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STANDING COMMITTEE ON RAILWAYS
(2004)

FOURTEENTH LOK SABHA

MINISTRY OF RAILWAYS
(RAILWAY BOARD)

SAFETY AND SECURITY IN INDIAN RAILWAYS

FIFTH REPORT

LOK SABHA SECRETARIAT
NEW DELHI

December, 2004/Agrahnaya, 1926 (Saka)

SCR No. 84

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Presented to Lok Sabha on 22.12.2004
Laid in Rajya Sabha on 22.12.2004

LOK SABHA SECRETARIAT
NEW DELHI

December, 2004/Agrahanaya, 1926 (Saka)

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3.	Shri V.S. Negi	-	Deputy Secretary
4.	Smt Abha Singh Yaduvanshi	-	Under Secretary
5.	Smt Archana Srivastava	-	Sr. Executive Assistant

INTRODUCTION

I, the Chairman of the Standing Committee on Railways (2004), having been authorised by the Committee to present the Report on their behalf, present this Fifth Report of the Standing Committee on Railways (2004) on 'Safety and Security in Indian Railway'.

2. The Committee took evidence of the representatives of the Ministry of Railways on 27th September, 2004 , 18th October, 2004. They called the representatives of National Federation for Indian Railwaymen (NFIR), All India Railwaymen's Federation (AIRF), All India Railway Protection Force Association (AIRPF Association) and All India Loco running Staff Association for appearing before the Committee on 7th October, 2004. The Representatives of AIRPF Association appeared before the Committee once again on 18th October, 2004.

3. The Committee considered and adopted the Report at their sitting held on 20th December, 2004. Minutes of the sittings held on 27th September, 2004, 7th October, 2004, 18th October, 2004 form Part-II of the Report.

4. The Committee wish to express their thanks to the officers of the Ministry of Railways (Railway Board), NFIR, AIRF, AIRPF Association, and All India Loco running Staff Association for furnishing the information which the Committee desired in connection with the examination of the subject 'Safety and Security in Indian Railways' and sharing with them the issues concerning the subject which came up for discussion during evidence.

NEW DELHI;
20th December, 2004
29 Agrahanaya, 1926 Saka

BASUDEB ACHARIA
Chairman,
Standing Committee on Railways

REPORT

SAFETY AND SECURITY

PART - I

CHAPTER – I

INTRODUCTORY

Making Indian Railways a safe and reliable system is an enormous challenge. The Railways have the most intricate and involved inter-dependencies for its proper and safe functioning. Safety on the Railways is the end product of the cohesive fusion of its myriad parts, including Railway Staff, tracks, rolling stock, signals, electrical equipment suppliers/vendors of various equipment and the general public. Factors such as a single flaw in the 63,122 km of track that criss-cross the country, a defect in the 7,681 locos, 44,756 coaches and 2,14,760 wagons (units) that haul about 14 million passengers and more than one million and five lakh tonnes of freight every day, an incorrect indication on one of a lakh of signals, a mistake or an act of negligence by one of its 6,00,000 frontline operating and maintenance staff, a rash act by one of millions of road users who daily negotiate about 40,000 odd level crossing gates spread across the system, an act of carrying inflammable goods have the potential to cause a major tragedy. Added to these are the acts of sabotage by misguided elements in different parts of the country. For the nation's premier transport organisation, with its great magnitude of operations safety is of paramount importance.

1.2 From time to time a number of Committees viz Kunzru Committee in the year 1962, Wanchoo Committee in the year 1968, Sikri Committee in the year 1978, Venkatachala Committee in the year 1996, Khanna Committee also called the Railway Safety Review committee in the year 1988 have studied safety in Railways and recommended certain concrete measures to be taken by the Railways to improve the safety system. The main focus of these Committees was on improving safety through better man-machine interaction, easier operating systems and reducing the need for human dependence in maintenance and operation.

1.3 During the oral evidence, the Chairman, Railway Board said:-

> "Khanna Committee had given recommendations in two parts, in the year 1999 and 2001, and the Railways had accepted 244 recommendations. Out of this Railways have already implemented 92 recommendations by 31.07.2004 and remaining recommendations are in the various stages of implementation."

1.4 During the coming years the Railways would be called upon to lift more and more traffic both passenger and goods, which will surely put greater strain on the system. Therefore, high priority is required to be accorded by Railways to safety measures to ensure greater safety in rail operations.

1.5 The Ministry of Railways being increasingly aware of the need to review the safety performance in the Indian Railways has presented two vital documents – 'The White Paper on Safety on Indian Railways' and the ' The Corporate Safety Plan' for the period 2003-2013 in the Parliament in April and August, 2003 respectively.

1.6 The White Paper on Safety on the Indian Railways offered a review of safety performance of the Indian Railways, in terms of accidents occurring on the system during the last 40 years, with a special reference to the last decade. The highlights of the paper revolved around moderanisation of infrastructure viz. track, bridges, rolling stock etc. and examination of the role of 'human element', specially that of 'failure of railway staff' in accidents. It has also gone into issues related to accident inquiry, fixing up of responsibility and recommendations made by various inquiry committees and Commissions.

1.7 The 'Corporate Safety Plan states the strategies being formulated and aims and objectives which the Indian Railways would be striving to achieve in the next decade. The document encompasses the priorities of the safety related works and indicates a broad timeframe within which to complete them along with the approximate requirement of financial investment for upgrading the infrastructure.

1.8 The Railways has claimed that because of their continuous efforts to improve safety of passengers and of operations, the number of consequential train accidents have reduced drastically from 2131 in 1960-61 to 325 in 2003-04 despite increase of 560% in passenger traffic and by more than 380% in freight traffic. Accident per million train kms. (a universally accepted Safety index), has come down from 5.50 in 1960-61 to 0.39 (provisional) in 2003-04.

1.9 Infrastructure which is running into thousands of items require periodic maintenance of all assets and each part by multi-layer inspections and super checks. If any part of infrastructure is weak or found to be even slightly unsafe, immediate action is taken to repair/replace the same.

1.10 The transport industry is the only one of its kind where an accident in the course of its working often results in injury, loss of property and even loss of lives of its valued customers. In all other industries providing any kind of service to the general public, an accident generally affects the workers of that industry alone, and not its customers. In view of the serious implications of a Railway accident, safety in the Railways has always had a special significance for the traveling public. The Railways in turn accord a very high priority to safety in train operations. This is primarily because of the realisation that accidents not only cause injury, loss of invaluable lives and property, but also result in a cumulative loss of transport capacity – a loss which cannot be effectively recouped over a period of time.

1.11 In order to facilitate the Ministry of Railways to formulate a proper policy to ensure safety and regain credibility of the Indian Railways the Committee have discussed various important aspects such as track circuiting, development of manpower through major improvements in working environment training to the operating staff, modernisation, maintenance/monitoring of safety assets and signalling systems.

CHAPTER - II

ACCIDENTS

ACCIDENTS AND CONSEQUENTIAL TRAIN ACCIDENTS

2.1 Consequential train accidents include train accidents having serious repercussion in terms of loss of human life, injury, damage to Railway property or interruption to rail traffic of laid down threshold levels and values. These consequential train accidents - include Collision, Derailments, Fire in Trains, Collisions of trains at Level Crossings and few miscellaneous incidents. All other train accidents, which are below the threshold values, are treated as "other train accidents". This categorization is, broadly, in consonance with practices adopted in many world railways, though varying in details and degree.

2.2 The number of accidents, including derailments, occurring on Indian Railways during the last 5 years are as under:-

Year	Number of consequential	
	Train accident	Derailments
1999-2000	463	329
2000-2001	473	350
2001-2002	414	280
2002-2003	351	218
2003-2004	325	202

2.3 During oral evidence, the Chairman, Railway Board stated: -

> "The safety track-record of the Indian Railways has been quite good and it is going from good to better. This year itself, that is, in 2004-05, five months have passed and sixth month is coming to conclusion, if we compare with the corresponding period of the previous year, this year we have only 100 consequential train accidents as compared to 163 numbers in the corresponding period of the last year. One thing has been that the collisions have been on the decline, derailments have been on the decline which normally result in the serious types of accidents."

2.4 He further added:-

> "If we have the international comparison also, in the year 2003-04 we have ended up with the number of train accidents per million ten kilometres as 0.39. It compares very favourably with any leading railway system in the world. It is varying approx. 0.40 to 1.1.. If we compare ourselves with the other countries of the world like Japan, China and USA, we are doing fairly well. We are on the path of recovery and we are on the path of improvement.

2.5 The Committee were informed that mainly all accidents are classified into four major types - collision, derailment, level crossing accidents and fire. Other types of accidents incorporated are distinctly other than the consequential train accidents and accidents caused by equipment failure.

2.6 Accident is an occurrence in the course of the working of the Railway which does or may affect the safety of the Railway passengers or servants or which affect the safety of others, or which does or may cause delay to a train or loss to the Railway.

2.7 A measure of the gravity of train accidents is the incidence of injury, loss of life and damage to railway property. Generally, these consequential train accidents which change the mind set of public who judge the record of safety or railway travel by the incidence of these accidents, ignoring other occurrences of minor nature. A few other types of mishaps, involving serious potential hazards, are given equal importance. Indicative Accidents, distinct from Consequential Train Accidents include all cases of 'train passing signal at danger', averted collision', breach of block rules etc. These three types of indicative accidents underline the philosophy of IR's safety.

Collision

2.8 Collisions are the most dreaded accidents in any railway system. These can be 'side collision', 'Rear-end' and 'head-on collisions'. Trains ramming into another from behind are called rear-end collisions, while trains colliding on the same track from opposite ends, are called head-on collisions and are the most fatal of all accidents such as the collision that took place between 9112 Down Jammu Tawi – Ahmedabad Express and 1 JMP – Jalandhar-Pathankot

Passenger Train that took place on 14th December, 2004 in the Hoshiarpur District of Pubjab. Side collisions can occur either in station area, while converging or diverging or by fouling the adjacent track in multiple lines territory. Rear-end collisions and head-on collisions can occur at stations or between the stations. Of the total consequential train accidents, that occurred during the last decade, the percentage of collisions involving passenger carrying trains was 4% only, but they are highly volatile mishaps and call for necessary steps to prevent them at all costs.

2.9 During oral evidence the Chairman Railway Board stated:-

> "If you see the Corporate Safety Plan and based on the data of the previous ten years, 7% of the total accidents have been on account of collision and 38 per cent of the total fatalities, that is, death have taken place on account of collision. We have taken a number of measures to prevent the collision. In the Corporate Safety Plan, we have said that we will try to eliminate fully the collision during the next ten years. We have taken a number of measures like anti-collision device, track circuiting, going for the axle counters, going for the train protection warning system and solid state interlocking to be intensified."

2.10 The Ministry in their written replies also stated that 98.95% collisions were attributed to the railway staff and the remaining 1.05% were due to incidental causes etc.

2.11 The Ministry of Railways while replying about the steps taken to reduce the consequential train accidents have stated as follows:-

(i) Track circuiting works on main lines in station section on 'A', 'B' and 'C' routes have been completed to reduce probability of reception of a train on blocked line due to human failure.

(ii) Multiplicity of conventional lever cabins is being substituted by Route Relay Interlocking on replacement.

(iii) 'Block Proving Axle Counter' have been provided over 220 block sections and is progressively being added.

(iv) Auxiliary Warning System is operational in Bombay Suburban System.

(v) Automatic Loco Flasher Lights are being progressively installed on locomotives to give indication to drivers of trains running from opposite direction in case of mishap for prevention of further accidents.

(vi) Walkie-talkie sets have been supplied to drivers and guards of all trains to improve communication between Driver and Guard.

(vii) More powerful 25-Watt VHF sets are being progressively provided to station staff to improve communication between Driver/Guard and Station staff.

(viii) Guards have been provided with Electronic Flashing Tail Lamps, having better visibility than the conventional Kerosene lit Tail Lamps.

(ix) Provision of Anti collision Device.

2.12 The number of collisions, inspite of hefty increase in traffic over the years, has come down as follows:-

Period	**Collision**	**Movement of Traffic Train Kms. (in Millions)**	**Collisions per million Train Kilometres**
Average in 1960-70	83	433.9	0.19
Average in 1970-80	59	481.0	0.12
Average in 1980-90	48	559.8	0.08
Average in 1990-2000	34	652.9	0.05
Average in 2000-2001	20	723.8	0.02
Average in 2001-2002	30	756.4	0.04
Average in 2002-2003	16	786.2	0.02
Average in 2003-2004	9	---	---

2.13 During the oral evidence also the Chairman, Railway Board informed as under:-

"In the Plan period we intend to hundred per cent eliminate accidents on account of collision."

Derailments

2.14 The derailment of trains, primarily take place on account of following:-

(i) Equipment Failure.

(ii) Railway Staff Failure.

(iii) Miscreant Activities or Sabotage.

