NINETEENTH REPORT

STANDING COMMITTEE ON RAILWAYS (1995-96)

TENTH LOK SABHA

MINISTRY OF RAILWAYS (RAILWAY BOARD)

SAFETY MEASURES AND MAINTENANCE OF ASSETS IN RAILWAYS

Presented to Lok Sabha on..... 6 MAR 1996
Laid in Rajya Sabha on .....

सत्यमेव जयते

LOK SABHA SECRETARIAT
NEW DELHI

January, 1996/Pausa, 1917 (Saka)

CORRIGENDA TO THE 19TH REPORT OF STANDING COMMITTEE ON RAILWAYS (1995-96) ON SAFETY MEASURES AND MAINTENANCE OF ASSETS IN RAILWAYS

Page	*Para*	*Correction*
27	96	Delete para 96
28	95	Add para 96 after para 95 96. Asked if the Commission was satisfied with the maintenance of Rolling Stock by Railways, the Commission in a note to the Committee have stated:

C.R. No. 19

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Shri Somnath Chatterjee — *Chairman*

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3. Vacant*
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5. Smt. Santosh Chowdhary
6. Km. Frida Topno
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36. Shri Mohindar Singh Kalyan
37. Shri Prabhakar B. Kore
38. Smt. Sarala Maheshwari
39. Shri Radhakishan Malaviya

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* Vacancy caused due to appointment of Shri A.R. Antulay as Minister.

** Vacancy caused due to the death of Shri B.K. Gudadinni.

*** Vacancy caused due to the death of Shri Tejsingh Rao Bhonsle.

**** Vacancy caused due to appointment of Shri S.S. Ahluwalia as Minister.

40. Shri Sarada Mohanty
41. Shri Ahmed Mohamedhbhai Patel
42. Shri Satish Pradhan
43. Shri Kailash Narain Sarang
44. Smt. Malti Sharma
45. Shri Janardan Yadav

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1. Shri S.N. Mishra — *Secretary General*
2. Smt. Roli Srivastava — *Joint Secretary*
3. Shri T.R. Sharma — *Deputy Secretary*
4. Shri R.C. Gupta — *Under Secretary*

INTRODUCTION

I, the Chairman of the Standing Committee on Railways having been authorised by the Committee to present the Report on their behalf, present this 19th Report on 'Safety Measures and Maintenance of Assets in Railways'.

2. As the train operations have become more and more complex raising the hazards of accidents, the Committee have felt that safety of train operation has attained paramount importance. However, they have found that India is lagging much behind in the adoption of modern signalling methods which have greatly advanced the world over and there has been no progressive modernisation nor adequate expansion of signalling and telecommunication system with increase in density of traffic. The Committee have, therefore, desired that a well defined time bound integrated plan should be formulated for systematic installation of modern signalling devices.

The Committee have also suggested that track circuiting which is a safe and reliable device to prevent accidents should immediately be provided from fouling mark to Block Section Limit on all trunk routes and main lines and that the Auxiliary Warning System (AWS) be provided at all suburban sections. They have further desired that other safety systems like train radio Communication system and train actuated warning system at level crossings etc. should be developed and installed with the involvement of public and private sectors.

3. The Committee have urged that assets of railways like tracks and rolling stock be kept in a fit and proper condition with strict adherence to preventive maintenance schedules laid down for periodical overhauling (POH) for safe running of trains.

4. The Committee heard the views of the representatives of non-official organisations *viz.* Indian Railway Signalling & Telecommunications Association, Confederation of Signal & Telecommunication Engineering Organisation, Indian Railways Promotee Officers' Federation and All India Loco Running Staff Association on 16th October, 1995, 3rd November, 1995 & 20th November, 1995. The Committee took evidence of the representatives of the Ministry of Railways on 25th September, 1995 and 16th October, 1995 and of the Commission of Railway Safety on 3rd November, 1995 in connection with the examination of the subject.

5. The Committee wish to express their thanks to the non-official witnesses for giving their valuable suggestions. The Committee also wish to express their thanks to the Officers of the Ministry of Railways and the Commission of Railway Safety for furnishing the material and information which the Committee desired in connection with the examination of the subject and sharing with them their views concerning the matters which came up for discussion during evidence.

6. The Report was considered and adopted by the Standing Committee on Railways on 12th January, 1996.

7. For facility of reference, the recommendations/observations of the Committee have been printed in thick type.

NEW DELHI;
12 January, 1996

22 Pausa, 1917 (Saka)

SOMNATH CHATTERJEE,
Chairman,
Standing Committee on Railways.

PART I

REPORT

Introductory

There has been a rapid and continuous expansion in the Railway network. Every year new trains are introduced to cope with the increase in freight and passenger traffic. Indian Railways run about 12000 trains per day carrying around 13 million passengers and one million tonne of freight traffic. In this massive transportation of freight and passengers over long distance, safety in train operation is of foremost importance. As the density of traffic, speed and trailing loads of trains are increasing, the train operations have become more and more complex. There may be now greater risks of human error that can result in unsafe situation leading to accidents and resulting in loss of valuable human lives and materials. Hence the great importance of safety measures in all sections of Railways. The Safety of Train operations are dependent on proper maintenance of tracks, rolling stock and other Railway assets. The Railway assets are to be kept in wholly working and safe condition and are to be renewed and replaced at constant intervals for smooth and safe operation. All these require augmentation and also progressive modernization of the safety measures in the Indian Railways, so that the network can provide accident free operation.

