be entitled for average killometrage allowance as per fixed rates.                                                                                                        |                     |
| <b>(f) Accident Allowance (Para 912 IREM I) :-</b>                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                    |                     |
| When running staff is detained at any out station more than 8 hrs due to accident they will be entitled for accident allowance at the rate of 70 km for each 24 hrs or part but in case of detention is less than 8 hrs such allowance will not be admissible . The duty period will only be counted. |                                                                                                                                                                                                                                                                    |                     |
| <b>(g) Trip Allowance (Para 923 IREM) :-</b>                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                    |                     |
| The Trip allowance is admissible to running staff for working on the high speed train per trip on the following rates wef 1.9.2008                                                                                                                                                                    |                                                                                                                                                                                                                                                                    |                     |
| 1                                                                                                                                                                                                                                                                                                     | Mail/Exprss pilot                                                                                                                                                                                                                                                  | Rate 24.00 per trip |
| 2                                                                                                                                                                                                                                                                                                     | CO pilot                                                                                                                                                                                                                                                           | Rate 18.00 per trip |
| 3                                                                                                                                                                                                                                                                                                     | Passenger pilot/ Mail Guard                                                                                                                                                                                                                                        | Rate 18.00 per trip |
| 4                                                                                                                                                                                                                                                                                                     | Asstt Guard                                                                                                                                                                                                                                                        | Rate 12.00 per trip |
| <b>(h) Shunting Duty Allowance:-</b>                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                    |                     |
| <b>S.No.</b>                                                                                                                                                                                                                                                                                          | <b>Category</b>                                                                                                                                                                                                                                                    | <b>Rate Rs.</b>     |
| 01                                                                                                                                                                                                                                                                                                    | Loco Pilot                                                                                                                                                                                                                                                         | 33.50               |
| 02                                                                                                                                                                                                                                                                                                    | Guard                                                                                                                                                                                                                                                              | 26.50               |
| 03                                                                                                                                                                                                                                                                                                    | Fireman/ALP                                                                                                                                                                                                                                                        | 23.50               |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>(i) Offtg Allowance (Para 913 IREM) :-</b></p> <p>When ever any running staff is deployed in higher post for offtg. purpose they will be allowed offtg. allowance In such circumstances the 15% of the lower post shall be added for allowing all other allowances &amp; Running allowance too How ever offtg for 30 days or more on higher post necessary fixation of pay in higher grade as per normal rules will be done.</p> |
|  | <p><b>(j) Leave Mileage Allowance (LMA) :-</b></p> <p>When running staff remained on leave he will be allowed leave mileage allowance to keep his living standard accordingly .</p> <p>The calculation for LMA will be done as under :-</p> $\text{LMA} = \frac{30\% \text{ of the Basis pay}}{\text{No. of days of the month}} \times \text{leave taken}$                                                                             |

## **(20)Children Education Allowance ( CEA) & Hostel Subsidy:**

As per recommendation of 6th PC the CEA & Tution Fees/ Hostel Subsidy has been merged together & are eligible to all Rly. Servant subject to the following conditions. W.e. f 01.09.2008

1. The Allowance is eligible from Nursery to 12th STD
2. Maximum upto first 02 child & studying in School Afiliated to Board of Education.
3. Preformance criteria has been removed
4. The claims of Re-imb. Such as Tution fees, Admission, Spl. Fees for Agriculture, Electronics, Music, Practicle fees under work experience.
5. Re-imb of 01 set of Text book & Note Book
6. Two sets of uniform in a year
7. One set of School shoes
8. Annual cealing fixed @ of Rs.12000/- to be claimed Qtrly. & amount not more than Rs.3000/- Claim of one time with maximum cealing of Rs.12000/- is permitted
9. If both Husband & wife is working Only 01 can claim re-imb.
10. The claim is admissible subject to submission of Original Receipt.

Hostel Subsidy is eligible @ Rs.3000/- pm per Child subject to fulfilling of usual terms & conditions.

**( RBE No: 135/08 dt 1.10.08, 78/09 dt. 04.05.09 & 100/09 dt. 10.06.09 )**

The condition of payment of H.S only on transfer account has been relaxed . It will also be paid to all staff who are keeping the child in Hostel of a Residential School away from the station they are posted/ or residing, irrespective of any transfer liability.

**( R.B.No: E(W)2008/ED-2/4 td. 06.11.2009)**

## **Facilities to SC/ST Rly. Employees Association**

Supply of circulars on Reservation Rules & Establishment or other relevant matters. Maximum two informal meetings in a year. Two card passes in 1<sup>st</sup> Class/AC Sleeper to President /General Secretary at Central and Zonal levels. Stay Facilities as available as per eligibility on payment of usual charges. Allotment of a suitable office accommodation at Board, Zone and Divisional levels. Special Casual Leave and special passes to not more than 20 office bearers to attend informal meetings at Divl./Workshop level.

**Recognized Unions** -Registered under Trade Union Act & recognized by the Government

**Facilities to Union** - 1) Through PNM 2) Through JCM Govt. as a whole. 2) SBF Membership 4) PREM 5) Staff Committees at important stations 6) Issue of card passes 7) Special CL for meeting 8) To hold meeting on Railway land with prior approval 9) Accommodation & telephone on rental basis 10) Space for

notice board 11) Supply of copies of RB's letters 12) Collection of subscription - 20 yards away from pay counter 13) Bearers cannot be transferred without two months notice 14) Foreign service contribution towards Pension/PF/Gratuity 15) Protection for holding meeting 16) Deputation for Union work with protection of promotion.

### **Transfer of Office Bearers of Recognized Union**

If transfer is in the interest of Administration, sufficient two months notice is given. Fact brought to the notice of DRM/CPO. Any objection by Union, the decision of GM will be final. If transfer is within the same station from one Administration to another, this procedure/practice be followed. In case of periodical transfer as distinct from transfer to other special consideration & if GM does not cancel, the order of transfer may be allowed till next election/next 1 year. If transfer is on promotion, the Union be advised of the proposed transfer & pend till employee wishes to refuse the promotion. If transfer is at own request/mutual, there is no need to follow this procedure. Intimation is necessary. In case of following, only advice be sent. i) If Union official involves in a SPE case. ii) If transfer is from one section/department to another in same office. iii) If involved in gross violation of safety regulations, GM can transfer Union official.

### **Aim**

- 1) To maintain harmonious relations between Officers & Organized Labours
- 2) Redressal of grievances of RSs
- 3) To maintain contact with Organized Labours
- 4) To solve disputes & differences bet. Organized Labours & Administration.

|                           |           |                  |
|---------------------------|-----------|------------------|
| Railway Board             | Zonal     | Divisional       |
| Chairman - MS             | GM        | DRM              |
| Secretary - Advisor Staff | CPO/IR    | SDPO             |
| Members - 20              | 20        | 20               |
| Quarterly                 | Quarterly | Once in 2 months |

Individual DAR cases are not discussed, however, no hard and fast rule regarding this. Only policy matters are discussed.  
Maximum -30 items - 6 Items per branch allowed.

## **TRADE UNION ACT**

A Trade Union is a continuous association of wage earners for the purpose of maintaining and improving the conditions of workers and their lives. Salient features of the Trade Union Act, 1926 are -

1. This act was passed in 1926 to be implemented from 1.6.27.
2. Any seven or more persons can form an Association and get registration.
3. Registrar can withdraw or cancel the registration of union.
4. Legal protection shall be given to union office bearers against criminal proceedings, but that must be for union working only.
5. The union may raise separate funds other than subscriptions on purely voluntary basis for promotion of social or political interest.
6. Unions are to define their aim and objects for its constitution and maintain and get it audited of accounts.
7. Registrar can inspect the accounts and the unions books at any time.
8. If unions indulge in (a) unfair practices; (b) go for irregular strike; (c) submit false statements, the punishment would be total withdrawal of recognition/registration.
9. If employer (a) interferes in the working of union; (b) influences for against the union; (c) discriminates with any office bearers of the union; (d) refuses to negotiate or deny privileges to unions, he/she is liable to be fined.
10. Rights and liabilities of trade union and the purpose for which the union fund may be utilised have been defined.

### **Advantages of Trade Unions**

1. A boon for working class.
2. Brings all round improvements in working conditions.
3. Brings industrial peace.
4. Safeguards against the possibility of exploitation of the workers.

### **Dis-advantages of Trade Unions**

1. Workers go on strike on flimsy grounds.
2. Hostile attitude towards improvements and improved method of production.
3. Go Slow policy reduces the national income.
4. Creates artificial scarcity of labour.



## 2. The Railway Board Level :

- a) Chairman- Member staff  
Secretary - Dy. Director Establishment
- b) Subject agenda must be circulated one month in advance. Out of agenda items may also be discussed with permission of chairman and chairman can discuss any item out of agenda
- c) Meeting : once in three months separately with representatives of NFIR & AIRF.
- d) Matters discussed which come within the powers of Railway Board or which could not be settled at the Zonal Railway level.

## 3. Ad-hoc Tribunal Level :

- a) The matter of important nature on which no agreement is reached up to the Railway Board level.
- b) Chairman would be retired judge of High court or Supreme court having his own staff, and equal representatives of labour and administration.
- c) The award given by the tribunal is not binding. The government may accept, reject or modify the award of the tribunal.
- d) The matter settled by the tribunal or decision of tribunal once accepted by the government shall not be opened by unions for a period of two years.
- e) Where the government rejects or modifies the decision of the tribunal then the same items may be raised at the end of the year by the union.

## J C M

### JOINT CONSULTATIVE MACHINERY

#### **Object:**

With a view to have harmonious relations between government and its employees in matters of common concern and with the object of further increasing the efficiency, the government of India have established a machinery known as the joint consultative machinery.

#### **Subject matter :**

JCM may discussed matters relating to conditions of service, welfare of employee and measures to improve efficiency and standard of work. No individual cases can be discussed in JCM.

JCM works at three-tier basis.