2.15 The Chairman, Railway Board informed the Committee:-

"As regards derailment is concerned, nearly 75 per cent of the total accidents of derailments and 14 per cent of the total fatalities, that is deaths are on account of the derailments. In the Corporate Safety Plan, our efforts will be that in the next ten years we will reduce the current trend of the derailments by minimum 60 percent. Here, we have taken a number of measures to minimise the derailments like assets renewal under SRSF particularly, going in for the longer rails, better quality of welds on rails, import of Self Propelled Ultrasonic Rail Testing Cars, that is, state of art cars, going in for more and more mechanised maintenance, going in for the bridge management system, phasing out four-wheeler track weapons, patrolling of tracks to be intensified during summer, winter and monsoon seasons, going in for the bogey mounted brakes, going in for the automatic switch over on the flasher lights in the locos and the audio-visual signals in the locos. These are various measures in a nutshell we have gone in for to minimise and reduce the derailment."

2.16 Some of the steps, taken by the Railways to reduce Equipment Failures, are enumerated hereunder:-

(i) Accelerated replacement of overaged assets, viz. track & bridges, rolling stock, signalling etc.

(ii) Procurement of rails with improved specification and quality control.

(iii) Introduction of need based concept of Ultra Sonic Flaw detection (USFD) testing of rails.

(iv) Procurement of more USFD machines.

(v) Upgradation of standard of track structure on various routes.

(vi) Import of technology for more track friendly coaches.

(vii) Bogie mounted brake system.

(viii) Composite brake blocks.

2.17 Some of the steps taken continuously to reduce staff failure are summarized hereunder:-

(i) Simulators have been installed for training of drivers. Four simulators are presently available – two for diesel drivers and two for electric drivers. More simulators are being procured.

(ii) 'Quality Management System' have been developed and implemented as per ISO 9001 Quality Standards in all the Production Units, majority of the workshops and some of the sheds/depots. All other important manufacturing/repair Units have also been advised to develop and implement quality management systems.

(iii) Introduction of automatic loco flasher lights in case of train getting into an unusual situation and warning train drivers on other tracks.

(iv) Staff are regularly being sent for Refresher Course and safety camps as per laid down periodicity. Safety staff overdue for refresher course is not permitted on train duties.

(v) Training centers have been given new thrust with modern and better training facilities.

(vi) Greater emphasis is given on surprise inspections, ambush checks and safety Audit. Night inspections are conducted regularly to eradicate adoption of short cut methods.

(vii) Phychological tests are being carried out at every level for vital categories (Assistant Station Masters, Assistant Drivers, Motorman, etc.)

(viii) With revamping of Railway Recruitment Boards (RRBs), quality of staff being selected through RRBs has substantially improved.

(ix) Safety Drives to guard against staff failures are launched to curb use of short-cut methods and unsafe practices.

2.18 The number of derailments per million train km has also come down as follows:-

Period	Derailment	Movement of Traffic Train Kms. (in Millions)	Derailments per million Train Kilometres
Average in 1960-70	1066	433.9	2.46
Average in 1970-80	767	481.0	1.41
Average in 1980-90	624	559.8	1.12
Average in 1990-2000	359	652.9	0.55
Average in 2000-2001	350	723.8	0.48
Average in 2001-2002	280	756.4	0.37
Average in 2002-2003	218	786.2	0.28
Average in 2003-2004	202	---	---

2.19 The Ministry have stated that 74.04% derailments are attributed to the negligence of the railway staff, 7.40% due to equipment failures, 5.66% due to sabotage and remaining 6.66% due to the combination of factor, 'incidental', cause 'could not be established' etc.

2.20 When the Committee desired to know the reasons for targeting only 50% reduction in rail accidents and 60% reduction in train accidents occurring due to derailment in the Corporate Safety Plan 2003-2013, the Ministry of Railways replied that with focused attention on human resources, technological up-gradation and adoption of modern maintenance practices it has been assessed that the present level of railway staff failure, causing derailments, will come down significantly through steps like phasing out of derailment prone 4-wheeler tank wagon stocks, replacement of over-aged assets under "Special Railway Safety Fund" improved welding technology enhanced training infrastructure etc. Although the technology/inputs are bound to reflect in the overall decline in the number of accidents in various categories like collision, derailments and fire, the accidents occurring on account of outside interference cannot be fully ruled out as Railways have little control over such externalities.

Further, the Ministry stated that derailments have declined to 202 in the year 2003-04 from an average of 1066 during 1960-70.

2.21 Some of the steps taken to reduce accidents on account of miscreant activity are:-

(i) Development of anti-theft fittings and fastenings for Short Welded Rail (SWR) stretches in vulnerable areas.

(ii) Burring of fish bolts on vulnerable locations.

(iii) Elimination of fish-plated joints by welding of rails.

(iv) Deputing watchmen on important bridges, deep cuttings, tunnels and their approaches, in the sections identified as sabotage prone.

(v) Undertaking surprise mobile patrolling in night by joint team of Railway Protection Force (RPF) and Gangman, in such sections.

(vi) Continuous track circuiting of rails.

2.22 There are instance of shifting sand dunes due to sand drifts in Western Rajasthan. On being pointed out that this hampers the visibility level in running trains and the sand deposits on the tracks leading to stoppage of trains for safety reasons for hour together, the Ministry stated that the sand is removed from the tracks manually. Further the Ministry informed that they are planning plantation of trees on both sides of the track to stop the sand drift.

Level Crossing Accidents

2.23 Apart from above there is another catchment area where most of the accidents occur, namely level crossings.

2.24 In the last decade, there has been no significant reduction in the numbers of accidents taking place at level crossings. Most of these accidents are due to the carelessness of the road users. Of the total consequential train accidents, that occurred during the last decade, the accidents at level crossings were about 16%. Accidents at manned level crossings were at the level of 4% of the total consequential train accidents, whereas unmanned level crossings account for 12% of the total accidents.

2.25 During oral evidence the Chairman Railway Board stated:-

> "There had been nearly 23 per cent increase in the level crossing accidents during the previous decade based on which we have prepared the Corporate Safety Plan. In this Corporate Safety Plan we have mentioned that we will make efforts that this increase is totally arrested. Nearly 16 per cent of the total accidents occur on account of level crossings and 46 per cent of the total fatalities are on account of level crossings. In this case, we have taken a number of measures like going in for the interlocking of the level crossing, provision of phones on the level crossing, manning of the unmanned level crossings, going in for the road over-bridges and road under-bridges at the busy level crossings as a replacement measure, going in for the train accentuated warning devices and also resorting to the measures of the safety counselling by sending teams to the nearby villages."

2.26 Accidents at unmanned level crossings occur primarily due to dashing of road vehicles with the oncoming trains and cause fatality of the road user. A road vehicles driver, though having the advantage of maneuverability and lesser braking distances and shorter reaction time as compared to train drivers, fails to maintain the level of alertness, normally expected, while crossing such intersections, where he is supposed to take necessary precautions as stipulated in the Motor Vehicles Act 1988. It has been observed that over 85% of all accidents occurring at unmanned level crossings, involved passenger carrying trains, reflecting that the road vehicle drivers normally misjudge the speed of the oncoming trains and take chances while crossing the rail track.

2.27 During oral evidence on this point, the Chairman, Railway Board stated:-

> "There are nearly 19,000 unmanned level crossings. We have a certain laid down criteria about how to man an unmanned level crossing. These criteria are based on the density of road vehicles and on the density of rail traffic and also on visibility and prevailing conditions and the frequency of motor vehicles in a particular level crossing. Based on these criteria, we have identified that out of these 19,000 unmanned level crossings, nearly 1281 level crossings need manning. We are going to sanction manning of all

these level crossing. We have already sanctioned nearly 550 level crossings for manning. We are doing the manning of these level crossings on priority."

2.28 On an average, every year, 141 persons died and 158 injured in the accidents occurring at unmanned level crossings during the last decade, contributing a share of 37% of the total fatalities in all accidents, 9% of the total fatalities occurred in manned level crossing accidents, thus indicating that 46% of train accident fatalities take place at rail-road intersections.

2.29 The level crossings are made to facilitate the smooth running of traffic in a regulated manner governed by specific rules and conditions. As on 31.03.2002, there were 21,792 unmanned and 16,549 manned level crossings on Indian Railway System. At present, 6446 manned level crossings are interlocked and 14502 are provided with telephones.

2.30 The Ministry has informed that 55.88% of manned level crossing accidents were attributed to railway staff, whereas 41.18% are due to negligence of road vehicle users and 2.94% due to the combination of factors.

2.31 The Ministry enumerated the steps being taken to reduce the accidents due to level crossing accidents as follows:-

(i) Road users frequently misjudge the speeds of trains. A train travelling at 90 KMPH covers 25 m/sec. Thus although to the road user, the train appears to be 200 metres away, in terms of time it is only 8 seconds away. This message and need of safety at unmanned level crossings is conveyed through publicity campaign launched in various media like TV, Cinema, posters, radio, newspaper advertisements and street plays etc.

(ii) Since accidents at unmanned level crossing takes place due to negligence of road users, the State Governments can help by being strict while issuing and checking driving licenses, specially to drivers of trucks, buses and other heavy vehicles. All Chief Secretaries have been requested to help in educating road users.

(iii) Analysis of accidents at Unmanned Level Crossings reveals that more than 30% of accidents take place with tractors. State Governments have been requested to enforce provisions of Motor Vehicle Act for tractor drivers.

(iv) Telephones are also being progressively provided at all manned level crossings.

(v) The level crossing gates are progressively being manned in phased manner.

(vi) The manned level crossing having very heavy traffic density are also being progressively interlocked with signals.

(vii) Busy level crossing gates are being replaced by road-over-bridges/road-under-bridges.

Accidents due to Fire

2.32 During the oral evidence on this point, the Chairman, Railway Board stated:-

"2% of total accidents occur on account of fire and 2% of total fatalities are also on account of fire."

2.33 He further added:-

"We are going for fire proof coaches, we are going for improved, electrical fixtures and use of fire resistant material in our coaches; and we are going for intensive campaigning to prevent carrying of inflammable goods, either through PA system or otherwise."

2.34 The Ministry also informed that trend of accidents during last 5 years (1999-2000 to 2003-04) indicates 44.59%, Fire accidents were attributed to the negligence of the railway staff, 27.03% due to the 'Failure of other than railway staff', 10.81% due to equipment failures, 6.76% due to sabotage and for remaining 10.71% either the cause could not be established or were due to 'incidental' causes.

CHAPTER – III

The Human Factor

3.1 Manpower is the most valuable asset for Indian Railway. Undoubtedly, the entire safety edifice of Indian Railways rests on the 'human element'. It is also true that on an average 2/3rd of accidents are attributable to 'staff failure', either directly or indirectly.

The Chairman, Railway Board informed the Committee that human failures used to be of the order of 66 per cent, which has come down, and as of today, to 53 per cent.

Manpower is the most valuable asset in any organisation, more so in Indian Railway which is highly labour intensive. The Indian Railways with a work force of nearly 1.5 million is one of the biggest employers in the world. To have the optimum output from the workforce, higher motivation level and stress free environment is to be ensured. Suiting the job requirement, skills of manpower have to be suitably developed requiring adequate attention in their training facilities. The corrective steps being taken for reducing the staff failure on Indian Railways include:-

(a) Improving quality of recruitment by Railway Recruitment Boards.

(b) Aptitude test for selected operating categories of staff at entry level.

(c) For updating of knowledge of safety staff in safety related rules, staff are periodically spared for refresher training in Zonal training institutions. Besides, safety seminar/meetings are held from time to time, wherein staff are acquainted with the causes of accidents so that same type of error may not be repeated by them while performing their duty.

(d) Simulator aided training is given to the running staff.

(e) Rs.73.5 crores have been provided under SRSF for upgradation/modernization of 52 major training centres.

(f) Periodical Medical examination is given to all train passing and running staff.

(g) Drivers are subjected to breath analyser test before they are booked for duty and also at 'sign off'. Surprise checks are also carried out on the run after commencement of duty.

(h) Safety category staff vacancies are filled up on priority.

(i) Emphasis is given on surprise inspections and ambush checks.

(j) Greater stress is being given to improve the condition of running rooms for drivers/guards.

(k) Disciplinary action is taken against the staff found guilty of any act or omission which resulted or would have ordinarily resulted in an accident.

(l) Reducing over hours working.

(m) Inspection and ambush checks.

(n) Holding regular dialogue with grass-root and frontline safety category staff.

Training

3.2 Since Indian Railway are a labour intensive organisation, proper training and motivation of its labour force, would also contribute to improving railway safety. Even if the staff is disciplined and dedicated, still there is a scope for improving through training and extending it to areas not yet fully covered.

The Committee has been informed that several training courses are arranged by Railways for staff to have an indepth knowledge of railway working and techniques, depending on the nature of the job. Training courses are conducted as Initial, Promotional, Refresher and Specialised courses. Over 2 lakhs staff and 6000 officers are trained annually in 191 training centers (6 for gazetted and 185 for non gazetted) spread all over the country. According to Ministry a very high priority is given to training, motivation and morale of the railwaymen in general.

The Railways claim that a comprehensive training need analysis of all categories of staff is being done through series of meetings with Principals of training centre on a regular basis. Based on the feedback, training modules are continuously modified/revised to suit the training requirement of staff besides incorporating courses on new technology and better work practices. Specialised courses are conducted as and when required for enhancing skill whenever new

assets are acquired or new technology is adopted or for concentrating on a particular aspect of knowledge.