2. In order to make a proper study of safety system in Indian Railways, the Committee took evidence of the Ministry of Railways, the Commission of Railways Safety and also some non-official organizations *viz.* Indian Railway Signalling & Telecommunication Association (IRSTA), Confederation of Signal & Telecommunication Engineering Organisation (CONFEST), Indian Railways Promotee Officers' Federation (IRPOF) and All India Loco Running Staff Association (AILRSA).

3. The Committee also undertook study tours to various Railways and discussed Safety Measures and Maintenance of Assets with the General Managers and other officers of the Zonal Railways. A Study Group of the Committee also visited Ferozabad for an on-the-spot study of a recent serious accident site in which Purshottam Express and Kalindi Express, were involved on 20th August, 1995 resulting in the death of more than 300 passengers and injuries to almost an equal number.

Signalling & Telecommunications (S&T) Technology used

4. Signalling and Telecommunication are important instruments for the safety of train operation. The critical importance of modern signalling devices cannot be over emphasized. More than 80% of train accidents occur due to human failure. Signalling devices which have been greatly advanced in the world over if implemented will substantially minimize the risk and possibly the number of accidents caused due to human failures.

The Wanchoo Railway Enquiry Committee, as early as in 1968, had observed:—

> "that the techniques of signalling have indeed advanced today to an extent that it is possible to eliminate the chance of fallibility of human elements to a degree not conceived of a few decades ago."

5. However, the Railways Reforms Committee (1983) (presided over by Shri H.C. Sareen) in their Report on Signalling & Telecommunication observed:—

> "Unfortunately the Indian Railways have lagged far behind the other important Railways in the world, including a number of those in the developing countries in the adoption of modern signalling devices and techniques."

6. The Confederation of Signal & Telecommunication Engineering Organization in their evidence on the Technology of S&T in Railways stated that in terms of signalling standards, the technology now adopted was what was conceived in the sixties. They stated that the safety system in Railways of foreign countries was much advanced as compared to that in India.

The Committee were also informed that most of the modern signalling items with new techniques are available in the country by which there can be monitoring of traffic from a centralized place and traffic movement can be coordinated in centralized manner. Modern information system and technology are also available within the country.

7. To a specific query whether any study of Safety system in foreign countries *viz-a-viz.* the safety measures in Indian Railways was made, the Ministry of Railways replied in the negative.

When asked how Railways kept themselves fully posted with the latest technological advances made by foreign countries, the Ministry in their note stated:—

> "Information regarding latest technological advances made by the foreign countries in Signalling and Telecommunication systems in the Railways are made available to Research Design and Standard Organization (RDSO), Lucknow and Indian Railways Institute of Signal Engineering and Telecommunication (IRISET), Secunderabad. Railways get themselves posted with such information through literature and technical seminars arranged by RDSO and IRISET, Secunderabad, Railways also send officers to attend international seminars abroad and follow up on specific points of interest."

Outlay for Signalling in Eighth Five Year Plan

8. The Draft Eighth Five Year Plan prepared by Ministry of Railways in November 1991 proposed an outlay of Rs. 2595 crores for Signalling and Safety out of a total plan outlay of Rs. 45,600 crores. However, the total plan size of Rs. 45,600 crores was curtailed to Rs. 27,202 crore by the Planning Commission. The outlay for Signalling and Safety was reduced drastically to Rs. 675 crores.

9. When asked who fixed this amount of Rs. 675 crores, the Member (Electrical) during evidence stated that it was fixed by the Railways.

10. As regards breakup of the Rs. 2595 crores proposed for Signalling & Safety in the draft plan, the Ministry of Railways furnished the following information:—

In the VIII Plan, Rs 2595 crores were proposed for S&T works as under:

(a) Signalling Replacement	Rs. 1209 crores
(b) Safety works	Rs. 631 crores
(c) Telecom replacement	Rs. 536 crores
(d) New Telecom System	Rs. 219 crores
Total	Rs. 2595 crores

11. As regards break-up of Rs. 675 crores, the Ministry stated:

> "The reduction to Rs. 675 crores on S&T Plan Head from Rs. 2595 crores was on ad-hoc basis. Since it was quite high, Group-wise reduction was not attempted. Considering that this has to be increased, it was decided that the allocation under this Plan Head will be decided based upon priority requirements in each year."

12. The expenditure incurred on S&T during the first 3 years of Eighth Plan had been Rs. 485.55 crores. The total expenditure by the end of 1995-96 would be/- Rs. 760.55 crores taking into account Rs. 275 crores provided during 1995-96. According to the Ministry the total expenditure on S&T Plan head in the Eighth Five Year Plan was expeted to be about Rs. 1100 crores.