1. National Council
2. Departmental council
3. Regional council

#### **1. National Council :**

- a) The national council will deal with matters effecting the all central government employees of different departments such as pay and allowances, minimum wages, weekly hours of rest etc.
- b) Chairman : cabinet secretary of government of India.  
Administrative side- up to 25 members appointed by the government from different central government department.  
Staff side : upto 60 members who will be nominated by the federation, recognised trade unions of different central government department.  
Secretary : each side will appoint its own secretary
- c) National council may appoint a committee of experts to study and report on any matter falling within its scope.
- d) The subject agenda must be circulated one month in advance.
- e) Any matter disposed off cannot be placed on agenda during next 12 months.
- f) If there is no agreement between the two then the matter is referred to the Board of Arbitration whose decision would be final and binding on both the parties, only parliament can change it otherwise it cannot be touched and remains in operation for a period of three years.
- g) It must meet once in six months.

2. Departmental Council :

- a) Every revenue earning ministry must have a departmental council
- b) It deals with the matter effecting all Railway employees.
- c) Chairman : Chairman Railway Board  
Administrative side : upto 10 members nominated by the Rly board.  
Staff side : upto 60 members nominated by AIRF & NFIR.
- d) Subject agenda must be circulated one month in advance and of agenda items may also be put up with the permission of the chairman
- e) It must meet once in 4 month.

3. Regional Council :

It deals with the common problems of the employees of a particular reason.

Chairman would be the senior most officer of that perticular reason.

Both side will nominate their representatives.

**P R E M**  
**Participation of Railway Employee in Management**

It was setup in the ministry of Railway in the year 1972 and the Zonal Railways in 1977.

On Indian Railways it is working on three-tier basis.

1. The Railway Board Level  
( Corporate Enterprise Group of Labour of Management)
2. The Zonal Railway Level
3. The Divisional Railway Level

Object:

- To have better and systematic participation of labour in management with the main objective of improving the efficiency viability of Railway organisation and building the image of Railways as a service organisation
- To proved free flow of exchange of ideas on the running and shaping of Railway organisation
- Apprise the investment programme particularly in regard to housing and welfare activities.

Note : Staff matters could not be discussed unless linked with the overall productivity of the organisation.

**1. The Railway Board Level :**

Chairman - Chairman Railway Board  
Convenor - Secretary Railway Board  
Administrative side - Members Railway Board, Advisers & ED's,  
Staff side - Four representatives of NFIR & AIRF each.  
Four representatives of federation of Railway officers.  
Four representatives of federation of promotee officers association

**2. The Zonal Railway Level**

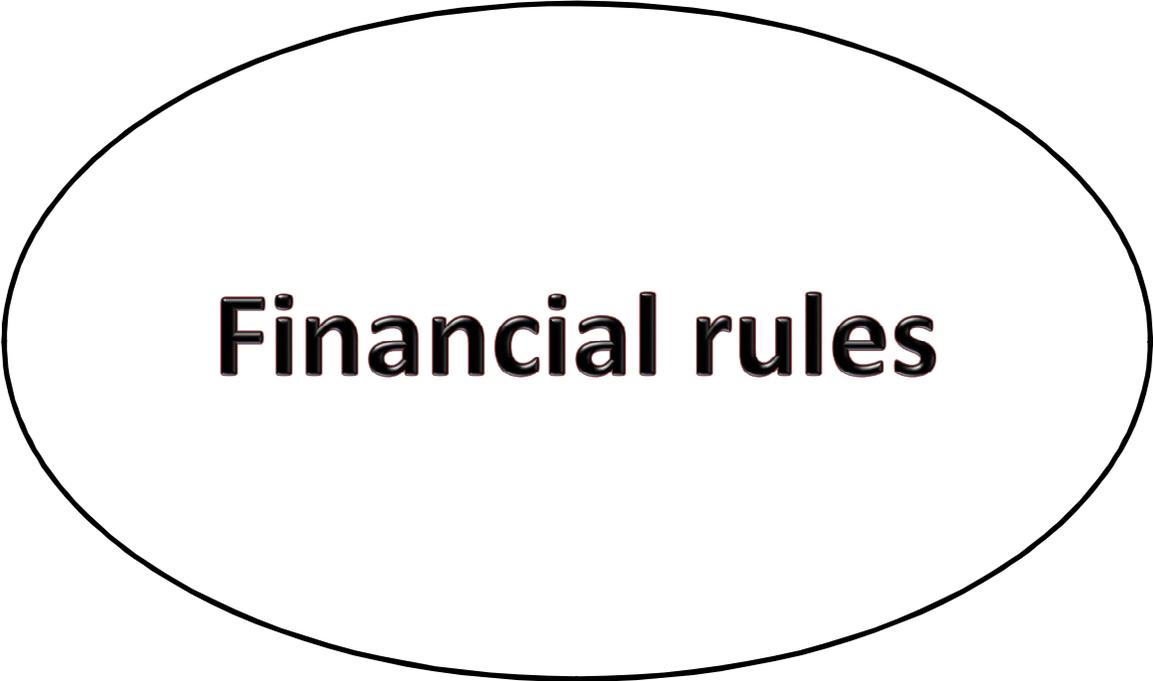
Chairman - GM  
Convenor - Dy. GM (G)  
Administrative side - AGM & PHOD's  
Staff side - Four representatives of NRMU & CRMS each  
Four representatives of Railway officers association.  
Four representatives of promotee officers association.

**3. Divisional Railway Level :**

Chairman - DRM  
Convenor - Sr. DPO/ DPO  
Administrative side - ADRM & Branch Executives  
Staff side - Four representatives of NRMU & CRMS each

Four representatives of  
Railway officers association.  
Four representatives of  
promotee officers  
association.

**Meeting :** once in three months at all three levels.



**Financial rules**

# Financial rules

## RAILWAY BUDGET

### Introduction and definition: -

Budget is a statement of the estimated annual receipts and expenditure both on capital as well as revenue transactions of an organization. It is a process of planning and reviewing the activities of an organization. Railways being a Govt. of India department, receipts and payments of the system were used to be merged in the General Budget of the Govt. of India. As a result of the recommendations of the "ACWORTH COMMITTEE" during 1920-21, it was decided to separate the finances of Railways from General Finances with the objects of securing stability for General revenues and to strengthen the Railways finances. This is generally known as "Separation Convention of 1924". Since then the Railway Budget is submitted in advance of the General budget.

In terms of article 112 of the Constitution of India, the budget is presented to both the Houses of parliament viz. Lok Sabha and Rajya Sabha.

The expenditure on Railways may be either voted or charged. The expenditure covered under the former category requires the approval of parliament. But in respect of charged expenditure the sanction of the President of India is conveyed without being submitted for the vote of Parliament. The items of expenditures that are covered under this category are as under: -

- i) Interest, sinking fund charges and redemption charges on loan and debts.
- ii) Salary, allowances and pension payable to or in respect of Comptroller and Auditor General of India.
- iii) Any sum required satisfying any judgment, decree or award of any court or arbitration tribunal.
- iv) Any other expenditure declared by the constitution of India or by Parliament by law to be so charged.

### THE SOURCE OF FUNDS FOR THE RAILWAY ORGANIZATION: -

#### CONSOLIDATED FUND OF INDIA.

In terms of article 266(I) of the Constitution of India, a fund is created which will act as a reservoir in which all the earnings flow (credited) and from which the expenditures of

Government as authorized by the Parliament will be made. Central Government is having Consolidated Fund of India. Any expenditure to be made from this fund needs Parliament's sanction/votes. For this purpose, a bill known as "Appropriation bill" is required to be introduced by Railway minister in Parliament. The bill is discussed and when passed by the Parliament is send to the President of India for his assent. When the assent is given by the President, the bill gets converted into the "Appropriation Act" and this act enables to withdraw the money from the Consolidated Fund Of India.

### **CONTINGENCY FUND OF INDIA.**

Normally all expenses incurred by the Government should be met out of consolidated fund of India with the vote of the parliament or Appropriations sanctioned by the President. However, to meet unforeseen contingencies when the expenditures cannot be met out of available grants and the vote of the parliament cannot be obtained due to the same not being in session or dissolved the expenditure is met out of fund created for the purpose under article 267(II) which is known as "Contingency Fund Of India". The fund is under the control of President of India. As far as Railways are concerned, Financial Commissioner (Railways) controls the fund.

This fund is used as and when the contingency arises. Money can be withdrawn from this fund on an application addressed to the President and is given as an advance which needs recoupmnt. The amount from this fund can be withdrawn when the parliament is not in session and to meet the unforeseen expenditure, which cannot be met from out of the amount of grant available.

As soon as parliament comes to session an "Accommodation bill" is passed and amount is recouped from Consolidated Fund of India.

### **DEMANDS FOR GRANTS: -**

The budget proposals of the expenditures to be met out from the "Consolidated fund of India" should be presented in the form of Demands for Grants. Parliament has got the powers to assent or to refuse to assent or to reduce the amount proposed by the Railway Ministry during the course of discussion on Railway budget. Such powers are exercised to cut motion. The voted part of expenditures together with the charged appropriation are presented to the parliament in the form of Demands for Grants. At present there are sixteen demands for Grants which are grouped under seven categories viz.

| <b>Group no.</b> | <b>Group</b>                                          | <b>Demand no.</b> | <b>Name of the demand.</b>                          | <b>Classification.</b> |
|------------------|-------------------------------------------------------|-------------------|-----------------------------------------------------|------------------------|
| I                | Policy formation and services common to all Railways. | 1                 | Railway Board                                       | -----                  |
|                  |                                                       | 2                 | Research, Audit and Miscellaneous Establishment.    | -----                  |
| II               | General Superintendence and Services on Railways.     | 3                 | General Superintendence and Services.               | A                      |
| III              | Repairs and Maintenance                               | 4                 | Repairs and maintenance of Permanent way and works. | B                      |
|                  |                                                       | 5                 | Repairs and maintenance of Motive Power             | C                      |
|                  |                                                       | 6                 | Repairs and maintenance of Carriage and wagons.     | D                      |
|                  |                                                       | 7                 | Repairs and maintenance of Plant and Equipments.    | E                      |
| IV               | Operations                                            | 8                 | Operating expenses Rolling stock and Equipments.    | F                      |
|                  |                                                       | 9                 | Operating expenses Traffic                          | G                      |
|                  |                                                       | 10                | Operating expenses Fuel                             | H                      |

|     |                                                     |    |                                                                                                                   |                          |
|-----|-----------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------|--------------------------|
| V   | Staff welfare, Retirements benefits & miscellaneous | 11 | Staff welfare and amenities                                                                                       | J                        |
|     |                                                     | 12 | Miscellaneous Working Expenses.                                                                                   | K                        |
|     |                                                     | 13 | PF, Pension and Retirement benefits.                                                                              | L                        |
| VI  | Railway funds and payment to General Revenue.       | 14 | Appropriation to Railway Funds                                                                                    | M                        |
|     |                                                     | 15 | Dividend to General Revenue, Repayment of loan taken from General Revenue and Amortization of Overcapitalization. | -----                    |
| VII | Works Expenditures                                  | 16 | Assets – Acquisition, Construction and Replacement.                                                               | P,Q,R,S<br>Capital Fund. |

### **PREPARATION OF ANNUAL BUDGET: -**

Preparation of annual budget is done by the Railway Administration and other production units. The revised estimates for the current financial year and the budget estimate for the ensuing financial year are prepared and submitted to Railway board in the month of November every year.