3.3 Some of the steps taken by the Ministry of Railways in this direction are as under :-

Refresher Courses: Staff are regularly sent for Refresher Courses and Safety Camps. Refresher Courses are conducted once in three years for some safety categories. Safety category staff becoming overdue for refresher courses are to be taken off duty, till such time they complete the training. The importance given to refreshing and updating the knowledge of the employees is borne by the fact that amongst the trainees undergoing training in a year, about 40% undergo Refresher Course training only.

Crash Courses : From time to time, staff connected with train operations are specially screened and those found deficient are given crash courses at training centers.

Simulator aided training for the running staff: Effective training plays an important role in improving enginemanship and safety consciousness. In order to give a major fillip to the quality of their training Centers.

3.4 During oral evidence, the Chairman, Railway Board informed that:-

"We have given lot of thrust to training of our Railway staff and we have made a provision of nearly Rs.220 crore for it in our Corporate Safety Plan."

3.5 He further informed:-

"We are training nearly two lakhs of our employees every year spread over nearly 175 training institutes. As regards the type of training that we give, we are giving both practical and theoretical training. At the end of the training course, there is a test system. Many trainees fail also. So, they are well tested and they have to pass that test. Only then they will be allowed to work.

Firstly we have courses at all levels. We have induction course, refresher course and advanced promotion course. There

are various levels of courses. They are meant for people at various stages. Running staff has to attend the refresher course periodically. Unless he passes it, he will be taken off from his duty.

As regards qualified instructors, we get competent instructors who have good educational background and good acumen for training. But at certain places of the training institutions people normally do not want to go there, and there we find some problem. But we try to overcome those problems. We try to get competent instructors in these institutes.

We are conducting courses for trainers also. We are training the trainers so that they become good trainers. We are having special courses for trainer also."

3.6 During oral evidence the representatives of the Railway Unions stated as under:-

"Although training centres exists in Indian Railways and training is given, I feel those modules need further improvement and the strategy should be to see that the worker is updated to meet the requirements of the system. Unfortunately, that type of vision is missing today. So, in this context, an important suggestion is that talented people should be inducted as trainers. If the trainers are qualitatively superior and are assigned the responsibility of bringing up the skills of each and every worker, not only at the induction stage but also at the stage of every promotion, naturally efficiency would improve. When efficiency and quality are improved, so far as the human workforce is concerned, the accident rate would come down. The Government had been granting 30 per cent of basic pay as training allowance to instructors previously. Subsequently, due to economy measures, it has been brought down to 15 per cent. This needs to be looked into for at least

restoring 30 per cent so that efficient people could be attracted because their involvement would be an added advantage to the training institution of Indian Railways."

3.7 The Ministry also stated that a separate unit is being set up for training techniques and instructional designs which will be entrusted the job for development of lesson plans, training modules, etc. Funds have also been allocated to various training centers for upgrading the facilities for improving the living conditions in the hostel, providing better messing facilities, strengthening the facilities for recreational and cultural activities, making good the deficiencies in respect of training aids, as also upgrading the Model Rooms with working models, see-though models, etc.

Work Environment

3.8 To promote devotion, dedication and sincerity towards duties, Human Resource Development (HRD) Cells are proposed to be constituted at Zonal, Divisional Headquarters involving dynamic and knowledgeable supervisors to study:-

(i) Working habits of ground level staff

(ii) Factors leading to short cuts

(iii) To reduce fatigue, minimise monotony and improve safety consciousness.

3.9 However, during oral evidence the representatives of the Railway Unions stated:-

"The ten-hour duty system was brought into force in the year 1969. This rule is needed to be reviewed because of various changes. Today, the speed of the train has increased, the load has increased, the number of signals has increased, and also the whistle boards have increased. Yet, the driver and assistant driver are expected to continuously concentrate on the foot plate of the locomotive without diverting his attention even for a minute on any other aspect. He has to continue like this till he reaches the destination. On account of this, there is a heavy stress on them. This stress also causes safety hazards. So, there is a need to review the duty hours of running staff, particularly drivers and assistant drivers. The Justice Miyabhai Tribunal Award was considered by the Ministry of

Railways in 1969 and orders were issued. At that time, the locomotives were of steam and there was opportunity for the driver to drink half a cup of tea at each halt. Now, there are no halts. There has to be total mental and physical concentration. It would be humanly impossible to have such a concentration for such long hours. So, there is an urgent necessity to think and revise the duty hours at least on high speed trains like Rajdhani and Shatabdi and other super fast express trains."

3.10 They further stated:-

"In 1973, there was an agitation of loco running staff in this regard and an agreement was reached with the Government of India because it was approved by Parliament. The Driver must not work beyond 10 hours. It was implemented in 1979 but subsequently, it was withdrawn and today a driver is forced to work even 22 or 24 hours at a stretch."

3.11 During oral evidence, the Chairman, Railway Board stated:-

"We have to see that they do not work under stress and strain. About 10 hours of duty from rolling on to rolling off and 12 hours of duty from signing on to signing off. We are very strictly monitoring this; there are exceptions here and there; but we are monitoring to see that this rule is not violated to the extent possible; and we do not stress our drivers.

There are two categories particularly of gangmen and drivers which we have to take care of to reduce the stress level, apart from the ten hours of duty."

3.12 Regarding the working hours, the Chairman, Railway Board further stated:-

"On the issue of drivers performing more than ten hours of duty and without power brake certificate, we are very strict because we want to contain the stress level of our drivers. We will like to adhere to the ten-hour or twelve hour duty rule. But at times it may be there that there may be emergency or accidents or some other unusual and untoward incident in connection with train operation that the driver may be called upon to

work beyond the duty hours. So, that is in built in our procedure, but that should be as a matter of exception and not as a matter of rule."

3.13 As regards the Miyabhai Tribunal Award of 1969 there was an agreement which was announced on the floor of the House by the then Railway Minister in both the Houses of Parliament. Till date, this has not been strictly implemented. There are a number of incidents. Even in some cases, the running staff have to work for more then 14-15 hours. When asked for reasons for non-implementation of Miyabhai Award for more than 20 years. The Chairman, Railway Board replied:-

"As regards the Miyabhai Award and the subsequent practices that we have been following thereon, I would like to say that we are trying to follow the ten hour and twelve hour duty norm. It is in consultation with the Federations.

In fact, earlier, it was difficult to make the exact prediction/forecast about the trains as to when the trains would arrive. It was given an intensive examination, an end-to-end examination. It used to be very difficult to foretell as to what would be the time when the train would reach and the driver should be called for duty. With the implementation of the Freight Operation Information System (FOIS) we are able to predict when the train is going to be there and how much time would it take. Further the maintenance of the rakes has also improved. We are in a very good position to forecast when the train is going to reach and when the driver should be called for duty. Our communication system to call the driver for duty has also improved.

We are going in for the crew friendly loco cabs for the drivers. This also came up in the Safety Samvadh that even guards are also over-stressed and that the type of brake van that we provide to them is very inhuman. So, we are going in for the crew friendly brake vans also in a big way. We are improving the ambience and the facilities in our brake vans."

3.14 He further submitted that:-

"We have already identified safety categories. We have got nearly 6.5 lakh posts which fall in safety categories and the instructions have been reiterated that particularly in respect of the safety categories, we should do the job analysis periodically and regularly and wherever we feel that working hours are to be changed, necessary action should be taken accordingly. These items are discussed by our unions and federations also regularly with the Administration. We take care of the same."

3.15 The Committee were informed that Yoga and Meditation lessons have also been introduced in training centres with an aim to help railwaymen in coping with the stresses involved with their jobs.

3.16 Regarding rest, Section 133 of the Railway Act, 1989 provides that a railway servant:-

(a) Whose employment is intensive or continuous shall, for every week commencing on a Sunday, be granted a rest of not less than thirty consecutive hours.

(b) Whose employment is essentially intermittent shall, for every week commencing on a Sunday, be granted rest of not less than twenty-four consecutive hours including a full night.

3.17 Working hours of employees in the Railways vary 42 hours to 72 hours per week. The hour of work per week are decided on the basis of job he performs and the strain he undergoes while doing his duty. The figures show that accidents on account of human failures/errors are consistently reducing year after year. Railway Administration is fully aware of the benefits drawn by providing comfortable living and proper working conditions to the staff and efforts in the direction are still on."

Crew friendly cab for locomotives

3.18 An ergonomic design of loco cab has been developed to provide easy approach to various control handles/buttons. Providing new features will ensure fatigue-free driving for long hours.

3.19 During oral evidence, the Chairman, Railway Board informed that:-

> "In the running train where next stop comes, the driver goes to the next coach and try to help himself. We had gone into various modifications in our loco cab; making it more crew friendly, more from the point view of urbanism. We want to make it more compact and handy for the crew and these changes we had already started effecting in the new locos. As regards this toilet facility in the cab, we have to take a final view. Very recently, we had organised an exhibition wherein certain foreign railways participated. They had also made a provision of small toilet."

Upgradation of Running Rooms

3.20 Running rooms should be provided with certain basic amenities like clean toilet facilities, safe drinking water, proper ventilation, desert coolers, subsidized meals, etc. According to the Ministry of Railways all the new running rooms would be built with improved layout and proper amenities. The existing running rooms are being upgraded on an urgent basis.

3.21 However, during oral evidence the representatives of the Railway Unions informed that:-

> "Category staff people, away from their homes, work for three or four days also at times. Sometimes, people do not come. They should have a proper place to stay. Rules have been framed. Sanctions have been given at some place and good arrangements have been done. Except in a few cases, improvements have been done. Improvement is required in the working condition of the running staff."

Upgradation of crew lobbies

3.22 Crew lobbies also need to be upgraded by providing basic amenities, facility for proper display of various instructions, computer and software package for proper booking of crew and ensuring adequate rest for running staff.

Recruitment

3.23 In the Budget Speech the Railway Minister declared that 20000 vacancies in Group 'D' category and 3500 vacancies in Railway Protection Force as constables would be filled up in Safety category during the year 2003-04 .

3.24 Indian Railways are a dynamic organisation, continually expanding its infrastructure by way of construction of new lines, doubling of lines, electrification of routes etc. apart from considerably increasing passenger and goods services every year. The Ministry have stated that safety category staff vacancies are filled up on priority basis.

3.25 During the oral evidence, the Chairman, Railway Board apprised the Committee:-

> "We have got the vacancies because we had been introducing new trains. After introduction of the trains, we were having the process of creation of posts and filling up of posts. So, last year we have taken a decision that whenever we declare any new trains, immediately the posts will be automatically created like the running staff. In the six monthly review, the posts will be automatically created and they will be filled up. So far as filling up of vacancies is concerned, we are going for an all out drive for this."

3.26 Hence, there is need for more and more staff in the field commensurate with the increase in infrastructure so that the basic goal of Railways of serving the national economy, providing better customer services and meeting needs of safety is not compromised. In view of the above, should the rigid rightsizing policy in the government organisations of filling only 1% of the posts against 3% retirements every year, be made applicable across all disciplines of Indian Railways and its field units. Similarly, Railway Protection Force and Railway Protection Special Force, which are combative forces, should be treated similar

to the other combative forces of the Government, which are exempt from rightsizing.

Right Sizing of Man Power

3.27 Since 1990s, Railways have been following the policy of rightsizing manpower. During this exercise, railways have succeeded in bringing down their staff strength from 18.07 lakhs in 1990 to 15.10 lakhs in 2002, a reduction of almost 3 lakhs in 12 years.

3.28 As per the replies given by the representatives of the Railway Union in this regard:-

> "Railway Ministry are adopting the policy of right sizing of manpower duly down sizing the work force without making realistic study of the staff requirement, condition of assets, work environment, facility of discharging duties efficiently etc. The infrastructure i.e. New Lines, Doubling of Lines, Electrification etc., are being expanded without providing adequate manpower and other requirements. While the Passenger/goods services are increased every year corresponding infrastructure and work force are not being provided. These unrealistic measures are causing heavy strain on the staff and also telling upon the efficiency of the system in general.
>
> The Ministry of Railway are adopting the policy of so-called rightsizing, but in fact it is downsizing. The downsizing is continuing despite addition of over 250 freight and 50 passenger trains in a year. Such new trains are added to the system without any increase in the manpower or providing infrastructure for the maintenance of rakes. There has also been an increase in the workload because of doubling of the lines and more number of routes are electrified, yet there has been no increase in the manpower."

3.29 They further informed that:-

> "It is happening because of surrendering of posts. Posts are being surrendered in order to show the economy. Posts are being surrendered because of competition among officers as to which DRM surrenders more posts. The competition is so serious that officers surrender lots of post and go away. After that to create the post is a problem.

Not only this, if a section is transferred from one division to other, posts in the portion of the division which is going to other division are being surrendered and when other man takes over he will say that before he has joined these posts had been surrendered."

3.30 Further more:-

"The Railway Ministry has now framed a new concept of benchmarking. It is called Indian Railways Bench Marking (IRBM). The factors like working condition, condition of loco-sheds or wagons, age of the locomotives whether they are new or old, work culture, etc. are not taken into account. It is not a scientific concept of benchmarking. Efficiency depends upon the availability of materials and machines, layout and infrastructure. Suppose, in some place infrastructure is not modern and is not up to the expected standard, there definitely more manpower will be needed. So, without looking into all these facts, this is done just for the purpose of surrendering."