The estimation is done on the basis of –

- 1) Actual expenditure for the previous year under each demand.
- 2) Actual expenditure for the first seven months of the previous financial year under each demand.
- 3) Actual expenditures for the first six months of the current financial year and the approximate expenditures for the seventh month.

The revised requirement of the remaining five months of the year are thus worked out which are known as revised estimates for the current year. The same become budget

estimates for the ensuing financial year after taking into account special features and known factors for the next financial year.

The budget is presented to the parliament duly compiled by the Railway board in the month of February each year on the dates fixed for the purpose.

### **PRESENTATION TO THE PARLIAMENT: -**

The consolidated budget proposals are presented before the parliament by Honorable Railway Minister in the following form –

- 1) The speech of Railway Minister (Yellow Book)
- 2) The book of Demands for Grants(Blue Book)
- 3) The explanatory memorandum(White Book)
- 4) Works, Machinery and Rolling Stock Programme(Pink Book)
- 5) Budgetary Notes(Green Book)

### **APPROPRIATION BILL: -**

In terms of article 114(I) of the Constitution of India, after the budget is voted by the Parliament and Appropriations sanctioned by the President, an Appropriation bill is introduced in the Parliament, on passing of the same, it becomes Appropriation Act. This act authorizes Government to withdraw money from consolidated fund of India to the extent sanction for incurrance of expenditure.

### **RULES OF RE-APPROPRIATION: -**

The following are the rules of Re-appropriation: -

- 1) Re-appropriation is not permitted from one demand to another demand.
- 2) Re-appropriation is not permitted from capital to revenue demands and vice versa.
- 3) Re-appropriation is not permitted from voted expenditure to charged expenditure and vice versa.
- 4) Any surplus amount that remains unutilized by the end of the financial year lapses with that year and is not available for spending during the next financial year.
- 5) Railway Board is empowered to make re-appropriations within the same demand.
- 6) GM is empowered to make re-appropriations from one subhead of demand to another subhead of demand but within the same demand.

## **BUDGET REVIEWS: -**

In order to ensure that the budget allotments placed at the disposal of the Railway administration is not exceeded and to ensure that funds allotted are sufficient to cater to the requirements, the budget is reviewed thrice in a year.

### **AUGUST REVIEW.**

The first review is conducted in the month of August, hence is known as August review. In this review, the actual expenditure of the first three months and approximate expenditures for four months is compared with the budget grant for the current year and actual expenditures for the previous financial year. The expenditure is also compared with the budget proportion and the actual expenditures of the corresponding period of the previous financial year.

The variation in above figures are analyzed and net additional requirements(if any) are asked for during this review.

### **REVISED ESTIMATES AND BUDGET ESTIMATES.**

The second review is conducted in the month of November each year, which is known as **revised estimate** for the current financial year and **budget estimates** for the ensuing financial year. The actual expenditures for the first six months and approximate expenditures for the seventh month of the current financial year is compared with –

- 1) Budget proportion

- 2) Expenditure incurred during the last financial year.
- 3) Expenditure incurred during the corresponding period of the last financial year.
- 4) Budget grant.

Additional requirements or surrender of funds, if any can be done at this stage.

### **FINAL MODIFICATION.**

The third review is conducted in the month of February year and is known as Final Modification. Actual expenditure during first nine months and approximate expenditure for the tenth month is reviewed and compared with –

- 1) Budget grant / Revised grant (if received).
- 2) Budget proportion.
- 3) Actual expenditure during the last financial year.
- 4) Actual expenditure during corresponding period of the last financial year.

### **APPROPRIATION ACCOUNT: -**

After the closure of accounts for the financial year, report is submitted to the Parliament as to how far the budget estimates have been realized i.e. as to how the funds voted by the Parliament and Appropriations sanctioned by the President have been utilized. Three sets of figures are reported namely, Original Grant, Final Grant and Actual Expenditure. Comparison between latter two is made and Variations are worked out duly explaining the same.

The Appropriation Accounts along-with Railway's Audit report thereon are presented to the Parliament through Public Account Committee, which is a committee nominated by the Parliament. On passing / acceptance of the Accounts by the parliament, the excess over sanctioned appropriations is regularized and thus cycle of Parliamentary control over Railway's Finance is ensured.

## **CONTROL OVER EXPENDITURE: -**

The expenditure on railways may be either revenue or capital, chargeable to works demand. The control over expenditure exercised against these heads involves two aspects. –

a) Control with reference to sanctions.

- i) Delegation of powers i.e. Railway board to General Managers and to lower sanctioning authorities.
- ii) In exercise of their financial powers, the sanctioning authority must pay due regard to the “Cannons/Standards of Financial Propriety”.

b) Control over actual expenditure incurred/booked in the books of railways.

- i) Control over expenditures against the budgetary allotments.
- ii) Control over expenditures against the estimated cost as shown in works, machinery and rolling stock programme.

In order to ensure that the budget grants as voted by the Parliament and appropriations as sanctioned by the President are utilized for the purpose they are voted/sanctioned, the control is exercised. The requirements of railways are more as compared to the resources available, hence it is important to exercise control over expenditure. Further, railway is also a commercial organization in addition to Government organization, hence if railway is to earn profit, it is necessary to ensure that control over expenditure is exercised. The control over expenditure is exercised by –

### **1) THE PARLIAMENT.**

As the sanctioning authority for incurrance of expenditure, the parliament exercises control over expenditure by reviewing the Appropriation accounts and the audit report thereon critically. The scrutiny is done by the Public Account Committee on behalf of the Parliament with a view to satisfy that the amount shown in accounts as having been spent was legally available and was spent for the purpose for which the amount was made available.

The control over expenditure is exercised by the Parliament through –

- i) Railway convention committee.
- ii) Estimates committee.
- iii) Discussion on Railway budget.
- iv) National Railway user's consultative committee.
- v) Committee on subordinate Legislation.
- vi) Committee on Government assurances.
- vii) Public Accounts Committee.

## 2) THE EXECUTIVES.

Incurrence of expenditure is subject to preparation or prior vetting of the estimates by the Accounts department, sanction of the competent authority being obtained. This is ensured by the executives. He further ensures that the work progresses as per the sanctioned estimate and budget provision. The provisions of Cannons/Standards of Financial Propriety are also to be kept in view, while granting sanctions to the expenditure.

### **Cannons/Standards of Financial Propriety –**

In exercise of their financial powers, the sanctioning authority must pay due attention to the following principles –

- i) The expenditure should not prima facie be more than the occasion demands and that every Government should exercise the same vigilance in respect of expenditures incurred from public money as a person of ordinary prudence, would exercise in respect of expenditure of his own money.
- ii) No authority should exercise its powers of sanctioning expenditure to pass an order, which will be directly or indirectly to its own advantage.
- iii) Public money should not be utilized for the benefit of a particular person or section of a community unless –
  - a) The amount of expenditure involved is insignificant.

- b) A claim for the amount could be enforced in a court of law.
- c) The expenditure is in pursuance of recognized policy or custom.
- iv) The amount of allowances such as travelling allowance granted to meet expenditure of a particular type should be so regulated that the allowance are not on a whole a source of profit to the recipient.

### **3) THE ACCOUNTS DEPARTMENT.**

The internal check carried out by the Accounts office on bills, vouchers, estimates and proposals is primarily to ensure that the same are as per codal provisions, however, the end goal is to ensure control over expenditure.

On passing of the bills and adjustment of vouchers, the same are entered in subsidiary registers like Revenue allocation register for revenue expenditure and Works register for works expenditure. At the end of the month these registers are closed and Control statements are prepared and submitted to the executives to enable them to know the pace of expenditure. Control over expenditure is exercised by comparison of these statements with budget proportions for the month and to end of the month. Similarly, the totals of works registers are compared with budget grant/proportion and estimates to exercise control over expenditure against budget grant and sanctioned estimates.

### **4) THE AUDIT DEPARTMENT.**

The audit department as representative of The Comptroller and Auditor General Of India, scrutinize the Appropriation Accounts with a view to see that the accounts are properly maintained and the figures exhibited in the appropriation accounts are correct as per the books. They also ensure that the expenditure is regular and properly maintained. The scrutinized Appropriation Accounts along-with remarks offered by the audit are submitted to the Railway Board. Railway Board submits the consolidated Appropriation Account to the Parliament.

### **PERFORMANCE BUDGET: -**

The expenditure on Indian Railways is fixed in nature to the extent of 60%, to exercise control over expenditure and to know the result of expenditure, a new scheme known as Performance budget is introduced on the Railways. As per this scheme, availability of funds and results obtained from its utilization are compared to know whether the results are to the extent they were expected. In other words, the financial input is compared with the physical output. So far this scheme is put in use for demand no.10 i.e. Operating Expenses – Fuel, since the norms of comparison could be laid down. The scheme is still in the experimental basis on the Railways and will take a lot of years before it could be successfully implemented.

### **INTEGRATED BUDGET: -**

The annual budget of the Railways consist of assessment of earnings and expenditures for revenue budget and that related to investment decisions taken through Works, Machinery and Rolling stock programme i.e. Works Budget. In order to correlate the decisions relating to all aspects, a consolidated budget called Integrated budget is submitted by Railway for presentation to the Parliament. This budget includes Revenue as well as Capital budget.

This budget is prepared under personal guidance of General Manager with FA & CAO's assistance. The Integrated budget will include the projection of traffic and earnings, working expenses, estimated financial results for the ensuing financial year, operating ratio as well as the financial viability of the system.

### **ZERO BASE BUDGET: -**

Zero base budgeting can be defined as –

- 1) An operating planning and budgeting process which requires each manager to justify his entire budget request in detail and shifts the burden of proof to each manager to justify why he should spend any amount. The procedure requires that all activities and operations be identified in decision packages, which will be evaluated and ranked in order of importance by systematic analysis.

- 2) In most literal sense, Zero base budgeting implies constructing a budget without any reference to what has gone before, based on a fundamental re-appraisal of purposes, methods and resources.
- 3) Zero base budgeting is a technique/management tool which provides a systematic method for involving all operations and programmes current or new, allows for budget reduction and allows re-allocation of resources from low priority programme.

**Budget making under Zero base budgeting involves the following: -**

- i) Identification of Organization's structures management, decision units and objectives.
- ii) Formulation and development of decision packages.
- iii) Review and prioritization of decision packages.
- iv) Allocation of resources for the chosen decision packages i.e. preparation of budget.

## Rules of Allocation

A careful and well-placed analysis of all expenditure and receipt is most necessary to effective financial control. It is the primary object of any accounting classification. It is necessary to secure uniformity of accounting to render suitable comparison between the accounts of different railways. It also helps in preparation of budget and estimates. The labor spent in the classification will be of no use if accounts office fails to maintain proper record as per prescribed classification or if the executive omits to review periodically with the assistance of such record of earning and expenditure for which they are responsible.

The primary responsibility for correct allocation of the initial record in support of receipts and payments rests with the executive offices. The account office is responsible for ensurance of correct allocation. Allocation is the process of indicating nature of expenditure (Head of accounts) under which expenditure is to be finally recorded.

### CLASSIFICATION OF EXPENDITURE

The railway expenditure has been classified in to two groups namely: -

- 1) Capital Expenditure: Under this category such items of expenditure are included which pertain to acquisition of concrete assets, constructions, replacement and renewals of assets such as cost of land, Construction of staff quarters, Construction of Bridges etc.

Expenditure incurred on amenities to passengers and other railway users, amenities to staff, unremunerative operating improvement works when incurred on acquiring concrete assets is not treated as capital expenditure but is accounted for separately under “Development Fund” and “Open Line Works Revenue”.

The Expenditure on renewals and replacements of railway assets is made out from a separate fund commonly known as “Depreciation Reserve Fund”. For the purpose of revenue allocation the revenue working expenses for the railways are classified under thirteen major heads with a separate abstract for each sub major head.

- 2) REVENUE EXPENDITURE: - These items of expenditure relate to the working of railway, repairs and maintenance and operation of rolling stock, Plant and Machinery and equipment's.

| <b><u>ABSTRACT</u></b> | <b>ACTIVITY</b>                                                    | <b>DEMAND NO.</b> |
|------------------------|--------------------------------------------------------------------|-------------------|
| A                      | <u>General superintendence and Services</u>                        | 03                |
| B                      | <b><u>Repairs and Maintenance Of permanent ways and works</u></b>  | 04                |
| C                      | <b>Repairs and Maintenance of Motive Power</b>                     | 05                |
| D                      | <b>Repairs and Maintenance of</b><br><i>Carriage and wagons</i>    | 06                |
| E                      | <b>Repairs and Maintenance of</b><br><i>Plants and equipment's</i> | 07                |

|   |                                                              |    |
|---|--------------------------------------------------------------|----|
| F | <b>Operating expenses Rolling</b><br><i>Stock</i>            | 08 |
| G | <b>Operating expenses Traffic</b>                            | 09 |
| H | <b>Operating expenses Fuel</b>                               | 10 |
| J | <b>Staff welfare and amenities</b>                           | 11 |
| K | <b>Miscellaneous Working Exp.</b>                            | 12 |
| L | <b>P.F. ,Pension and other</b><br><i>Retirement Benefits</i> | 13 |
| M | <b>Appropriation to Funds</b>                                | 14 |

The items of expenditure which are incurred on repairs and maintenance of various assets such as railway track, bridges, service and residential buildings etc. are in the nature of day to day expenses. To keep the organization running and also to enable the existing assets to give the same services and to keep them in good service condition for achieving the above purpose the revenue working expenses of the railways has been classified in to thirteen abstracts and each abstract being given a different alphabet to identity the expenditure.

From first April of 1979 the entire structure of railways Demands for Grants and the classification of earning and expenditure has undergone complete revision and accordingly Revenue abstracts have been utilized for recording the revenue working expenses. The Demands have been further classified in to main heads, sub heads and detailed heads to form the allocation for any expenditure. The allocation will be in eight digits, which will in three parts.

Part I: - This part gives the demand applicable as per the nature of expenditure and consists of First 3 digits. The same can also be denoted by corresponding abstract applicable to the demand.

Part II: - Second group of three numerical digits indicate the main head of account which individually indicate the minor head, sub head and detailed head respectively.

Part III: - This part consist of two numerical digits which represents the primary unit i.e. object of expenditure.

Capital nature of expenditure is mainly divided in to five heads of allocation i.e. Capital, DRF, DF, OLWR and Capital Fund.

The introduction, abolition and change of nomenclature of any main/sub head or transfer of detailed head from one main head of one group to any other group or re-arrangement of the abstract is not within the power of Railway Administration. FA&CAO with the approval of GM may open a new detail head or sub head in extreme emergency.

#### PRIMARY UNITS

- 01 Salaries and Wages
- 02 Dearness allowance
- 03 Productivity linked bonus
- 04 House rent allowance
- 05 City compensatory allowance
- 09 Wages of casual labors
- 10 Mileage or K.M. allowance
- 11 Over Time allowance
- 12 Night Duty allowance
- 13 Other allowances
- 14 Fees and Honorarium
- 15 Transfer allowance
- 16 Travelling allowance including air travel
- 17 Air travel expenses sanctioned in lieu of privilege passes
- 18 Office expenses
- 19 Rent for P & T, Telephone charges including trunk calls.
- 21 Advertisement expenses.
- 22 Utilities water, electricity etc.
- 23 Rental for office equipment other than data processing.
- 24 Printing and stationary including publications.
- 27 Cost of material from stock.
- 28 Cost of material direct purchases.
- 31 Fuel for other than traction.
- 32 Contractual payments.
- 33 Transfer of debits and credits from one unit to another.
- 34 Adjustment of wages on POH and other repairs from WMS account to revenue heads.
- 36 Excise duty for purchases of material.
- 37 Customs duty
- 38 Sales tax.
- 39 Other expenses.

The following primary units are used for expenditure for works: -

- 1 Pay and allowance
- 2 Payments to casual labor.
- 3 Payments to contractors.
- 4 Direct supply of material.
- 5 Stores supplied from stock.
- 6 Freight on stores.
- 7 Credit for released material.
- 8 Others.
- 9 Transfer of debits/credits effecting Capital Works Expenditure.
- 10 P.L.B.
- 11 Excise duty for purchases of material.
- 12 Custom duty.
- 13 Sales Tax.

The revised classification of expenditure on works irrespective of whether they are charged to capital, DRF, DF, OLWR will come under single demand no 16 namely Assets acquisition, construction and replacement. The accounting classification for works expenditure is in the form of 7 digits 4-module alphabetical code.

The first module which is an alpha indicates the source of fund namely capital, DRF, DF, OLWR as the case may be.

The second module of 2-digits is numerical this will represent the standard plan head.

The third module, which is also numerical, will represent the two digits corresponding to the sub-detailed head of classification giving the details of the asset acquired, constructed or replaced.

The last module, which is also numerical 2-digit module, will indicate the primary unit or object of expenditure.

The following plan heads are often used under demand no 16. These are also known as minor heads or plan heads.

| PLAN HEAD | NATURE OF WORK                  |
|-----------|---------------------------------|
| 11        | New lines construction.         |
| 12        | Purchase of new lines           |
| 13        | Restoration of dismantled lines |
| 14        | Gauge conversion                |
| 15        | Doubling                        |
| 16        | Traffic facilities              |
| 21        | Rolling stock                   |
| 31        | Track renewals                  |
| 32        | Bridge work                     |

|    |                                                                     |
|----|---------------------------------------------------------------------|
| 33 | Signaling and Telecommunication works                               |
| 34 | Taking over of live wires from P&T department                       |
| 35 | Electrification projects                                            |
| 36 | Other Electrical works                                              |
| 41 | Machinery and Plant                                                 |
| 42 | Workshops including production units                                |
| 51 | Staff Quarters                                                      |
| 52 | Amenities for staff                                                 |
| 53 | i) Passenger Amenities<br>ii) Other Railway users Amenities         |
| 61 | Investment in Government commercial undertaking, Road services      |
| 62 | Investment in Government commercial undertaking, Public undertaking |
| 65 | Other specified works                                               |
| 71 | Stores Suspense                                                     |
| 72 | Manufacturing suspense                                              |
| 73 | Miscellaneous Advance                                               |
| 81 | Metropolitan Transport Project.                                     |

The heads of accounts are financed from  
**CAPITAL:** Loan from General Revenues.  
**DRF, DF, and CAPITAL FUND:** Internal Resources.  
**OLWR, REVENUE:** Current Revenue.

Expenditure incurred for creation/acquisition of assets for the purpose of earnings or possession is termed as capital expenditure

### **CAPITAL.**

Capital bears/is debited with: -

- 1) The costs of land other than for quarrying and mining purpose.
- 2) The first cost of construction and equipment of a line under construction whether commercial or strategic whether remunerative or unremunerative and New production unit.
- 3) The cost of maintenance of a section of a line under construction not opened for traffic.