Retirement Scheme

3.31 The Chairman, Railway Board during the oral evidence stated:-

"For the gangmen and drivers category, we have gone in for safety related retirement scheme. This has again come out of the Safety Samvadh and this is under implementation in its first phase. The applications have come and we are scrutinizing them. We are hopeful that this should be a popular scheme."

He further added:-

"The scheme in phases starting from the stage of the staff seeking retirement at the age of 57 years first. If we allow it right from 50 to 57 at a time there will be a sudden spurt in vacancies. After talking with the federation we have arrived at a compromised formula and we are going phase-wise."

Mode of Payment

3.32 While deliberating upon the mode of payment of salaries to all the categories of staff, including Group 'D' category, by cheque, the representatives of the Ministry of Railways informed that:-

> "We have received instructions from the RBI and CVC that payment should be made by cheque, not only payment to staff but payment to other contractors etc. also. Whatever payments are made, we should make it by cheque. This was to be implemented by 31st December, 2004. After going into the total details we find that it is not possible to do it one hundred percent. So, we have issued instructions that wherever this facility is not available, payment through cheque will not be made….. Definitely it is not being made compulsory for gangmen."

CHAPTER –IV

FUNDING OF SAFETY RELATED WORKS

4.1 Till 2000-01, budget allocations for safety related works were funded from the Depreciation Reserve Fund and Development Fund, which are financed from internal resources, and the Railway Safety Fund, which is funded from the Railway's share of the diesel cess. From 2001-02 a Special Railway Safety Fund was constituted and safety related works are also being financed through this fund.

Depreciation Reserve Fund(DRF) and Development Fund(DF)

4.2 Indian Railways for long have, had a system for funding replacement/renewal of its overaged assets. This has been done through the "Depreciation Reserve Fund" (DRF), created for this specific purpose. Annual need based contributions are made to this fund from Railway revenues. Investments of developmental nature, as also on safety related projects have been done through the "Development Fund." Both these funds are sourced from internal generation of resources. While DRF is essentially for replacement and renewals, Development Fund is to meet the expenditure on safety related other works such as track circuiting, interlocking of level crossings, provision of lifting barriers, Foot over Bridges etc.

4.3 Indian Railways have been spending substantial amounts every year on safety related works basically pertaining to replacement, and renewal of critical assets of tracks and bridges. Railways have also been constructing road over and under bridges at busy level crossings, and has undertaken the manning of level crossing at certain others. Apart from this, there has been upgradation of maintenance facilities at workshops oriented towards improved safety of plant and equipment.

4.4 The Committee observed that by track renewal, Railways increase the carrying capacity of freight as well as passengers. Increase in the percentage of growth in the traffic is more than 500 or 600, and in case of freight traffic the increase is more than 400 and 500 even with the existing over-aged assets and the existing average speed limit. By replacing over-aged assets Railways could have increased capacity and thereby increased internal generation. When

asked about the reasons for not properly planning better utilization of assets replacing overaged assets so as to achieve growth in traffic and in turn enhance internal generation.

4.5 The Chairman, Railway Board explained:-

"Nearly four-five years back, we were in a very tight situation. We worked virtually at the operating ratio of 98 per cent. With the operating ratio of 98 per cent, there could not be any internal generation. We have to cater to not only Depreciation Reserve Fund, but also to Pension Fund and Development Fund. Development Fund takes care of staff amenities, passenger amenities and traffic operational efficiency works. It is the prioritisation that we have to do. As on 01.04.2001 our kitty in the Depreciation Reserve Fund was only Rs.78 crore. However, in 2003-04, the operating ratio is 92.1 per cent. So, even after recouping all our Railway funds, by the end of the current financial year we will have more than 4600 crore rupees in the Railway funds. Particularly in the Depreciation Reserve Fund, we will be having more than 2600 crore rupees. Indian Railways have adopted a right strategy. This year also we are expecting an operating ratio definitely somewhere around 92. We are in a position to ensure that we are able to meet our annual arising of the replacement of over-aged assets with the funds of DRF. The arrears in any case we are getting wiped out by Special Railway Safety Fund."

Special Railway Safety Fund (SRSF)

4.6 Since the early nineties, the Railways have not been able to provide fully for the depreciation needs due to severe financial constraints. The steep increase in the working expenses of the Railways resulted, in an erosion of the Railways' capacity to generate investible surpluses. The railways had to even resort to drawing down from the balances of the DRF to enable minimal plan outlays. Consequently, there was an accumulation of overaged assets awaiting renewals. In the wake of this, the Railways Safety Review Committee (RSRC) recommended the grant of Rs.15000 crores to the Railways for wiping out the accumulated arrears of the replacement and renewals of the safety related assets.

4.7 Railway Safety Review Committee-1998, in Part-I of their report identified the following arrears of asset renewal as on 01.04.99.

Arrears of Track Renewals (BG)	-	12,260 Kms.
Distressed Bridges	-	262 Nos.
Overaged Signalling Gears	-	1,560 Stations
Overaged Coaches (BG)	-	1,322 Vehicle Units
Overaged Wagons (BG)	-	34,000 (in terms of 4-wheeler units)

4.8 On the basis of RSRC's recommendation, a one time grant for renewal of these overaged assets was sought by the Ministry of Railways, on account of its inability to provide such a large quantum of funds from within its own resources. A non-lapsable Special Railway Safety Fund of Rs. 17000 crore was created to expedite the works of renewal/ replacement of overaged safety related assets within a time frame of six fiscal years. It was decided that this fund would be funded through two sources viz. (i) Railways' contribution through the levy of 'safety surcharge' on passenger traffic and (ii) through additional financial assistance to be given by the Ministry of Finance. The amount so provided would be Rs.5000 crores and Rs.12000 crores, respectively. The surcharge has been in place since 01.10.2001.

4.9 The Special Railway Safety Fund that has been set up in 2001-02, is to receive funds to the tune of Rs.17,000 crores over a six year time frame. The proposed utilization of this amount over the six year period is as given below:-

Item	**Expenditure proposed out of Total SRSF over six financial years (Rs. in crore)**
Track Renewals	7670
Bridge Works	1722
Signalling & Tele Communication	3103
Rolling Stock	3359
Safety Enhancement	1146
Total	**17000**

4.10 The Ministry of Railways received Rs.1350 crores from the General Exchequer towards Special Railway Safety Fund for 2002-03. The Ministry of Railways own contribution towards SRSF during the year was Rs.1136.32 crores. The total expenditure on works under SRSF during 2002-03 was Rs.2486.31 crores.

During 2003-04, Ministry of Railways received Rs. 1600 crores from the General Exchequer towards Special Railway Safety Fund. Railways own contribution towards SRSF was Rs.983.78 crores. The total expenditure on works under SRSF during 2003-04 was Rs.2583.78 crores.

The expenditure incurred during 2002-03 & 2003-04 under various SRSF related Plan-heads is as under:-

Item	**Expenditure**	
	2002-03	**2003-04**
Track Renewals	2006.67	1934.90
Bridge Works	151.61	157.27
Rolling Stock	321.95	306.13
Signal & Telecom	353.40	493.39
Other Elec. Works	0.03	0.27
Machinery & Plant	3.17	16.75
Other specified works	Nil	0.05
Total Gross	2836.84	2917.76
Credits	-350.53	-333.98
Total Net	**2486.31**	**2583.78**

The Planning of inputs of material required for execution of works is possible only after the allocations in that particular year are known, and follows the presentation of the annual Railway Budget. Further, physical progress depends on the availability of working season, which varies from region to region. Physical output and expenditure in the first half of the year may not be proportional.

Unlike the Revenue Expenditure, there is no targeted expenditure for the works, though every effort is made to utilize the funds in an even manner.

4.11 During oral evidence, the Chairman, Railway Board apprised the Committee as under:-

> "This is the fourth financial year running. At the beginning of this financial year, we had completed nearly 9,000 kms. of track renewals against the arrears which was envisaged in October, 2001 as 16,500 kms and by the end of this financial year, we will be completing nearly 11,500 track kms. of the track renewals. As regards the bridges, in October, 2001 there was an arrear of 2,700 bridges and till the beginning of this financial year we had completed 1,305 bridges and by the end of this financial year, we will be completing 1,700 bridges in total. Similar is the satisfactory performance in the case of signal and telecom gears and the rolling stock."

Railway Safety Fund

4.12 A Railway Safety Fund has been created from 01.04.2001 for financing works related to manning of unmanned level crossing and for construction of ROBs/RUBs at busy level crossings. This fund is financed mainly through receipts from Central Road Fund, which is funded by levying of cess of Rs.1 per litre on diesel and petrol. Railways get 12 ½ % of entire petrol cess and 6 ¼ % of entire diesel cess. Two separate plan-heads, viz. Road Safety Works-LCs and Road Safety Works-ROBs/RUB have been created in 2000-01 for booking of expenditure relating to these works. The total Railway Safety Fund in the Annual Plan for 2003-04 is Rs.433 crore. For the Annual Plan 2003-04 the outlay for Road Safety works – LCs is Rs. 313.00 crore while that for Road safety works ROB/RUB in Rs.120.00.

4.13. If all unmanned level crossings are to be manned, Railways require approximately Rs.2450 crore as Capital cost to man them and approximately Rs.700 crore per annum will be required to meet the maintenance and operation cost. The cost of manning with interlocked signals will be around Rs.5500 crore. However, to eliminate probability of any accident at manned and unmanned level

crossings, construction of Road over bridges and Road under bridges may be envisaged, but it will involve staggering amount of Rs.4,00,000 crore.

4.14 A Railway Safety Fund was created for financing works related to manning of unmanned level crossings and for constructions of ROBs/RUBs at busy level crossings. This fund is financed mainly through receipts from Central Road Fund, which is funded by levying of cess of Rs.1 per litre on diesel and petrol. Railways get 12 ½ % of entire petrol cess and 6 ¼ % of entire diesel cess. Two separate plan-heads, viz. Road Safety Works-LCs ad Road Safety Works-ROBs/RUB have been created in 2000-01 for booking of expenditure relating to these works.

4.15 To reduce accidents at busy manned level crossings, Indian Railway have been building Road Over-bridges/Under-bridges. In the last five years, 87 ROBs/RUBs have been constructed at an overall cost of Rs.222 crore. Similarly, Indian Railways have manned 490 unprotected level crossings at an overall cost of Rs.49 crore (approx.), during the last five years.

4.16 During oral evidence the Chairman Railway Board stated that:-

> "If you take diesel cess, then what happens is that 50 per cent of the diesel cess straightway goes for rural development. Of the remaining 50 per cent, we are getting only 12.5 per cent, but only 6.25 per cent comes to us. This is a very small percentage. In case of at least one lakh level crossings we should go in for replacement. My submission to the esteemed Committee will be that we should insist upon the State Governments to come forward so that we are able to do that. Actually what is happening is that we have got nearly 19,200 level crossing, around 20,000 level crossing that are unmanned. Out of the 16,500 manned level crossing we have got around 1250 level crossing where the DUV is more than one lakh. These more than 1200 level crossings would have to be replaced. There is no other choice. I would like to submit to the Committee that we should go in for replacement. We should insist upon the State Governments that this is a small amount of money."

CHAPTER – V

Modernisation & Maintenance of Safety Assets

Track Circuiting

5.1 Committees are formed from time to time to examine various aspects of safety. The Sikri Committee constituted in 1968 had specifically recommended for track-circuiting. Asked about the recommendations made by the Sikri Committee 30-40 years back in regard to track circuiting in all important sections, important stations. The Committee observed that because of non-implementation of certain recommendations like providing track circuiting from fouling mark to fouling mark, accidents had taken place.

5.2 While elaborating upon this the Chairman Railway Board, informed that:-

> "The track circuiting is required to cover more than a lakh of kilometers of track. We can broadly divide track circuiting into two parts – track circuiting at stations and through track circuiting or continuous track circuiting. Track circuiting at stations is further sub divided into several parts e.g. fouling mark to fouling mark. When we started with Sikri Committee, priority was felt that at least let us do it fouling mark to fouling mark. It was also looked into as to which stations we should cover first because there are various types of stations – A, B, C, D and E – depending upon traffic density and all that. Then, depending upon the station location, it is from home signal to the fouling mark and then from fouling mark to the advance starter and then the point zone where the turnouts are located. On this, there was an expert committee in the Railways and we went into prioritisation of this.

5.3 He further informed that:-

> "We have already covered A, B, C and D stations so far as fouling mark to fouling mark track circuiting is concerned. As regards remaining locations of track circuiting at various stations, it is in various stages and our plan is that in the next four years, we will try to complete the station locations covering A, B and C stations. As regards continuous track circuiting, we have already envisaged it in

our Corporate Safety Plan and sanctioned 2,000 route kilometers of continuous track circuiting at the cost of nearly Rs. 425 crore.

In the Corporate Safety Plan (CSP) we have also mentioned that, in the coming years, we will cover another 2,000 route kilometers for the continuous track circuiting at approximately same cost.

About track circuiting, it is not the only safety item. There are innumerable other items also. We have to prioritize the safety works. We try to mobilize enough funds or resources, and we have done it in this case also. Now, I can say that the progress in this field is fairly good and satisfactory."