- 4) The cost of any additions to the line or equipment estimated to cost more than Rs1/- lakh (New Minor Works Limit) when not chargeable to DF or OLWR.
- 5) The full cost of replacement of an asset where the original cost was charged to revenue, being within New Minor Works Limit but is now more than Rs1/- lakh provided it is not chargeable to DF or OLWR.
- 6) The cost of any additional plant and machinery not connected with any specific work where it exceeds the New Minor Works Limit.
- 7) The cost of any tools and plant specially purchased and any post specially created for the supervision or construction of a work chargeable purely to capital.
- 8) The cost of construction and equipment of unremunerative new lines (Other than Rolling stock and Land) and the cost of Maintenance of a section of new line not opened for traffic though remunerative.
- 9) The cost of Quarters w.e.f. 1.4.1974 onwards including the cost of fans and other amenities in type I and II Railway quarters constructed prior to 1.4.1974

Capital is credited with :-

- 1) The cost at the debit of capital of any Asset (other than land) which is abandoned or disposed off without being replaced.
- 2) The sale proceeds of any land acquired at the cost of capital when it is sold or surrendered.
- 3) The difference between the cost at the debit of capital of a replaced asset and the cost of its replacement, when the cost of replacement is chargeable to DRF and is less than the cost at the debit of capital.
- 4) The cost of labour originally incurred in laying the assets or part thereof, when such items are subsequently transferred for the use on a new work.
- 5) The original cost at the debit of capital of an asset replaced at the cost of OLWR / DRF.

### **Capital fund.**

The existing Revenue Reserve Fund has been abolished, with effect from 1992-93. In order to reduce over capitalization and to enable Railways to raise internal resources for meeting their increasing requirements for capital expenditure a new fund "CAPITAL FUND" has been created. This fund will bear the expenditure hither to chargeable to capital subject to availability of funds and provision in the sanctioned budget.

The expenditure on plan head 12 to 16, 21, 31, 32, 34 to 36, 41, 42, 52,53, 61, 62, 64 will be financed from the capital fund where as expenditure on plan head 11 (New lines) 51(Staff quarters) 81 (MTP) will continue to be financed from the loan capital i.e. General Revenue.

### **Depreciation Reserve Fund.**

In order to meet the cost of replacement of an asset, the normal life of which is over, due to wear and tear and requires replacement, DRF has been created.

Depreciation Reserve Fund bears / is debited with

- 1) The cost of Replacement and Renewals of works whether originally provided from Capital, Development Fund, Capital Fund.
- 2) The costs of replacement of ballast involving improved type of ballast.
- 3) The original cost of an asset at the debit of capital (other than land) replaced at the cost of OLWR.
- 4) The cost at the debit of capital or DF of an asset (other than land) which is abandoned or disposed off without being replaced.
- 5) All expenditure incurred on replacement of Rolling Stock.
- 6) The cost of tools and plant specially purchased and of any post specially created for the supervision of a work purely chargeable to DRF.

**NOTE.** Replacement of assets created out of OLWR is chargeable to OLWR if the cost of replacement is not more than Rs1/- lakh.

Depreciation Reserve Fund is Credited with :-

- 1) The amount of annual contribution from the Railway Revenue.
- 2) The amount realized from the disposal of an asset ( at the debit of capital or DF ) the original cost of which is more than RS 5000 and the amount realized from the disposal of the materials, released from a work, replaced at the cost of DRF, after deducting the incidental charges.
- 3) The amount of interest earned on the balance of the fund.

### **Development Fund**

In order to arrest over capitalization of Railway undertaking the government have decided that all un-remunerative new lines, works for passengers amenities, staff welfare and amenities works, operational improvement works should be charged to this fund. This fund was instituted with effect from 1/4/1950.

Development Fund is Debited with

**DF I** The cost of all passenger and other user's amenity works including additions and replacement of the existing and new works.

**DF II** Cost of Labour Welfare Works including additions to existing and new works when cost is exceeding Rs1,00,000/-

The cost of construction of staff quarters including additions to existing quarters will be charged to capital with effect from 1/4/1974.

**DF III** The entire cost of works when exceeding RS 10/- lakhs which are un-remunerative but are required for improvement of operational efficiency including additions and alterations, replacement of existing and new works.

**DF IV** Safety works.

Development fund is credited with

- 1) Amount transferred from Revenue Reserve Fund.
- 2) The amount appropriated to it each year from surplus.
- 3) The cost at the debit of DF of an asset which is abandoned or disposed off without being replaced.
- 4) The difference between the cost at the debit of DF of replaced asset and the cost of its replacement when the cost of replacement is chargeable to DRF and is less than the cost at the debit of DF.
- 5) The amount of interest earned on the balance of the fund.

### **Open Line Works Revenue**

This head is financed from Revenue and bears / debited with

- 1) Cost of all works other than those related with passenger and other users amenity works chargeable to DF whether new, additional improvements, replacement and renewal works when the cost is less than RS 1,00,000/- i.e. within the limit of new minor works.
- 2) Cost of such replacement and renewals costing less than RS 1,00,000/- when not chargeable to capital, capital fund, DRF, DF, and Revenue.
- 3) The cost of all un-remunerative works for improving the operational efficiency when the cost is less than RS 10/- Lakhs.
- 4) The cost of dismantling handling and shifting including freight to stores depot in respect of replacement works.
- 5) The expenditure on investment in share capital of Railwaymen's consumer Co-operative societies up to RS 2,500/- per society.

OLWR is credited with the amount realized from disposal of an asset without being replaced, the original cost of which was charged to OLWR and amount realized from disposal of the asset replaced at the cost of OLWR.

**List of passenger amenities.**

- 1) Provision of overhead and ground level arrangement at stations for filling water in carriages, water supply at stations including purification plants water coolers, or water trolleys provided at stations.
- 2) Provision of waiting accommodation including provision of benches and improvement to the existing arrangements.
- 3) Provision of refreshment rooms, retiring rooms, vendor stalls of all description except those which are required to be provided by the contractors themselves.
- 4) Provision for improvements to latrines provided at stations for the use of bonafied Railway passengers.
- 5) Provision of bathing facility at station for use of passengers.
- 6) Improvement to existing carriages such as provision of fans improved lighting, bigger water tanks etc intended to provide improved facilities to passengers.
- 7) Improved lighting and provision of fans on platforms or in waiting hall and sheds etc. to cater to the requirements of Railway passengers.
- 8) Exhibition of sheet time table in glass frame or on black board to cater to the requirements of the passenger.
- 9) Works under all the above heads meant to cater the Railway passengers during religious fare (mela) required for a period exceeding six months.

**Other Railway users amenities.**

The persons availing the facility of parcels or goods services are termed as other Railway users. The facilities provided at parcel office or goods sheds can be termed as other Railway users amenities.

- 1) Arrangement for drinking water including water coolers, water trolley etc.
- 2) Waiting accommodation including provision of various types of premises.
- 3) Refreshment rooms including vendor stalls except those which are required to be provided by the contractors themselves.
- 4) Provision of latrines or urinals.
- 5) Lighting arrangement and provision of fans.
- 6) Any other work considered essential i.e. inquiry office, information Centre etc.

**Labour Welfare Works.**

The works which are carried out as a welfare measure for the work force in general are called as Labour welfare works. The list of labour welfare works is as under.

- 1) Provision of new hospitals, dispensaries, school etc. Additions, Alterations and improvements to the existing work.
- 2) Provision of new institutes, recreation rooms, swimming pools, sports ground, reading rooms including improvements to the existing ones.
- 3) Provision and improvements to health and welfare services, child welfare and maternity centers, cooling arrangements for workshops and rest rooms for workmen.
- 4) Provision and improvements of sanitation water supply, road lighting and marketing facilities in Railway colonies.

**Un-remunerative works but essential for increasing operational efficiency.**

Works arising out of the need for keeping operational methods upto the latest requirements and standards are as under.

- 1) Removal of infringement at stations.
- 2) Re grading of permanent way and improvements to curves.
- 3) Converting dead end sidings into through routes and provision of through loops at station.
- 4) Provision, extension and modernization of catch sidings.
- 5) Lighting of sheds and stations whether new works or improvement to existing works.
- 6) Duplicating or strengthening girders by adding material.
- 7) Provision and improvements and additions to drivers and guards running rooms.
- 8) Provision of fire fighting equipments at stations.

**INVESTMENT PLANNING AND WORKS BUDGET**

Investment Planning and Works Programme Section

**General**

Investment decisions relating to the creation, acquisition and replacement of assets on the Railways are processed through the annual “Works, Machinery and Rolling Stock Programme”. Instructions regarding the preparation of the Machinery and Rolling Stock Programme are contained in **Chapter XV of the Indian Railway Code of Mechanical Department (Workshops)**. On the basis of the estimate of the Plan funds requirement for the ensuing year, the Railway

Board lay down the financial limits (see para 609) under various plan heads (refer to Appendix I) within which the Railway Administrations are required to make out their programme for the following years duly vetted by the Financial Advisor and Chief Accounts Officer for submission to the Railway Board by a specified date. The programmes are examined by the Railway Board and discussed, where necessary, with the General Managers and the works to be undertaken as well as the outlays during the Budget year are decided upon. The various stages of investment planning and preparation of the Final Works Programme are given below:-

- (i) Formulation of schemes as a part of advance planning;
- (ii) Submission of major schemes for advance scrutiny and clearance by the Railway Board for selection of Projects to be taken up in the following year;
- (iii) Preparation of the Preliminary Works Programme within the financial ceiling laid down by the Railway Board; and
- (iv) Discussions with the Railway Board and submission of the Final Works Programme.

The investment planning process through the above stages is dealt with in the following paragraphs.

### **Advance Planning**

The preparation of the annual Works Programme of a Railway is not an isolated exercise for the year, but is part of a continuous planning process from the level of the Divisional Officer upwards. Investment proposals emanating from the Division would be those which are intended to effect improvement in operation or remove bottlenecks etc., within the Division itself. Major investment proposals which benefit a Zonal Railway System or the Indian Railway as whole

should be co-ordinated and planned at the level of the Railway Headquarters or the Railway Board, where necessary. An important requirement for effective investment planning is the realistic estimation of project costs. Full details of the scheme must be worked out and no scheme should be included in the Railway's Works Programme unless detailed plans and estimates have been prepared and are ready. Detailed Traffic and Engineering surveys should be carried out for new lines, gauge conversions doublings and for other line capacity works costing more than Rupees Five Crores each. In the case of yard remodelling, line capacity works i.e., goods shed facilities and important buildings the estimates should be based on plans approved and signed by the concerned departments who should scrutinise the plans carefully to avoid the need for making any substantial modifications in the required facility at a subsequent stage. If major changes in the plans/scheme/specification of works nevertheless become necessary and are likely to lead to substantial excesses over the sanctioned estimate the changes asked for by the concerned departments should not be agreed to unless reviewed and approved by the competent authority sanctioning the original estimate. In regard to proposals for new marshalling yards goods terminals and tranship yards etc.. work study teams should go into the actual working before formulating schemes for the additional facilities required.

It is an essential feature of the railway system as a commercial undertaking that expenditure other than that wholly chargeable to ordinary Revenue, incurred on new assets or for improvement of existing assets should be financially justified before it is incurred. Detailed instructions regarding the financial Appraisal of Railway projects are contained in **Chapter II of the Indian Railway Financial Code** to which reference may be made. The cases where no financial

justification need be given are contained in para 202 of the Indian Railway Financial Code. Detailed financial implications (including financial return) should be worked out in all cases including works financed from Development Fund, Accident Compensation. Safety anti Passenger Amenities Fund or Open Line Works Revenue (see para 626). If the prescribed return is found to be not obtainable on the anticipated level of traffic, the Railway Administration should examine whether the proposal cannot be reduced in scope, or given up in favour of some other alternative. or postponed until traffic prospects improve.

When a number of works have to be carried out to achieve a common objective, the financial implications or justification should be worked out for the entire scheme as a whole. In case where the wider schemes covers two railway a joint estimate of cost should be prepared for the Railway Board's consideration, The Railway in which the major portion of the work falls should obtain figures from the contiguous Railway for submitting joint figures of cost anti financial implication to the Railway Board.

### **Scrutiny of Schemes before preparation of Preliminary Works Programme**

All schemes costing Rs. 20 lakhs or above should be worked out comprehensively and sent to the Board along with full details of (i) the technical features. (ii) Cost break-up, (iii) benefit expected to accrue and (iv) financial implications. A sketch map of each proposal should also be sent. The Railway Administration must clearly bring out the purpose of each scheme and confirm that the proposal meets the objective fully and that the scope and cost of the project have been arrived at after the fullest possible investigation including assessment of the financial implications. After the schemes have been scrutinized by the Board, the Railway Administrations

should be advised of the acceptance, with or without any modifications for inclusion in the Works Programme.

Track renewal proposals costing Rs. 20 lakhs and above are initially scrutinised by the Board, keeping in view the availability of permanent way materials. progress of the works already sanctioned and other technical factors. For this purpose the Railway Administrations should send all track renewal proposals costing Rs. 10 lakhs and above together with technical data like traffic density, age, conditions of track components etc., in the form prescribed by the Board to reach the Boards office by the stipulate date. After the proposals are screened by the Board, guidelines are issued to the Railway Administrations to reframe their proposals for inclusion in the Works Programme.

### **Preparation of the Preliminary Works Programme**

The Chief Engineer of the Railway will be primarily responsible for ensuring that the proposals prepared by the various departments are complete in all respects and are correctly prepared. The overall priorities within the ceilings given by the Board will also be fixed by him in consultation with the General Manager and other Heads of Departments. He will be responsible for the preparation and timely submission of the Preliminary and the Final Works Programme.

In or about June/July each year the Railway Board should convey to each Railway, in respect of each Plan Head, the total outlay within which the Works Programme should be framed by the Railway. A list of the Plan Heads is given in Annexure I. On receipt of this financial ceiling the Railway Administration should take stock of the schemes already formulated and

those under consideration and select for inclusion in the Works Programme within the financial ceiling such works as are expected to yield the maximum benefit to the Railway. preference being given to works in progress. Further necessary changes in the investment schedule may be made in order to work within the financial ceiling for the year such modification., being taken note of in framing the Preliminary Works Programme and revising the financial implications. if necessary.

The Preliminary Works Programme for the following year should be submitted by the Railways to the Railway Board by 1<sup>st</sup> week of September or such earlier date as may be laid down by the Board. Proper financial appraisal of each work should be given in the Preliminary Works Programme together with the comments of the Financial Adviser and Chief Accounts Officer.

The project cost should be based on firm data both as to quantity and rates at current price levels. and should any increase occur in prices during the period intervening between the initial preparation of the project estimate and its inclusion in the Works Programme. the estimate should be updated taking into account any significant changes in the wages and material prices as well as increase in freights and fares. No other increase such as on account of change in scope of the project should be allowed without prior reasons being adduced for acceptance by the Railway Board. A sketch showing the proposal should accompany each proposal.

Each investment proposal should be accompanied by a detailed plan showing the scheduling of the project to match the traffic requirements and the financial outlay proposed for the year should be in accordance with this

project schedule to enable the Railway Board to arrange for a realistic funds allocation for implementation of the programme.

In deciding the outlays for the various works Railway Administration must endeavour to progress all works in progress speedily and bring them into use at the earliest possible date. A work which has been sanctioned and for which funds have been allotted whether in the original or supplementary budget of a year should be treated as a "work in progress" for the next year and provided for as such in the programme. Such works should be grouped as indicated in para 619.

The Railway Administrations should make a realistic assessment of the amount required for each work in progress and necessary provision should be made for it in the Works Programme. In estimating the provision for works during the budget year a generous allowance should be made for those delays in execution which though unforeseen are known from experience to be so liable to arise particularly prior to inception and during the initial stages of large projects. The provision made should take into account adjustment of charges on surveys connected with a project.

In exhibiting the outlay for the current year against individual works in the works programme, the outlay should be as per Pink Book, and in exceptional cases where the Railways propose any substantial increase in the outlay with corresponding reductions against other works, such revised outlay may be shown separately in brackets below the outlay as furnished in the Pink Book duly explaining the reasons for doing so in footnotes at the appropriate places. As far as possible only the last sanctioned costs should be exhibited. Wherever it is visualised that the cost would involve an excess



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*Note.*-Years have been shown in the form for the purpose of illustration.

In respect of “Works in Progress” reference to item No. of the current year’s Pink Book and also the authority under which the work was first started should be indicated. The works should be arranged as per the Plan Heads.

**619.** The items in the Works Programme should be grouped under the following categories while compiling the Works Programmes:-

(i) New Works.

(ii) Works in Progress.

(ii) Works approved in earlier years, which have not been actually commenced and on which no expenditure has been incurred till 30<sup>th</sup> June of the year previous to the Programme year.

(iv) Works approved in the earlier years but estimates for which have not been sanctioned by 30<sup>th</sup> June of the year previous to the Programme year.

The works are further made into sub-groups of (i) Works costing more than Rupees Five Lakhs each and (ii) Works costing upto Rupees Five lakhs each. Under (ii) works costing upto Rupees two lakhs each in the case of Track Renewal works and for works costing upto Rupees one lakh each in the case of other works only lumpsum provision should be shown without detailing individual works. Within each sub-group, the works are presented under each Plan Head. A map showing the Railway System and

indicating the new lines, doublings, major yard remodelling, important line capacity and signalling works which are in progress as well as proposed should be attached to the Works Programme. An alphabetical index of works and various managerial information regarding critical materials, expenditure position relating to passengers and railways users amenities etc. which will be prescribed by Railway Board should be included.

**Integrated Budget.**-The Annual Budget of Railways consists of assessment of earnings and expenditure forming part of Revenue Budget and that relating to the investment decisions taken through the Works Machinery and Rolling Stock Programmes. In order to co-relate the decisions relating to all these aspects, a consolidated budget called integrated Budget including Revenue Budget, Works Programme and the Machinery and Rolling Stock Programmes should be submitted by the Railways alongwith the preliminary Works Programme. The Integrated Budget will include the projections of traffic and earnings, working expenses, the estimated financial results for the ensuing year, and the operating ratio in the proforma specified by the Railway Board. The Railways should also furnish the details of Rolling Stock required on replacement account and addition account, duly co-relating it to the anticipated increase in traffic. In the covering note to the Integrated Budget the Railways should bring out the effect of the budget proposals on the efficiency of operations as indicated by the operating ratio and the financial viability of the system as revealed by the financial returns on capital investment. After discussion of the Preliminary Works Programme, a revised Integrated Budget should be submitted along with the Final Works Programme duly taking into account the changes that might have taken place in the meantime. The Integrated annual budget may

be prepared under the personal guidance of the General Manager and with the assistance of Financial Adviser and Chief Accounts Officer.

### **Final Works Programme**

After having examined the individual Railways Programme, and discussions with the General Managers, the Railway Board will decide the works which should be undertaken during the following year and which should be included in the Final Works Programme. The Railway Administration will then modify their Works Programmes as a result of the Board's decision and send their Final Works Programme to the Railway Board by the stipulated date.

### **Section II- Works Budget**

**Works Budget.**-The revised and budget estimates for the construction, acquisition and replacement of assets are briefly known as Works Budget. The revised estimate gives an estimate of funds required for the current year and the budget estimate refers to the following year. For a detailed study of the Railway Budget, **Chapter III of the Indian Railway Financial Code** should be referred to. The budget estimate for the works are based on the Works Programme approved by the Board. The requirement of funds both for new investments and for works in progress are submitted in the form of "Demand for Grants" in the Works Machinery and Rolling Stock Programme which forms a part of the Budget papers presented to the Parliament. While compiling the Works Machinery and Rolling Stock Programme for presentation in the Parliament only works costing Rupees five lakhs and above are itemised.

## **Demand for Works Grants**

The proposal of Government in respect of sums required to meet the expenditure from the Consolidated Fund of India are to be submitted in the form of Demands for Grants to the Parliament. The Demand shall be for gross expenditure, the credits or recoveries (refer to **para 335** of Indian Railway Financial Code) being shown in the form of footnotes to Demands.