5.4 Further more:–

"resource crunch has been the basic cause for not proceeding with these identified safety items like track circuiting or renewal of the over-aged assets in the last three or four decades. As regards the replacement of over-aged assets, we had been struggling to do it. It is because both these works, namely, the replacement of over-aged assets – which used to be charged to the Depreciation Reserve Fund – and the track circuiting works – which used to be charged to the Development Fund – are funds, which were to be funded from the internal generation itself…….. internal generation over the past few years had been limited.

As on date, the work is in progress in 930 locations, and we have already given the target of 2008-2009. It is because we have now got adequate funds for the replacement of the over-aged assets, and it would also take care of some safety enhancement works. Now, with Rs.17,000 crore for SRSF, we are in a position to take care of our safety items.

In the CSP, we have also mentioned that the track circuiting at stations would be carried out at another, 1,072 locations, in addition to these 930 locations. We have documented in the CSP that we will be completing all these works in 9 years from now, and

for the A, B and C category stations we are trying to cover them by 2008-2009.

Track Maintenance

5.5 Railway track is the backbone of the railway system. Keeping railway track in a satisfactory state of maintenance, is considered by Railways as a very vital ingredient for ensuring safety. Towards this objective, there is a well-established system of inspection of railway track in as much as, every inch of track is inspected by a trained personnel everyday, be it a holiday or otherwise. There is a daily inspection of track by key-man who covers his beat on foot twice (to and fro).

5.6 In addition to manual inspection, track defects are also being observed by way of Recording Track Geometry periodically. Mechanical and electronic Track Recording Cars are utilized depending upon the importance of the Route i.e. Rajdhani and Shatabdi route, A, B, C etc. and the frequency for track recording has been specified. To measure the riding quality of track, Oscillations are also recorded at specified intervals.

5.7 Repair and maintenance of Railway track is an ongoing process. Maintenance works are carried out regularly depending upon the need. For ensuring safety of traffic, track is inspected regularly and corrective action taken promptly wherever required.

5.8 However, safety is ensured at all levels and at all times and the Permanent Way Supervisors are authorized to impose speed restriction as warranted, without any reference to their supervisors.

5.9 Renewal of track is also carried out on age-cum-condition basis, depending upon availability of funds. In certain cases, the maximum permissible speed of a section, is also reduced if the conditions so warrant.

5.10 For detection of hidden flaws in rails/welds adequate number of self propelled unlra sonic flaw detectors have been procured.

5.11 The Ministry in their written replies stated that execution of track renewal works. Especially overdue stretches, has got an increased emphasis with the setting up of Special Railway Safety Fund (SRSF) during 2001-02, as is evident from the figures given below:

Year	Expenditure (Rs. in cr)	Achievement (Track Km. In CTR Units)	Remarks
99-00	2042.00	3006	DRF
00-01	2244.65	3250	DRF
01-02	2475.32	3620	DRF+SRSF
02-03	3298	4776	DRF+SRSF
03-04	3370 (Budget)	4986	DRF+SRSF
04-05		4125 (Target)	DRF+SRSF
04-05		1642 (Upto Aug 04)	DRF+SRSF

5.12 During oral evidence Chairman, Railway Board, submitted:

> "We use to a routine, rudimentary way of maintaining of tracks. We have gone in a big way for mechanization. Now tracks are maintained with the help of machines. This has reduced the stress level. Accidents on account of human failure have, therefore, gone down. As mentioned the accidents on account of human failure which used to be 66 per cent a few years back, has been reduced to 53 per cent."

5.13 He further added:

> "We have got different track structures. It may be 60 Kg./m rail with 90 UTS. For all these various track structures so far as age is concerned, some GMT has been prescribed. GMT means Gross Million Tonne. For example age of 60 Kg 90 UTS track is 800 GMT. Suppose annual traffic is 30 GMT for a given section. Then it may read renewal in approximately 30 years. In normal course we do not merely go by the age. We have a system of regular inspection. Renewal may be on condition basis also. May be, a track in 27 years may still be okay and we continue with it or it may require renewal very earlier on condition basis. So, it is condition on age basis for renewal because there are different situations.

There may be high wear and tear on curves, or in coastal area corrosion is high. So, it is based on the situation and the condition is also kept into consideration.

Bridges

5.14 Regarding bridges, age is not the criteria for rebuilding/rehabilitation of bridges. The number of factors affecting the life of a railway bridge being very large, it is not practicable to predict its precise life. The sudden failure of bridges is very rare and therefore, on Indian Railways the replacements have been done on the basis of:-

(i) Visible signs of distress in the form of cracks in the masonry/concrete or corrosion in the steel components.

(ii) On account of obsolescence i.e. the old stone slab or rail cluster bridges, early steel girders, screw pile bridges etc.

(iii) When they are found inadequate for heavier axle loads i.e. overstressing becomes beyond laid down limits.

However, safety is ensured at all times and suitable speed restrictions are imposed or traffic even stopped, if warranted, on noticing any signs of distress during bridge inspections or even during any other routine inspection of track. The speed restrictions are imposed even by lower grade supervisors in view of safety for which they need not wait for prior approval of higher authorities. Bridge rebuilding/rehabilitation is an continuous process.

5.15 The Ministry of Railways have stated that there is no codal life prescribed for bridges from the point of view of their replacement. A number of factors affect the life of railway bridge and it is not practicable to predict its life precisely. Therefore, life of bridge is not dependent mere on Its age, but also on the

physical condition. However, the following steps have been taken in this regard to maintain all bridges in safe condition:-

(i) A rigorous schedule of inspection of bridges by various officials as laid down in the codes for inspection of bridges is followed.

(ii) As a result of inspection undertaken, rebuilding/rehabilitation of bridges is carried out on programmed basis.

(iii) Wherever required speed restrictions are imposed on bridges till the rehabilitation/rebuilding is undertaken.

(iv) The frequency of inspection of distressed bridges is increased suitably as laid down in Bridges Manual.

(v) Frequency of inspection of floor system of early steel bridges of once a year is being adhered to.

(vi) Suitable speed restrictions have been imposed on all the cast iron pile bridges till they are rebuilt. All the 105 cast iron pile bridges have been sanctioned for rebuilding.

(vii) Guidelines have been issued for underwater inspection of bridges and work has started on some of the bridges.

(viii) Guidelines have been issued for the assessment of residual fatigue life of steel structures.

(ix) A talk force has been set up to further study the systems of bridge inspections and management, underwater inspection for bridges & training of bridge engineers abroad. Action is being taken to upgrade and modernize the systems of inspection and management for bridges as well as training of Indian Railway Bridge Engineers and Inspectors in India and abroad on a continuous basis so that the latest techniques of non-destructive evaluation of bridges, under water inspection of bridges, residual life assessment of bridges and bridges and bridge management shall be implemented effectively.

(x) During the IX Plan period Rs.410 crore. Were spent for rebuilding/strengthening of 3400 bridges.

(xi) Outlays for bridge rehabilitation/rebuilding have been increased substantially. Rs.1530 crore has been earmarked for rehabilitation/rebuilding of bridges out of Special Railway Safety Fund during the period 2001-02 to 2006-07.

5.16 As on 01.04.2004, there are 228 distressed bridges on Indian Railways, all of which have been sanctioned for rehabilitation/rebuilding. Out of these, 169 distressed bridges are targeted for rehabilitation/rebuilding for the year 2004-05. The details of distressed bridges rebuilt/rehabilitated since 1996 are as under:-

Year	No. of distressed bridges rebuilt/rehabilated
1996-1997	89
1997-1998	73
1998-1999	104
1999-2000	190
2000-2001	134
2001-2002	116
2002-2003	343
2003-2004	175
2004-2005	169 (Targetted)

5.17 During the evidence Chairman, Railway Board emphasized:

> "All over the world nobody has determined the age……. I have seen some of the bridges of 170 years old abroad quite okay…… we have some codal life of bridges based on which we allocate funds under DRF….. We have got nearly more than a lakh of bridges. Many bridges are more than 100 years old. Age is merely not a criterion for the replacement. Many bridges, which are more than 100 years old, are in sound condition. We have laid down a system of inspection of bridges. they are inspected every year and during inspection if we come to know that there are some distressed bridges – which means bridges which show the sign of deterioration of physical condition – the frequency of inspection is increased. Not only frequency is increased they are kept under rigorous watch. If need be we impose speed restrictions. Lately we have gone for the latest state of art techniques for managing of bridges. we have gone for bridge management system, determination techniques for fatigue life and residual life of the bridges. This is the latest state of art technique being followed all

over the world. We have imported techniques for under-water inspection of the bridges, integrated testing of the bridges, non destructive testing, mapping of unknown foundations techniques, etc. A number of techniques have been adopted. This determines the life of the bridge. We will actually come to know the residual life of a bridge. We have now techniques which can determine that a bridge which may be 100 years old still may have the residual life of so many years. We are following these techniques.

Installation of Safety Devices

5.18 Introduction of modern signaling system is not only promoting safety and minimizing the impact of human error in train operation but also enhancing line capacity. Technical back up support to the drivers has become essential with increasing demands of traffic due to speed of trains, congestion on routes etc.

Role of RDSO to enhance Safety

5.19 Research, Design and Standards Organisation (RDSO) which is the research and design wing of Indian Railways, has been making significant contribution in improving the safety of train operations and maintenance. Some of the major safety projects, being pursued by RDSO include developing Centre Buffer Coupler (CBC) for coaches with anti-climbing features, digital axle counter using multiplexes, end of train telemetry system, solid state interlocking system, in-cab signalling and modern train protection system etc.

5.20 RDSO is spearheading its research in developing Wheel Flat Detector, which facilitates timely action for detachment of rolling stock after getting information regarding wheel flats, theft-proof 'elastic rail clips', track friendly wagon bogie, derailment detection device, and design development of detection system of overloading wagons etc.

5.21 At present, RDSO is seized of wheel impact load detector, crashworthy coach design, prevention of rock falls in cuttings, datalogger for Ultra Sonic Flaw Detection (USFD) machines, development of track side bogie monitoring system, development of test-track facility, development of measuring wheel technology etc. Technology mission on railway safety is being launched in association with IIT/Kanpur and Department of science of Technology (Ministry of HRD) to tackle

some burning issues like wheel flat detection, problem of visibility during foggy weather etc.

5.22 The Ministry of Railways stated that the officers from RDSO also carry out studies on the defects or flaws in rails/track.

Anti Collision Device

5.23 In order to prevent collisions at high speeds on Indian Railways, an Anti-Collision Device (ACD) – called "Raksha Kavach' has been indigenously developed by Konkan Railway Corporation Limited (KRCL). The system consists of a network of micro processor based communication devices for preventing collisions at high speeds which may result in loss of human lives. The system works on a satellite based Global Positioning System (GPS) and deviation count principle for identification of track layout automatic speed control and braking features on the locomotives. This radio based device, when installed on locomotives, brake-vans, stations and level crossing gates, is expected to provide protection to train drivers, gateman and road users against collisions, train parting etc.

5.24 Decision on provision of Anti Collision Devices (ACDs) would be taken based on the successful results of the extended field trials in Katihar division, Balli-Madgaon-Verna section Jallandhar Amritsar section Vishakhapatnam-Vigayawada section. Work of radio and route survey for 750 Kilometers of electrified route on Southern Railway and 750 kilometers of non-electrified route on South Central Railways has also been sanctioned.

5.25 During oral evidence the Chairman Railway Board informed that -

> "We have sanctioned nearly 3,500 kilometers of ACD, out of which 1,730 kilometers are roughly in the NF Railway and the balance in the Northern, Southern, South-Central and South-Western Railways. In Northern Railway, we had conducted the extensive field trial on ACD on the Amritsar-Jalandhar section. After that, we took a decision to go on a commercial scale on the NF Railway. The work is going on well and would be completed in the current financial year. We would come to know of the teething problems. They would be incorporated and modifications in specifications,

changes in procedures or changes in design, if required, would be effected. In the meanwhile, we would keep everything ready. All the detailed estimates would be kept in readiness. Once we have learnt of the problems in the NF Railways, we would commence the work on the other four Railways."

Auxiliary Warning System

5.26 Auxiliary Warning System (AWS) has been installed to the extent of over 599 track Kms. Automatic Train Protection and Warning System is an aid, which provides audiovisual warning to the driver and prevent him from passing signals at danger. Presently, an AWS is working on Mumbai suburban area of Western and Central Railways. AWS on 128 kms stretch of Southern Railway is in progress.

Automatic Block Signaling and continuous track circuiting

5.27 Automatic Block Signaling is permissive signaling system and permits sending of more than one train between two stations with safety and speed, thus, optimising utilisation of existing assets. It also provides better safety at level crossing gates. Automatic Block signalling is functional on 1375 route kms. Works measuring 2000 Route Kms. of Automatic Block Signaling, with features of continuous track circuiting, have been proposed with a view to detect discontinuity in rails, caused by rail fractures, and acts of vandalism/sabotage.

Block proving by axle counter

5.28 This is a device to prevent collision in the mid-section has been made functional over 200 stations. Works are in progress at more than 1000 block sections. Further, the device is being integrated into panels to be installed as part of modernization and replacement of signaling installations. A set of axle counters placed at two ends of a portion of track, count-in and count-out the number of axles of a train respectively. A zero resultant count indicates, by inference that the portion of the track is clear. Indian Railway have started using modern systems equipped with digital technology, offering high immunity to interference and high reliability.