The Demand for Grants for the Works Budget is :-

**Demand No. 16** :-Assets-Acquisitions, Construction and Replacements.

### **Financing of Works Budget**

**Works chargeable to Demand No 16.-** Assets-Acquisitions Construction and

Replacements are financed from railway revenue when it is charged to OLWR or financed from Capital. Depreciation Reserve Fund. Development Fund, Accident Compensation Safety and Passenger Amenities Fund.

Expenditure budgeted under “Capital” involves increase in the Capital-at-charge of the Railways and hence is the liability for payment of dividend to General Revenue subject to the relief/exemptions granted by the Convention Committee. “Works Expenditure” of the Railway is thus financed from Revenue, Railway Funds and Capital provided by the General Revenues.

The Railway Funds are Depreciation Reserve Fund, Development Fund and Accident Compensation Safety and Passenger Amenities Fund. For Details regarding the operation of the funds, reference may be made to **Chapter III of the Indian Railway Financial Code**. In the event of the railways revenue surplus not being adequate to fully meet the requirements of Development Fund Expenditure, the budgetary support from the General Revenues would also include temporary loans to finance expenditure from the Development Fund. The expenditure under works Budget of the Railways is, therefore.

determined by the resource allocation under various Plan Heads.

**Credits or Recoveries.** There are certain credits or recoveries which are excluded from the scope of the Demands presented for vote of Parliament. (Refer to **para 335** of Indian Railway Financial Code for details). Though these credits or recoveries are outside the scope of the Grants. they are booked in accounts as reduction of expenditure, e.g. credit for released materials. A list of credits or recoveries which should be excluded from the scope of the Demand should be sent in **Form 315F** along with the revised estimates of the current year and budget estimates of the ensuing year under each Demand.

**Distribution of Funds by the Railway Board.**-The Grants as voted by the Parliament and the appropriations for charged expenditure (for details of 'voted' and 'charged' expenditure reference may be made to **paras 302 and 303** of the Indian Railway Financial Code) as sanctioned by the President are distributed by the Railway Board among the Railway Administrations and other authorities. subordinate to them as soon as possible after the Budget is sanctioned. The sums so distributed are called "Allotments" and the orders by means of which the allotments are made are called "Budget Orders". The allotments made out of funds voted by the Parliament are shown as "Voted" and those fixed by the President are shown as "Charged".

The Budget Orders are accompanied by the final issues of "Demands of Grants" and "Works Machinery and Rolling Stock Programmes" containing the detailed distribution of the Budget allotment made to railway administrations for working expenses and Capital, Depreciation Fund', Development Fund, Open Line Works (Revenue) and Accident Compensation, Safety and Passenger Amenities Fund expenditure. The Budget allotment made to railway administration is intended to cover all charges including the liabilities for past years to be paid during the year or to

be adjusted in the accounts for it. It shall be operative until the close of the financial year. Any unspent balance shall lapse and shall not be available for utilisation in the following year.

In the event of the Budget Orders of the Railway Board not being received before the commencement of the financial year, the railway administrations are empowered to incur expenditure pending the receipt of the Budget Order on works which were in progress at the end of the previous financial year. All expenditure incurred under this must be treated as a charge against the allotments eventually made for such works.

When the Budget Orders issued by the Railway Board show any reduction in the estimate originally submitted to them, prompt measures should be taken by the railway administrations to limit the expenditure to the amounts allotted and distributed by the Railway Board.

### **STATION BALANCE SHEET (COACHING BALANCE SHEET)**

Station Balance Sheet is a statement of Account prepared by Station Master in the duly prescribed proforma and under prescribed Heads of Accounts showing the liabilities accrued at Stn. on account of sale of Transport services. The Stn. B/Sheet will have two sides. Left hand side is known as debit side where as Right Hand Side is known as credit side. All such items will be shown on the debit side for which SM is responsible to recover the charges for rendering of different types of services. In short, debit side will show the liability of Station Master for recovery of charges. Credit side will show the mode of clearance liability either by means of cash, cash vouchers or any other authorised voucher. The debit side and credit side of Balance Sheet should be equal in amount. But in practice generally total of debit side will be more than the credit side because every time it is not possible to recover the freight charges accrued during the month in the same months account and there is difference between debit side and credit side. To equal the amount of debit and credit side the difference

between debit side and credit side is shown as "Closing Balance " on credit side of the Balance Sheet . This closing balance in the other words is known as Station Outstanding comprising of different items. Whatever the figures shown in the Balance Sheet are summarized figures extracted from different books and it is the responsibility of the Station Master to prove the figures by enclosing certain returns. Information regarding Local and foreign traffic will be given in the same Balance Sheet although returns for Local and foreign traffic will be prepared separately. Separate Balance Sheets are to be prepared for coaching and goods traffic.

## **STATION BALANCE SHEET**

### **(COACHING BALANCED SHEET)**

**NAME OF STATION :** -----

**MONTH AND YEAR :-----**

| <b>Debit</b>                                                                                                                                                                                                                                                                                                              |               | <b>Credit</b>                                                                                                                                                                                                |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>PARTICULARS</b>                                                                                                                                                                                                                                                                                                        | <b>AMOUNT</b> | <b>PARTICULARS</b>                                                                                                                                                                                           | <b>AMOUNT</b> |
| 1 To Opening Balance<br>i) Floating cash<br>ii) Cashiers Debit<br>iii) Accounts office debits or error sheet.<br>a) Admitted Debits<br>b) NotAdmitted Debit<br>iv) Wharfage charges<br>v) Govt. Publications                                                                                                              |               | 1. By Cash and cash Vouchers for which acknowledgement is received .                                                                                                                                         |               |
| 2 To Current Debits<br>i) Passenger Traffic (PCT)-L<br>ii) Passenger Traffic (PCT)-F<br>iii) Passenger Traffic BPT-L<br>iv) Passenger Traffic BPT-F<br>v) Luggage,Animals & Birds<br>vi) Excess fare<br>vii) TTE Cash<br>viii) Cloakroom charges<br>ix) Parcel Traffic –L<br>x) Parcel Traffic –F<br>xi) Wharfage Charges |               | 1. By Special Credits<br>i) Cr. Advice Notes.<br>ii) Refund list.<br>iii) Deduction list<br>iv) Remission Orders<br>v) Dr. Transferred to Other Stn.<br>vi) Transfer to LPO<br>vii) Return to supply officer |               |

|                                                                                                                                                                                                                                    |  |                                                                                                                                                                                                                                     |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 3.To Special Debits<br>i) Floating Cash<br>ii) Cashiers Debits<br>iii) Accounts Office debit or error sheet.<br>a) Admitted debits<br>b) Not Admitted debits<br>iv) Sundry and Miscellaneous earning<br>v) Government Publications |  | 3. By Closing Balance(Station Outstanding)<br>i) Floating cash<br>ii) Cashiers Debit<br>iii) Accounts office debits or error sheet.<br>a) Admitted Debits<br>b) Not Admitted Debit<br>iv) Wharfage charges<br>v) Govt. Publications |  |
| Total                                                                                                                                                                                                                              |  | Total                                                                                                                                                                                                                               |  |

### Station Returns (Coaching Traffic)

Following are the returns required to be submitted by the stations to the Accounts Office. They are categorized as per the periodicity of their submission.

#### Daily:-

1. Cash remittance note.
2. Daily return of non-issued tickets
3. Daily return of collected tickets.

#### Periodical :-

1. Advance statement of coaching earnings.
2. Ticket Indent.

#### Monthly :-

1. Monthly Statement of non-issued tickets.
2. Passenger Classification.
3. Parcel Cash Book.
4. Excess fare return.
5. Wharfage and Demurrage return.
6. Statement of Error sheet received.
7. Statement for supply of Government publication.
8. Deduction List
9. Remission orders statement.
10. Statement of Credit advice note received.
11. Statement of certified overcharge sheet received.
12. Statement of Debit transferred to other stations.
13. Statement of Debits transferred by other stations.
14. Statement of sundry and miscellaneous Earnings.

15. Statement of Station outstanding (Separate for each item.)  
 16. Coaching Balance Sheet.

**GOODS BALANCE SHEET**

**NAME OF STATION : ----- MONTH AND YEAR :-----**

| Debit                                                                                                                                                                                                                                                               |      | Credit                                                                                                                                                                                                                                                                                                                |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| PARTICULARS                                                                                                                                                                                                                                                         | AMT. | PARTICULARS                                                                                                                                                                                                                                                                                                           | AMT. |
| 1 To Opening balance<br>i) Floating cash<br>ii) Cashiers Debit<br>iii) Accounts office Debits or error sheet<br>a) Admitted Debits<br>b) Not Admitted Debits<br>iv) Wharfage Charges<br>v) Cost of Govt . publications.<br>vi) Inward to pay freight                |      | 1. By Cash and cash Vouchers for which acknowledgement is received .                                                                                                                                                                                                                                                  |      |
| 2 To Current Debits<br>i) Outward Paid GoodsTraffic-L<br>ii) Outward Paid Goods Traffic-F<br>iii) Inward To-Pay Traffic –L<br>iv) Inward To-Pay Traffic-F<br>v) Wharfage and Demurrage<br>vi) Wagon Registration Fees<br>vii) Crane Charges<br>viii) Siding Charges |      | 2. By Special Credits<br>i) Cr. Advice Notes.<br>ii) Refund list.<br>iii) Deduction list<br>iv) Remission Orders<br>v) Dr. Transferred to Other Stn.<br>vi) Certified Overcharge sheets.<br>vii) Rebooking or paid on charges.<br>viii) Consignments sent to LPO<br>ix) Twice Accounted invoices<br>x) Auction sales. |      |

|                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 3.To Special Debits<br>i) Floating cash<br>ii) Cashiers Debits<br>iii) Accounts Office debits or error sheet.<br>a) Admitted debit<br>b) Not Admitted debit<br>iv) Sundry and Miscellaneous earning<br>v) Government Publications |  | 3. By Closing Balance<br>i) Floating cash<br>ii) Cashiers Debit<br>iii) Accounts office Debits or error sheet<br>a) Admitted Debits<br>b) Not Admitted Debits<br>iv) Wharfage Charges<br>v) Cost of Govt . publications.<br>vi) Inward to pay freight |  |
| Total                                                                                                                                                                                                                             |  | Total                                                                                                                                                                                                                                                 |  |

### **Checks on station Balance Sheet.**

The debit side may be divided into 3 parts opening balance, current debits and special debits ( accountal of Error Sheet).