Improved Interlocking Technology

5.29 Mechanical and electrical lever frames in cabins are being replaced gradually by panel interlocking and solid state interlocking with centralised operation of points and signals, thereby reducing dependence on the human efforts. There is a quantum jump in relay based panel interlocked stations replacing Cabin operated mechanical signaling system. It has gone up to 2500 stations from 1000 stations during the last decade. Route Relay Interlocked stations have jumped from 123 stations to 229 stations in the same period.

Solid State Interlocking

5.30 With the development of electronic/solid state technology, the use of such devices in signal and interlocking installations has also been adopted. It employs microprocessors and software for interlocking functions, providing a high level of reliability, availability and safety. The system has a built-in data logging facility for effective off line failure and operational analysis.

Walkie-Talkie Sets to Crews

5.31 As an interim measures prior to introduction and proliferation of MTRC (Mobile Train Radio Communication), 5 W Walkie-Talkie sets have been provided to drivers and guards of all the trains for communication in static mode or at low speeds. Besides, 25W VHF sets have also been provided at stations on Broad Gauge Double Line/Multiple Line sections so that train crew can communicate with the nearest station masters in the case of emergencies. Approximately 26,000 walkie-talkie sets to drivers and guards and 2,200 sets of 25 W VHF sets to station staff have been provided.

Mobile Train Radio Communication

5.32 Mobile Train Radio Communication (MTRC) is the modern and state-of-art means of communication wherein Driver/Guard of a train can communicate with the Station Master or Section controller or any other maintenance/operational functionary in stationary or mobile mode. This is duplex communication wherein both the parties can talk simultaneously. The works for provision of MTRC have been sanctioned on 2,415 km. It will be GSM-R based MTRC system with digital technology, as being used by cellular networks worldwide.

Overhead Alignment

5.33 Indian Railways are having 42000 route km of overhead alignment on which train control and block circuits are working, Considering its many inherent constraints, it has been decided to replace overhead alignment on important sections on routes by underground cable. 10000 route kms of optic fibre cable has already been laid and works are in progress for 8000 kms.

Simulators for Drivers

5.34 Simulators are progressively being used for imparting training to drivers. These simulators replicate the effect of braking, acceleration etc. in the train on a stationary cabin of a locomotive. Training on the simulator exposes drivers to intricate problems in the complex train-track dynamics and his reflexes to observe fast changing signals.

SOS Flasher Lights

5.35 Flasher lights have been provided on all 7000 locomotives to warn trains coming from opposite direction, after a derailment on double line, and prevent such type of collisions. Automatic switching 'On' of the flasher lights, not requiring the interference of drivers and becoming operational in case of sudden need, have also been introduced. Most of the main line diesel and electric locomotives have already been modified.

Improved Tail Lamps

5.36 LED Type flashing Tail lamps have been provided in rear of all trains for better visibility to prevent rear end collision.

Improved Signal Lamps

5.37 LED based signal lamps are being introduced for semaphore signals thereby improving their visibility as compared to conventional kerosene lit semaphore signals.

Auto Braking Device

5.38 'Dead man's handle' in EMU and MEMU trains is provided for automatic braking, if driver gets incapacitated.

Modifications of rules of Operations

5.39 Rules for train operation during foggy weather have been revised, thereby reducing chances of an accident during conditions of fog.

Train Actuated Warning Device (TAWD)

5.40 Development of a reliable Train Actuated Warning Device (TAWD) for giving audio/visual warning to road users about an approaching train has been under process on Indian Railways to reduce accidents at unmanned level crossings. Field trials have been carried out to prove its reliability and fail-safe feature, apart from suitability and miscreant prone environment. The trials have been completed and few designs have been found suitable. These devices will be installed at selected 100 level crossing gates on Indian Railway. Further adoption of these devices will be considered after observing the performance of these 100 devices.

The Ministry of Railways have adopted parallel technologies such as auxiliary warning system for ACDs and TPWs and TAWD. They are running parallel pilot projects on each one of them for testing. Based on the success of a particular technology it would be adopted by Indian Railways.

Monitoring Mechanism

5.41 All instructions and directives issued by concerned departments are sent to various agencies concerned with particular matter. The system of test checks exists at the field level. Instructions become part of rule books and manuals. Their physical implementation gets regularly monitored through multi-level inspections, super-checks, and surprise scrutinies etc.

A system of "Safety Audit" is also followed to detect the deficiencies in the system, if any. Subsequently, remedial and suitable action is also taken.

5.42 During the oral evidence, the Chairman, Railway Board apprised the Committee.

> "So far as these instructions within the Railways are concerned, this is being done regularly every month by the headquarter team. As regards the inter-railway safety team, we are doing it six monthly. The COS is the coordinator. The COS of a given Railway is supported by the Head of the departments of some concerned Departments like Signal, Engineering, Mechanical and Electrical. They go to the other Railway and conduct inspection. They have their independent inspections. They normally cover their inspection in two days' time, and if need be, they meet the General Manager and apprise him of the problems of that Railway. The copies of these inspection notes are given to the Railway Board.

5.43 For ensuring safety there is a daily inspection of track by key-man who covers his beat on foot twice (to & fro). There are also a scheduled inspection at the level of permanent way Inspector (PWI), Assistant Engineer, Divisional Engineer and Sr. Divisional Engineer who inspect their section on weekly, monthly and quarterly basis.

The Chairman, Railway Board stated:-

> "Besides these safety audits, we have given the beat to every Executive Director in the Railway Board with the directions that in their inspections, they will cover the safety items also during their safety inspections."

5.44 A Joint Inquiry Committee of officials of the Railway or Commissioner of Railway Safety inquires into each case of derailment. The Inquiry Committee or CRS determines not only the cause of accident and the connected responsibility, but also points out any other irregularity that may be noticed during the inquiry. The officials held responsible for causing derailment are taken up under Disciplinary and Appeal rules. Follow-up action on each of recommendation is taken in right earnest.

CHAPTER – VI

Safety Audit and Disaster Management

Disaster Management System

6.1 The first responsibility in case of accidents is to reach and extricate accident victims and organise effective trauma case. The basic principle of trauma management is speed & expediency, as most trauma patients can be saved within the first hour. This hour is called "The Golden Hour."

A High-level Committee was constituted in September, 2002 to review the Disaster Management over the Indian Railways. The Committee has identified the technological and managerial inputs to quicken the pace of relief and rescue operations. The Committee has observed that it is natural and logical that the first relief to the affected passengers normally comes from the closest rural or urban population and it does take a couple of hours for the railway teams to reach the site. The Committee has made 111 recommendations for effecting improvement in the existing infrastructure and its usage for mitigation of disaster and for better preparedness in emergencies. The Committee's report has been accepted and all its recommendations are at various stags of implementation.

6.2 Implementation of these recommendations will strengthen the organised Disaster Management over Indian Railway leading to quicker rescue, relief and restoration operation. The financial implications of implementing these recommendations will be around Rs.375 crore. These recommendations include the following:-

(a) Faster Response

- Three coach high speed self-sufficient Self Propelled Accident Relief Train(SPARTs) for quicker initial response.
- Rationalisation of ART/ARMV locations.
- No need to obtain police clearance for rescue operations.
- Entering into MOU with State Govts. For mutual cooperation in case of disasters
- Institutionalising standing arrangement with Armed Forces for ensuring quicker rescue and relief operations.

Better facilities and equipments

- Steam cranes to be phased out
- Enhancing maximum permissible speeds of ART (Accident Relief Train) and ARMV (Accident Relief Medical Van)
- Better communication facilities e.g. availability of satellite phones and mobile exchanges, etc.

(b) Expanding resources to meet requirement in major accidents

- Formation of Disaster Management Plans at various tiers
- Crack teams at each Zonal Railway with containerised equipment for rescue and relief
- Standby ART/ARMV gangs for use when required
- Empowering field units to effectively tackle post disaster situation
- Full scale disaster management exercises

However, for ensuring rescue and relief within Golden Hour, disaster management plans at District and State level will have to converge and complement the railway disaster management system. The Railways are developing Disaster Management Modules.

The Commission of Railway Safety

6.3 The Commission of Railway Safety functions independent of the Ministry of Railways under the administrative control of the Ministry of Civil Aviation and deals with matters pertaining to Safety of rail travel and train operation and is charged with certain regulatory, inspectorial, investigatory and advisory functions as laid down in the Railways Act, 1989. The Commission is headed by a Chief Commissioner of Railway Safety at Lucknow. Working under the administrative control of the Chief Commissioner of Railway Safety are 10 Commissioners of Railway Safety, each one exercising jurisdiction over one of the 9 Zonal Railways and the Metro Railway.

Section 113 of Railways Act, 1989 requires intimation of serious accidents to be sent to the Commissioner of Railway Safety. Under the Statutory Investigation into Railway Accidents Rules, 1998 framed by the Ministry of Civil

Aviation and Tourism, a statutory enquiry by the Commissioner of Railway Safety is obligatory in every serious accident to a train carrying passengers which is attended with loss of human life, or with grievious hurt, as defined in the Indian Penal Code, to a passenger or passengers in the train or with serious damage to railway property of the value exceeding Rs.25 lakhs. While holding statutory enquiry, the Commission not only examines affected passengers but also invites members of the public to give evidence in persons during the enquiry or to write to the Commission. Some of the serious accidents at manned level crossings attended with loss of life or with grievous injury to persons travelling in road vehicles are also inquired into by the Commission of Railway Safety.

6.4 During the oral evidence the Chief Commissioner of Railway Safety informed that :-

> "We work on a modest budget of Rs.2.5 crore per annum. Our Headquarters is at Lucknow. I have got nine Commissioners of Railways Safety placed in different parts of the country to related with the Zonal Railways. Earlier there were nine zones but today we have got 15 Zonal Railways. Our main Commissions continue to interact with all the Zonal Railways. We are also taking action to consider and increase the number of Commissioners of Railway Safety depending upon the workload."

The principal functions of the Commission of Railway Safety are:-

- Inspection of new Railway lines prior to authorisation for passenger traffic;
- Periodical inspection of open lines;
- Approval of new works and renewals affecting passenger carrying trains;
- Investigations into accidents, including enquiries into such accidents to passenger carrying trains as are considered to be of a serious nature; and
- General advice on matters concerning safety in train operations.

6.5 Regarding the role of the Commission for investigation of Railway accidents, the Chief Commissioner of Railway Safety informed that :-

> "Once the prima-facie it is accepted by the police, the law agencies that it is indeed a law and order matter, perhaps the Commission does not have a much role to play about investigation. Our role is mainly into the technical aspects, as to how the accident happened. The law and order, in spirit, is not covered from our side. It is for the Committee to please consider my suggestion that whether purely a law and order case – like sabotage, arson, bomb blast on the track or in the train and which is accepted by the law agencies that it is a law and order related matter- should be inquired by the Commission or it can be removed from the role of the Commission."

6.6 When asked about placing the Railway Safety Commissioner's Report on various accidents on the Table of both Houses of Parliament, the Ministry of Railways stated that under 'The Statutory Investigation into Railway Accident Rules, 1998' such CRS Inquiry reports are confidential documents, and, therefore, these are not being tabled in both the Houses of Parliament. However, Chief Commissioner of Railway Safety can recommend publication of CRS Reports to Railway Board. In case the Railway Board has reservations on the recommendations on Chief Commissioner Railway Safety, Ministry of Civil Aviation finally decides the matter. In the recent past, CRS Inquiry Report on accident of 2301 Rajdhani Express near Rafiganj station on 9.9.2002 on Eastern Railway was published on the recommendation of Railway Safety Commission. However, Ministry of Railways have been always advising Chief Commissioner of Railway Safety for publication of CRS enquiry Reports.

Annual Report of Commission of Railway Safety summarizing the working and activities of Commission, which includes brief details of serious accidents inquired into by Commission of Railway Safety during the year, is placed on the table of both the Houses of Parliament by Ministry of Civil Aviation.

Commission of Railway Safety has recently started publishing 6 monthly periodical – 'Railway Accident Inquiry Reports' with effect from January, 2004 for public circulation. This periodical contains brief information, description, cause, remarks and recommendations arising out of enquiries conducted by the Commission.

6.7 All the inquiry reports of Commission of Railway Safety and any other Commission of Railway Safety and any other Commission specifically appointed for inquiry are thoroughly examined and appropriate action is taken on accepted recommendations. They are regularly monitored.

6.8 Apart from the above functions discharged by the Chief Commissioner of Railway Safety, he plays a vital roll for giving approval/certification for opening of new lines/new assets before they are formally opened. However, during oral evidence the CCRS submitted before the Committee as under:-

> "Normally, one month before the assets are opened, the Commissioners have to be given all the information by the General Manager. Some times because of some pressure, the Railways give inadequate notice. We do not have adequate time to go through their documents, to ask for clarifications and get a satisfactory reply from them. We have got other official commitments. We cannot just do that in three days. So, the Railways are agreeing to give us one month notice, which was being done earlier and which was removed later in the rules of 2000. While we inspect and give certification, we put certain conditions. Subject to those conditions, the lines can be opened. They accepted the conditions. But later on, the Railways went back and unilaterally withdrew some of the conditions imposed by us. We took it seriously with the Railway Board. I want to bring it to the kind attention of the august Committee for serious consideration."

Announcement of Prima-Facie cause of accidents by Railways

6.9 There are merits and demerits of announcing the prima facie cause of a major accident. In some cases, the prima facie cause of the accident can be easily observed from the site conditions and circumstances, and in other cases, it may not be practical to come to the conclusion regarding prima facie cause.

The railways' customers are keen to know the prima facie cause of the accident at the earliest, say, within few hours, and they do not want to wait for completion of inquiry by Commission of Railway Safety.

Railways also realize their responsibility, in the interest of transparency, to let them know the prima facie cause of the accident as per their observations.

If the Railways do not indicate their observations, a lot of misinformation is spread out, creating an adverse situation. Thus, it becomes all the more necessary to indicate to the media Railways' observations and prima facie cause, if possible.

6.10 However, the Chief Commissioner of Railway Safety during oral evidence submitted that :-

> "So far as Rajdhani accident is concerned, which is very fresh in the memory of everybody, our humble view is that there should be no hurry on the part of the Railway Administration to come to a conclusion on the *prima facie* cause till such a time the Commissioner of Railway Safety goes to the site of accident, does his inquiry and comes out with the report, which we do not delay. As I said, our preliminary report comes within ten days. So, there is no hurry for having to give a *prima facie* opinion by the Railway Ministry.
>
> The regulator or anybody from the regulatory side, if they say something, it handicaps us. Immediately a doubt comes also in the public's minds may be the Commissioner of Railway Safety will have to perhaps toe the line or whatever has been said by the regulator. It puts us into embarrassment. Our own recommendation on Rajdhani was precisely this. Please never ever say the *prima facie* cause when you know the Commissioner of Railway Safety is going to inquire into that. If we are not going to do the inquiry, you can say whatever you want."

CHAPTER – VII

Security in Railways

7.1 Indian Railways are the largest organisation in the country with mostly open, easily accessible and unguarded assets. These include equipments such as signaling, track, open line installations, overhead wires, yards, stations towers, etc., which are prone to theft and vandalism. With an adverse law and order situation in many parts of the country, including terrorism saboteurs etc., the railway operation and safety get seriously affected.

7.2 The responsibility for providing security on Indian Railways has been assigned to two agencies i.e. the Government Railway Police (GRP) which works under the respective State Government and the Railway Protection Force (RPF) which works under the Ministry of Railways (Government of India).

7.3 'Policing being a state subject, the security of passengers and their belongings in the running trains and on the Railway premises is the constitutional responsibility of the State Government concerned which they discharge through the GRP (Government Railway Police). Security of traveling public and their belongings is of a great concern. A high Level Committee was constituted to recommend steps for improving the security of Passengers' on Railways. As per the recommendations of the Committee, the RPF ACT, 1957 and Railway Act 1989 were amended to empower the RPF to take cognizance of certain patty offences. The amended Acts have now come into force w.e.f. 01.07.2004.

7.4 Previously domain of RPF was to protect Railway property only. Now after 01.07.2004, PRF is escorting selected trains and deploying manpower in passenger areas of some stations to supplement the efforts of GRP to combat crime.

7.5 During oral evidence, the Chairman, Railway Board intimated that:-

> "The RPF (Amendment) Act, was conceived in 2003-04. According to this Act, all minor offences mentioned in this Act will be tackled by the RPF, who are under the administrative control of the Railways. This has been implemented, for the 1st July this year. The whole process was completed during 2003-04. These are giving very good results. It is just a beginning. Right now, we are escorting 1288 trains with our own RPF staff, and we are tackling 26 minor offences on our own. It leaves the GRP or the Police to spare more capacity or energy to tackle IPC type of offences viz. offences like dacoity or robbery. We are sharing intelligence with each other and we are having liaison. This has clicked very well."

7.6 The following steps are being taken by Railways to prevent crime against passengers and their belonging:

(i) Anti-social elements are being removed from Railway premises and trains by RPF also to supplement the efforts of GRP by deployment of staff in passenger areas on some stations. Watch is being kept by Coach Attendants/TTEs on the passengers entering/detraining from the coaches and coaches are properly bolted during their run, especially in night hours.

(ii) Announcement through Public Address System and CCTV is made at important Railway stations to alert the travelling passengers against theft of their belongings etc.

(iii) FIR forms are made available with the Train Guards/Station Masters/RPF to facilitate the travelling public to lodge their reports immediately. RPF Assistance posts are provided at important station to assist passengers in lodging FIRs with Government Railway Police/Local Police.

(iv) Sharing of Special Intelligence and Crime Intelligence Between RPF and GRP is being done at all levels.

(v) Periodic co-ordination meetings with Government Railway Police are being held to analyze the crime position on Railways with a view to take suitable preventive measures.

(vi) Whenever the State Government wants to establish mobile police posts in the affected trains, necessary facilities like accommodation etc. are being provided. Approximately 322 such Mobile Police posts are functioning over the Railways. RPF is deployed to assist and augment the GRP in affected sections.

7.7 The Ministry of Railway stated that the cases of crime on Railways are reported to, registered and investigated by the Government Railway Police (GRP). RPF, however, coordinates with the GRP to supplement their efforts in controlling crime on railways. While sharing the crime intelligence, the vulnerable areas are identified. However, the vulnerable areas change from time to time according to the rise and fall in criminal activity. As the State Police has the power and responsibility of ensuring order and safety in the trains, they make efforts to provide escorts in important trains. RPF now supplements the efforts of GRP by sharing the escorting of trains at Zonal Level with effect from 01.07.2004.

7.8 The Ministry of Railways submitted that in regard to involvement of Railway Employees in cases of robbery/decoity, appropriate level & departmental action against such erring employees serves as a deterrent.

Security of Lady Passengers

7.9 Regarding the special security arrangement for ladies in the ladies compartments specially during the late hours in long distance trains they informed that GRP deploys lady constables to escort ladies compartments, depending upon the availability of such constable/manpower. Efforts have been made by RPF to sensitise their staff to this problem. GRP and RPF staff on duty in the trains and on the platforms, keeps watch on the ladies compartments and render assistance as and when required.

7.10 During oral evidence the Chairman Railway Board informed that: –

> "We have gone for mahila squads in two or three trains, of the type of 'Surakshini' and 'Tejaswini', in which we depute RPF staff, who are all ladies. Even the ticket checking staff are ladies. We are giving armed RPF staff and this has been very successful in Mumbai suburban trains. We are extending it to various other railways. The thrust was given last year and beginning was made even earlier and this thrust areas will be kept all through."

Sabotage

7.11 Railways pay a heavy price for adverse law & order situation. Law and order in trains, stations and railway premises is the responsibility of State Governments. Railway Protection Force (RPF) is meant for protection of railway property and do not have powers to take action, arrest and investigate law & order related issues. State Government deploy Special Police, called GRP for enforcement of law and order in railway premises and trains. Indian Railway pay half the cost of their expenditure to State Government. In the last 2 years, the expenditure on security covering RPF, RPSF and railways' share in establishment of Government Railway Police has crossed Rs.800 crore.

Though the number of accidents, caused by sabotage remains around 15 accidents per year, their gravity is incalculable as it erodes the public faith not only in Railway system but also in law and order enforcing agencies.

7.12 During oral evidence the Chairman Railway Board apprised the Committee that :-

> "Ultimately, whatever may be the reasons for sabotage, our moral responsibility is to give safe travel to the passengers. We have already taken a decision and formed a Committee at the Zonal and Division levels. The sabotage prone areas will be identified and by sharing the State and the Central Intelligence, steps will be taken. I had a meeting with the Cabinet Secretary and the Home Secretary. He had given a clear directive that this intelligence will be shared with each other. Track patrolling and identification of sabotage prone areas have already started at random and we have given a detailed guideline on this point.

7.13 When asked whether the existing strength of 69000 RPF is sufficient, the Chairman, Railway Board stated:-

> "This exercise was done at that time also. We need a total of nearly 18,000 staff for RPF to undertake the responsibility of security of passengers in passenger areas and in the running trains. These amendments have been made effective from 1st of July this year. So far we have been able to arrange nearly 9,000 staff out of the existing resources by redeployment. We have gone for the end to end rake movements. So, the staff which was deployed in the marshalling yards, for seal checking etc. has been redeployed for escorting trains, similarly for deploying them on the nominated stations, the staff already deployed in the parcel areas, goods points, on the platform have been redeployed for the purpose. We have been able to man nearly 1288 trains and 179 stations. The remaining 1550 trains are being still manned by GRP and the remaining stations are yet to be manned. We have set up an internal Committee. They have given their recommendations. A necessity is being felt of late that we will be needing creation of some additional posts. Although when these amendments were done and we approached the Cabinet it was decided that we would try to arrange these 18,000 staff by way of readjustment and redeployment. Probably, some posts may need to be created. We will approach the Cabinet at the appropriate time after we have done our exercise.

Thefts and Vandalism

7.14 There are many extraneous factors, which endanger railway safety, and are beyond the control of the railways. It is a known fact that the vital equipments of the railways are prone to theft and vandalism. These include P-Way fittings, brake gear fittings of coaches and wagons, overhead telephone wires, signaling equipment, track circuiting cables, OHE wires and other electrical equipments, etc. Each of these have an important bearing on safety and their theft invariably leads to unsafe conditions. Theft and vandalism works as disincentive to deploy track mounted safety equipments like hot box detectors, axle counters etc. commonly used on developed railway systems.

RECOMMENDATIONS/OBSERVATIONS

1 Indian Railways is one of the largest railway networks in the world with 63,122 Kms. of track, 7681 locos, 44756 coaches, 2,14,760 wagons (Unit), hauling 14 million passengers, 1.5 MT freight, crossing 1 lakh signals, 8081 stations, 40,000 odd level crossings and involving 6 lakh front line operating and maintenance staff by running 14761 trains daily. A single flaw in any of these has the potential to cause a major tragedy. The Committee are aware that safety is vital to railway's operational efficiency. Statistics show that despite the increase of 560% in passenger traffic and more then 380% in freight traffic, the number of accidents have reduced drastically from 2131 in 1960-61 to 325 in 2003-04. It is also claimed safety index has come down from 5.50 in 1960-61 to 0.39. But every accident involving loss of human lives shakes the people's faith in the Railways and, therefore, the Committee feel that statistics of accidents should not create smugness in the Railway authorities. Therefore, the Ministry of Railways should make all out efforts in all areas of its operations continuously to achieve zero accident rate.

2. The Committee are aware that manpower is the most valuable asset for Indian Railways. They were, however, informed that 'human failure is the largest single factor responsible for train accidents'. They were also informed that human failures used to be of the order of 66% has come down now to 53%. The Committee also note that besides the callousness of the employees, at times there are certain factors which are beyond their control such as circumstances on account of weather, defective signaling system, defects in locomotive or vehicle, stress due to long hours of work, work environment and many others. The Committee, therefore, feel that a system which is heavily dependent on human elements needs constant monitoring, inspections, counseling and training of operational staff to ensure the safety by strict observance of safety manuals and modernization of signaling system be done in a time bound manner. They are of the opinion that there is a scope for improvement through training and extending it to areas not yet fully covered. Furthermore the modern techniques require highly intelligent, technically qualified and thoroughly trained staff for handling the operation of the safety equipments as per job

requirement. The Committee, therefore, recommend that the drivers, guards, station masters and the staff in charge of signaling and communications should invariably be trained, re-trained, counseled, monitored and continuously assessed. They stress that intensive training should be imparted to the operational staff to keep them up dated with the latest developments through induction courses. The staff also require self motivation, basic work ethics and sense of responsibility. They emphasise that training should also bring about psychological change, the vision and level of commitment so that it undergoes a positive change. Further, meditation, yoga classis and recreational activities could also be promoted.

3. The Committee find that training allowance to instructors has been cut down from 30% to 15% as an economy measure by the Ministry of Railways. They feel that unless proper remunerations are offered, the talented and well qualified candidates would not come forward as instructors. Until, highly qualified instructors are available they cannot be assigned the responsibility of skills upgrading of trainees/employees upto an appropriate level. The Committee, therefore, emphasise that competent instructors who have good educational background and good acumen for training should be employed with a proper pay package. They further stress that even the trainers should be exposed to higher level of training from time to time.

4. The Committee were informed that the 10 hours of duty from rolling on to rolling off and 12 hours of duty from signing on to sign off are being maintained. However, they find that in actual practice it is not so and at times the operational staff especially Gangmen and Drivers have to work for even 22 to 24 hours at a stretch. The Committee believe that due to work stress and stifling conditions, the life of thousands of commuters cannot be put to danger. At times drivers have been found to be working for 5 consecutive days. The Committee apprehend that these type of conditions would certainly affect the safety in train operations. They feel that to promote sincerity and dedication the work environment should be made congenial and stressfree. The stress level of the ground level staff and those dealing with safety operations should be reduced and efforts be made to reduce fatigue, minimize monotony and improve safety

consciousness. They opine that ten hour duty system was brought into force way back in the year 1969 and this rule needs to be reviewed because of various crucial changes in the present day circumstances such as increase in speed of trains, the load, number of signals and also the whistle boards. They find that the driver/assistant driver have to continuously concentrate and be watchful about the track signal, speed restriction, the load, the rear end of the train and the behaviour of the track and locomotives for long hours particularly in superfast trains. They are of the view that such circumstances require total concentration, which is humanly impossible for such long hours. The Committee, therefore, recommend that the ten hour daily roster system may be reviewed in view of the present scenario of train speed levels, number of signals, load and whistle boards etc. They emphasise that it may be ensured that the running staff may not be put on duty for not more than 8 hours as continuous concentration is required by the drivers and a slight deviation, stress or fatigue could lead to a major disaster. Besides, the Committee also stress that crew friendly cabs should be introduced or necessary alterations be made in the running coaches at the time of overhauling to provide easy approach to various control handle/buttons including provision of toilets and provide such features that would ensure fatigue free driving for long hours. They also urge the Ministry to provide certain basic amenities at running rooms like proper hygienic toilets facilities, clean drinking water, proper ventilation, desert coolers, subsidized meals etc.