Opening balance is checked with the closing balance which is shown in the previous months Balance sheet. Current debits are checked with reference to various returns such as passenger classification copy of outward paid cash book, inward to-pay parcel abstracts and summaries, Warf. &Dem. statements and wagon registration fees statement. In addition to this, accountal of Goods traffic for current month will be checked with converted abstracts. The amount of E/sheet accounted for in the 3rd part will be checked with reference to entries of E/sheet recorded in the E/sheet register by the T/Accounts office.

The credit side of the station B/sheet is also divided into 3 parts (1)Cash and cash voucher duly acknowledged by chief cashier (2)Special Credit (3)Closing balance. Cash and cash vouchers as acknowledged by the chief cashier are checked with the cash remittance foil received from the cashier .The amount of cash remittance Note is posted in the register and checked with date-wise posting of cash remittance Note in the station B/sheet.

Special credits are checked with the enclosed documents such as refund list, paid on to-pay statement certified over charges deduction list credit advice Notes etc. received in T-Accounts office along with the station B/sheet.

Closing balance must be supported by the statements showing full particulars of the amounts yet to be cleared by the Station Master. The totals of the debit and credit side of the Stn. B/sheet should be checked to see that they are correct and both the sides totals are equal in amount. If the amount of the returns received in the Traffic Accounts is in excess of the amount shown in the station Balance Sheet, the amount of the Station Balance Sheet is corrected and difference of amount is debited against station. If the amount shown in the Balance Sheet is in excess of amount of return received , it is taken into consideration that a part of the return is missing and

such differences are entered in the register of missing returns and the same are called for from the station.

If the amount of credit taken in the station Balance Sheet exceeds the amount of Special credit taken under the supporting documents enclosed to the station Balance Sheet, the difference is debited against the station and closing balance in subject balance sheet is increased to the tune of difference.

The result of check of the Station Balance Sheet in the traffic Accounts office is intimated to the station through advice of Internal Check, showing closing balance as per Stn. Balance Sheet and the closing Balance Sheet as worked out by the Traffic Accounts office during the course of internal check. The difference between the two will be explained in detail in respective column of the advice of internal check.

### **STATION OUTSTANDING.**

Despite of best efforts by the Station staff, the items/amount which could not be realized/ collected by the staff at the close of the month for which the Balance Sheet indicate closing items are otherwise known as Station outstanding.

The Station Master is personally held responsible for keeping a proper account of such items as also timely clearance. The following items will generally constitute Station outstanding.

- 1) Floating cash -Since this sum has been provided by the Adm. to enable the Stn for daily transactions no action is generally called for from Station Master to clear this item until either the money is withdrawn or the Stn is closed for traffic.
- 2) Debit Received from cashier-Debits are received from cash office on Account of torn/soiled notes, counter foil notes, coins are also short remittances by Station. As soon as receipt of debit advice the Station Master has to identify the responsible person and action needs to be taken to make good the amount within 3 days.
- 3) Admitted Error Sheet (Debit)-The Admitted Error Sheet are the error sheet through which the financial loss sustained by the Railway on account of irregularities/mistakes from Station staff, pointed out by Accounts office, which has been accepted by the Stn from time to time. The amount admitted by the Stn will have to be cleared either in lumpsum or in installment by the responsible official. Action taken in this direction by the Stn will have to be recorded in the error sheet register maintained by the Stn besides advising concerned office for recovery in case of installment payable through salary.

4) Not admitted error sheet -These are cleared in two ways -

- (1) Either by obtaining credit Advice from Account Office by withdrawing the debits intimated through error sheet .
- (2) Subsequent admission of the not Admitted error sheet by the Station by realizing the mistakes pointed out by the Account office later.

In case of remarks offered by the Station are acceptable to the account office then, it will withdraw the debit by issuing credit advice which will nullify the debit or debit will be accepted by the station and necessary action will be taken to remit the amount by the responsible official as stated above.

5) To-pay Invoice (Consignment received)

Advice to consignor and consignee regarding arrival of the consignment will be issued, advising the party to take delivery within a specified period. In case the party request for diversion of the articles the administration has to act upon this immediately and clear the item. If on the other hand party does not turn down within the specified time, Station Master has to take speedy action by way of either to divert the consignment to Lost Property Office or action for auction and clear the item without any further delay.

6) To-Pay Invoice (consignment not received) -

In order to clear such items the Station Master has to initiate action by confirmation from forwarding station the particulars of Booking as also enquiry and personal contacts. Similarly via station also needs to be contacted for the movements of the consignment. Necessary certified over charge sheets are prepared, get this certified by forwarding station in case it is confirmed the consignment has not been booked to that station or consignment has been withdrawn after preparation of PWB/ Invoice . In the both cases SM is responsible for timely action and speedy clearance of such items particularly the irregular items i.e. more than one month old.

7) Unsold timetable, indemnity bonds, publications: -Due to revision in timings of trains, the timetables which has been supplied to Stations for sale become surplus on account of non sale which contributes an outstanding to Station & thereby in the balance sheet month after month. The unsold timetables are therefore to be returned to Divisional Commercial Manager duly preparing statement of same indicating the total value of the unsold timetables, with a request to advice necessary credit for the same. Similarly the indemnity bonds & other publications which fetches value on it's disposal also required to be returned to the department, if

they are time barred and necessary credit obtained from dept to wipe off the corresponding outstanding debit from the Station Balance sheet.

8) Miscellaneous Items:-This comprises rent, water charges, electric charges, crane charges, license fee etc to which the Station Master is responsible for realization as & when it become due. In the case of non realization due to certain reasons beyond the capacity of Station Master, reasons for the non-recovery should be conveyed to higher authorities for taking necessary & timely action appropriate so that outstanding items could be realized and there by the debit could be cleared

Amount accounted for in a particular month but could not be realized / cleared up to the end of the month is termed as station outstanding and as the non realization/clearance pertains to earnings which originate at station the outstanding is called as station outstanding. In short the station outstanding means unrealized earnings or un cleared liabilities. All amount received by the Station Master are shown on debit side of the station balance sheet and amount sent to chief cashier is shown on credit side of station Balance Sheet. Hence the difference of debit side and credit side of station Balance Sheet may also be termed as station outstanding.

### **CLEARANCE OF ITEMS OF STATION OUTSTANDING.**

1) Floating Cash :- All stations which are opened for traffic are provided with some amount in shape of small coins . This amount is known as floating cash . This amount is supplied to the station with the object that the passenger if comes to purchase a ticket and if they do not have sufficient change, to enable the banking clerk to refund the balance amount in the shape of small coins .

This amount should always remain at station forever and as it is. No addition/deletion is permitted from this amount.

2) Cashier's Debit :- This debit is raised by chief cashier for the amount short received or the defaced coins or spoiled or torn notes received along with station remittance through cash remittance note. The cashier debit is to be cleared immediately with in three days by remitting the shortages or replacing the notes and coins because there debit are always accepted debits.

3) Admitted Debit or Admitted error Sheet :- Error Sheet is documents issued by the Account's Office . It is the result of the internal check conducted by Account's Office on the written/documents submitted by the station. Any short Account , Short collection notice by the Account Office is advised to the station through this document . The Error sheet after scrutiny may be admitted or disputed. Admitted error sheet can be cleared as under: -

a) Clearance by payment in cash.

b) Recovery through paysheet.

c) Write off ---under competent authorities sanction.

4) Not Admitted Debits :-If the undercharges shown by the accounts office in error sheet is not acceptable to the station staff, the Station staff should write on the back side of the error sheet 'Not Admitted. This (not admitted)error sheet must show clear remark on the back side for disputing the debit raised. Non admitted error sheets are cleared as under.

a) Credit advice issued to accounts office to withdraw the debit on paying the convinced by the reason put forth by the special station staff.

b) Credit advice note/credit authority letter being issued by the Travelling Inspector Of Accounts on verification of the concerned document and having convinced of wrong/irregular debit.

c) When not admitted debits are returned back by accounts debit for not accepting the reason put forth by the station staff such error sheets are cleared according to the admitted debit or admitted error sheets.

d) Undercharges in inward paid parcel traffic :-Areas of undercharges means the undercharges pertaining to the way of bills or invoices of previous month or and parcel or goods not delivered in end of the current month. All such undercharges should be shown as accounts and whenever the parcels or goods are delivered amount should be forwarded to chief cashier and accounts should be cleared.

5) Freight Outstanding on inward to pay consignment for which consignments on hand- Such outstanding will be cleared on collection of freight at time of delivery or a notice will be issued to the party concerned and in response to the notice if the application are received for rebooking, the station master in such case will issue a fresh way bill or invoice for the rebooking of the consignment to new station. All charges due at the rebooking station in addition to the fresh freight are shown in this fresh way bill or invoice . The outstanding due on account of paid or to pay charges at the rebooking station will be cleared by accounting them under special credit in the concerned Balance Sheet. If no responses is received from party, the outstanding may be cleared by auction sale or transferring the to the lost property office, only after obtaining the approval of the competent authority.

6) Inward to pay freight for which consignment not on hand :- Wagon load consignment may get delivered with the approval of DCM to some other destination. In such cases the freight changes if any outstanding and the old destination station will be cleared by the exchange of document called certified overcharge sheet. The overcharge sheet will be prepared and certified by booking station and sent to the station when the debit outstanding and required to

be cleared. The amount shown in the overcharged sheet will be taken under special 'Credit' to clear the outstanding.

- 7) Govt. Publication for sale and indemnity bonds:- The unsold Govt. publication will be cleared when they are sold out by taking cash credit . If more stock is received than the requirement of the station such stock of sellable publication should be transferred to printing press or Divisional Commercial Manager's office to clear the outstanding.
- 8) OTHER MISC. ITEMS :- Generally, Wharfage & demurrage worked on for which authority issued by the competent authority if not forwarded to traffic accounts office. Traffic account office will object such 'credit' entries ; in such cases wharfage , demurrage for gone authority for the competent authority should be obtained and a copy should be sent to traffic account office to clear the outstanding.