The Committee were also apprised that at certain places there are no running rooms provided at the stations, with the result that drivers are unable to take proper rest. They desire that these should be provided at all the stations on top priority.

5. The Committee find that Railway Minister had announced in his Budget speech to fill up the 20000 vacancies in Group 'D' in safety category and 3500 vacancies in RPF. They find that due to this acute shortage of staff at times even the Station Masters have to perform commercial duties like sale of tickets, booking of parcels/goods, attending public queries etc. They feel that in the process there could be lapse in train operations. Due to shortfall in staff of safety category, safety of trains/operations have to be compromised with. The Committee, therefore, recommend that the vacant posts in safety categories should be filled up urgently on priority basis.

6. The Committee find that vacancies in important safety categories are not filled up and in the process huge backlog gets accumulated. It has been alleged that a large number of posts are surrendered indiscriminately without any commensurate reduction in workload of workers so as to reduce the expenditure on staff. They are of the view that efficiency depends on the availability of materials and machines, layout and infrastructure. The Committee, therefore, urge the Ministry to give necessary instructions to the Zonal Railway to surrender the posts only after an indepth analysis of the staff vis-à-vis other factors such as work load, working condition, availability of materials, status of machines, layout, infrastructure etc. and not merely as a routine practice. They further emphasise that particularly posts in safety category should not be surrendered or curtailed without making a thorough analysis.

7. The Committee are happy to note the decision of the Railways to automatically create posts for maintenance and running staff as soon as new trains are declared. They, however, emphasize that vacancies for additional staff for the additional work after introduction of new trains, should be filled up within a time bound period not exceeding six months.

8. The Committee note that under the Voluntary Retirement Scheme (VRS) of the Railways the gangmen and drivers within the age of 50-57 years are allowed to seek voluntary retirement thereby giving one of his wards appointment on compassionate grounds. However, they were also apprised that if VRS is given to all those in the age group of 50-57 years

then a huge number of vacancies would arise at once. As there are already a large number of existing vacancies in the safety category, it would not be desirable to consider all those eligible for VRS. The Ministry, therefore, decided to first consider only those who are 57 years of age. They are of the opinion that justification to extend this facility first to all those who are at the age of 57 years is on the consideration of their deteriorated physical condition in case of gangmen and deterioration in the amount of alertness in case of Drivers which is needed in their case due to aging effect. The Committee emphasize that this scheme may be implemented in phases starting from the stage of staff seeking retirement at the age of 57 years first.

9. The Committee observe that in order to earn more revenue, new trains are introduced and many express trains are converted into superfast ones and efforts are now made to provide for commensurate safety safeguards and maintenance facilities. While doing so, proper care is also not taken to replace the overaged rolling stock. It is also observed that the process of modernization and renewal of track and their maintenance lacks the desired attention. Moreover, most of the bridges and culverts have out lived their lives and have become weak. The Committee therefore, strongly recommend that before introducing more trains and enhancing frequency of the trains proper survey of the concerned routes, the capacity of the infrastructure to bear the additional stress including the status of rolling stock should be conducted.

10. The Committee were informed that the number of accidents have reduced drastically during the period 1960-61 to 2003-04 even though the freight and passenger traffic has increased manifolds. They were also informed that accident per million train Kms. (a universally accepted safety index) has come down from 5.5. in 1960-61 to 0.39 (provisional) in 2003-04 which compares favourably with any leading railway system in the world. The Committee also note that while the traffic has increased the commensurate increase in assets for capacity generation has not been there. They feel that the system is over stretched, overstressed and has a direct impact on the safety of the operations in running trains. The Committee, therefore, recommend that the railway network may be

expanded alongwith upgradation of technological installations. The priorities of investment have to be made so that the valuable and scarce resources could be allocated for expansion, replacement, rehabilitation and modernization of the existing network.

11. The Committee were apprised that the track circuiting is divided into two parts i.e. track circuiting at stations and continuous track circuiting. They were also informed that fouling mark to fouling mark track circuiting has already been accomplished at A, B, C & D stations and the remaining locations of track circuiting at various stations is at different stages of implementation. The Ministry further informed that 2000 route Kms. of continuous tracks circuiting at the cost of nearly Rs. 425 crore and subsequently another 2000 Kms. will be carried out at almost the same cost. The Ministry have informed the Committee that now they have adequate internally generated funds to be appropriated to the Development Fund, in order to take care of the track circuiting. Continuous track circuiting is very crucial to avoid accidents. The Committee, therefore, recommend that since the Ministry have adequate funds in the Development Fund the track circuiting works on the tracks should be carried out.

12. The Committee observe that new trains are declared on many sections and at times express trains are converted into superfast ones without studying the impact it would have on the already over stressed system. Railway track is the backbone of the railway system. They note that the maintenance of track is a continuous process. The Committee were informed that there is an established system of inspection of these tracks and recently the tracks are being maintained with the help of machines. The Committee recommend that regular inspection and surprise inspection by senior officers should be conducted. They also emphasise that the ultra sonic flaw detectors and self propelled ultra sonic rail testing cars for detection of hidden flaws in rails/welds should be bought in adequate numbers. They also stress that these sophisticated equipments be brought into regular use. The Committee further recommend that adequate efforts should be made for maintenance, renewal and modernization of tracks.

13. The Committee are aware that on some occasions train accidents have occurred due to overaged bridges. They note that the Ministry have adopted the state of the art technique for bridge management. The Committee have been informed that this helps in under water inspection of bridges, integrated testing of bridges, non-destructive testing mapping of unknown foundations techniques. This determines the life of the bridge as well as the residual life of the bridge. The Committee emphasise that regular inspection of the bridges should be carried out by using various technologies adopted by the Railways and determine their life and promptly carry out the necessary repairs wherever necessary.

14. The Committee note that a number of steps are being taken by the Railways to induct safety-related technologies like track circuiting, advance warning system, computerized track measuring cars, simulators for training of drivers, Anti Collision Device, Auxiliary Warning System (AWS) solid state interlocking walkie-talkie sets on crew, Auto Braking Device, Train Actuated Warning System (TAWS), Train Protection and Warning System (TPWS). The Committee were apprised that nearly 3500 Km of ACDs have been sanctioned for the year. They were also apprised that it has been decided to first go on a commercial scale on the NF Railways and subsequently the rest of the stations would be completed. The Ministry informed that all the detailed estimates are being kept in readiness and once the problems, if any, are rectified, they would work on other Railways. They were also informed that the ACDs would be installed on the entire broad gauge system by 2013. The Committee recommend that the routes which are fully saturated or more than 50% saturated should be identified, and installation of such devices should first be made on these identified routes.

15. The Committee observe that there was an accumulation of overaged assets awaiting renewal due to which a Special Railway Safety Fund of Rs.17000 crore was created in 2001-02 for expediting the work of renewal/replacement of these assets relating to safety within a period of six years. The safety of train operations are dependent on proper maintenance of the track, rolling stock and other safety assets. These may be kept in working and safe condition and as such they must be renewed/replaced at regular intervals for smooth running, as the term of SRSF is nearing completion in 2006 the Committee, recommend that the work under Special Railway Safety Fund may be expedited so that the same may be completed within the stipulated time.

16. The Committee find that nearly 16%of the total accidents occur at the level crossings. Most of these accidents are due to carelessness of road users. They also find that accidents at manned level crossings were at the level of 4% of the total consequential train accidents, whereas unmanned level crossings accounted for 12% of the accidents. The work related to manning of unmanned level crossings and construction of ROBs/RUBs is being financed through the Railway Safety Fund. As of now 50% of the burden for construction of ROBs/RUBs is being shared by the State Governments, but due to financial constraints they are not discharging their portion. The Committee in their First Report (14th Lok Sabha) has inter-alia recommended that under such circumstances, the Railway should consider utilizing the amount accrued from diesel cess for construction of approach works. They once again reiterate their earlier recommendation in this regard.

17. The Committee are aware that the first responsibility in case of accidents is to reach and extricate the victims and arrange for their effective treatment. The basic principle of trauma management is speed and expediency so that the victims can be saved within the first 'Golden Hour'. The Committee, therefore, recommend that the Railways should ensure an expedient system of rescue and medicare to manage the aftermath of accidents. Besides, they should set up specialized public

relation desks at the major stations falling on the routes of the trains involved in accident.

18. The Chief Commissioner of Railway Safety informed the Committee that normally one month notice is required for inspecting the assets before opening of assets/new lines. However, he submitted that at times, the Railways give inadequate time. As such they have to complete the inspection with a time constraint. They were also informed that the Commissioner of Railway Safety is not consulted before announcement of new trains. Chief Commissioner of Railway Safety gives a conditional certification to start the train/new line/segment, but subsequently, the Railways unilaterally withdraw some of these conditions. The Committee take a strong view and recommend that sufficient notice period may be given to the CCRS for inspection and in no case the conditions put by the latter, on any project or the works, be withdrawn without consulting him as it may prove a major safety threat to the Indian Railways.

19. The Committee note that the vital safety equipment of the Railways are prone to theft and vandalism. These things have an important bearing on safety and their theft invariably leads to unsafe conditions. The Committee, therefore, recommend that the existing vacancies in the RPF category should be filled up without further delay.

20. The Committee were given to understand during the course of the examination of the subject that no details such as names, designation etc. of the GRP escorting various trains and persons in pantry cars are maintained. With the result that in case of any mishap or untoward incident, even Railway staff on board are unable to trace the GRP personnel on duty in the absence of records. In this context, the Committee emphasise that Railways in coordination with the concerned authorities in GRP and Catering Department should maintain proper records which should be kept readily available with the train Guard/TTEs so that in case of any lapse, GRP personnel could be held responsible.

21. At present the responsibility of providing security in trains and stations has been assigned to two agencies i.e. the GRP and the RPF. The GRP works under the respective State Governments and the RPF works under the Ministry of Railways. Recently the RPF Act 1957 and the Railways Act, 1989 were amended and the same have come into force w.e.f. 01.07.2004. With the Amendments made in the RPF Act, Railways have given some additional responsibilities to RPF such as registration/investigation of the minor offences in the trains, which were earlier dealt with by the GRP. However, the railways have given no publicity in this regard with the result the passenger do not know that such a responsibility has been entrusted to the RPF. The Committee, therefore, emphasise that publicity to this effect may be made at stations and inside the trains. Also general public must be adequately educated.

22. The Committee also desire that coordination meetings between the RPF and GRP may be held at regular intervals in view of the additional responsibilities given to RPF and the sensitive information about the law & order situation in the vulnerable areas on the Railway network should be exchanged. Further, coordination meeting amongst Divisional Railway Manager (DRM), the District Magistrate (DM), Superintendent of Police (SP) and Divisional Security Commandant (DSC) should be held regularly to discuss the law and order problems.

23. The Committee observe that representatives of the RPF association like other recognized federations, are also involved in Permanent Negotiation Machinery (PNM) and are also the Members of Participatory Railway Management where the duties and responsibilities of RPF in regard to security of Railway property and providing security to passengers are discussed. The Committee are of the firm view that the involvement of RPF personnel in these participatory forums should be further strengthened.

24. The Committee were informed that the Mahila squads of RPF 'Surakshini and Tejaswini' are being deputed in two or three trains presently, which is a welcome step. The Committee desire that the Railway may make sincere efforts to increase the strength of Mahila squads so that they may be deployed in other trains also.

25. As per the existing system, payment of salary to the Group 'D' category of staff in particular, is made through cash. The committee were informed that as per instructions issued from RBI and CVC all the monetary transactions either to staff or to the contractors etc. are to be made through cheques only. However, taking into account the nature of duties performed by the workers especially 'D' class workers such as gangman, it is very difficult for them to come to a city to collect their salaries through banks. The Committee are of the view that disbursement of salary through cheque should be made optional rather than mandatory for the group 'D' staff. Necessary orders to this effect be issued to all the Zonal/divisional heads. They also desire that the matter may be taken up with the RBI/CVC explaining the difficulties to obtain a waiver especially for Group 'D' category of staff.

26. The Committee have observed that the shifting sand dunes/sand drifts in western Rajasthan hampers the visibility level in running trains. Also due to deposition of sand on the tracks the trains have to be stopped for safety reasons for hours together. They therefore, recommend that the Ministry should promptly take concrete measures such as plantation of trees on both sides all along the tracks in the affected areas and also develop such technology which would help in quick removal of sand from the tracks.

NEW DELHI;
December, 2004
Agrahanaya, 1926 Saka

(BASUDEB ACHARIA)
Chairman,
Standing Committee o n Railways