13. When asked if any exercise was made to find out the additional requirement of funds since the Draft Eighth Plan was prepared, the Ministry of Railways stated that the minimum requirement of funds as worked out by the Railways for S&T during the VIII Plan was Rs. 1548 crores.

14. The Ministry, however, informed the Committee that taking into consideration S & T works, which were carried out simultaneously with projects like electrification, doubling, traffic facilities etc. the total expenditure for Signalling and Telecom in the VIIIth Plan was expected to be of the order of Rs. 2000 crores (approx).

15. In reply to a question whether the reduction in the allocation of Eighth Five Year Plan would affect the programme for having a uniform signalling system or improvement in the signalling system, the Member (Traffic) clarified;

> "The entire amout of Rs. 2,595 crores was not for safety work. This included the amount to be spent on replacement of old lever

frames by new assets. This was under the head 'Signalling and Safety' and there were hundreds of items under this head."

He further stated,

"The Indian Railways do not have any plan to have a uniform signalling system for the whole country. We have not planned that yet. There are sections where standard I Interlocking is there or Standard II Interlocking is there. Whenever a section gets congested, we increase the section capacity. We improve the Signalling & Telecommunication system so that we can run more number of trains. Thus Rs. 2,595 crores was the total investment that we wanted to make on the Signalling Telecommunication & Safety, front to improve our section capacity to replace the old assets with new assets and also on the safety items."

Integrated Plan for Safety

16. The Committee desired to know if the Railways had any Integrated Plan for upgradation of signalling system. The representative of Minsitry of Railways stated that they had a conceptual plan on signalling system. Integrated Plan for safety as furnished by the Ministry is given in Annexure I. The Ministry also stated that most of the works are planned for completion within 3 years excepting colour light signalling which would continue to progress with electrification at a rate of 500 to 600 route kilometers per annum and Route Relay Interlocking which would be done as and when replacements become due. The Ministry further informed that the total amount required for implementation of integrated plan would be Rs. 200 crores (approx.) and the same would be provided.

17. Asked if the Integrated Plan was commensurate with the corporate plan of Indian Railways for 1985-2000 or that had become infructuous, the Member (Electrical) stated:

"We had the distribution for Rs. 2,595 crores which we have given to you. Then only Rs. 675 crores were allocated. We did not distribute Rs. 675 crores according to the four major heads which we have given for Rs. 2595 crores. What was the immediate requirement for the Eighth Plan was immediately worked out. It was found out that it was in order of Rs. 1500 crores postponing some items which could be conveniently postponed."

Budgetary allocation for S & T

18. The budgetary allocation and actual expenditure on S & T and percentage expenditure to total plan expenditure during the last 5 years are as follows:

(Rs. in crores)

Year	Budget Estimate	Revised Estimate	Actual	Total Plan expenditure	Percentage expenditure on S & T to total expenditure
1991-92	—	—	133.82	3889.96	3.44
1992-93	150.38	150.24	153.03	5136.68	2.97
1993-94	165.64	162.99	156.72	5004.43	3.13
1994-95	226.78	177.03	175.00	5205.00	3.36
1995-96	275	—	—	5250.00 (provisional)	5.23

19. The Budget Estimates for 1994-95 were Rs. 227 crores which was revised downwards to Rs. 177 crores. The Ministry explained the reduction of Rs. 50 crores as mainly on account of freezing of telecom works. The Department of Telecommunication had told them they would provide the communication and they need not spend on it. Some amount was also surrendered on account of delay in manning some unmanned crossings.

20. The Ministry furnished copies of their correspondence with Department of Telecommunication (DoT) in this regard. The Chairman DoT (Shri Vittal) in a communication to Chairman, Railway Board stated *inter-alia* in his letter dated 24 August, 1994 as under:

> "We agree in principle that it will be possible for the DoT to meet the communication requirements of the Railways especially in terms of optic fibre networks. The costs incurred by the DoT in providing these services will have to be appropriately recoverd by way of hire charges from the Railways. We are happy that Railways are once becoming the major customer of the DoT."

However, in a letter dated 9 December, 1994 from Member (Services) DoT to Member (Electrical), Railway Board it has been stated:

> "The Statement made by Shri Vittal that it will be possible for the DoT to meet the communication requirements of the Railways was only an in-principle agreement, especially in terms of optic fibre network. That cannot be taken as a firm commitment that the DoT will, in future, meet all communication requirements of the Railways."

21. It is seen from the correspondence exchanged between Department of Telecommunication and the Ministry of Railways that DoT's earlier indication of taking communication requirements of Railways was subsequently withdrawn.

When this fact was pointed out to the Ministry of Railways, they stated in a written note:

> "Immediately those telecom works which have been kept pending have been defrozen. Sufficient funds have been provided for progress of these works in 1995-96 and are again expected to be provided in 1996-97. The time loss on this account, however cannot be made up."

22. On the query of the Committee if any reprioritisation of work items was done after the reduction, the Ministry stated:

> "No reprioritisation was done. The overall plan size was reduced from Rs. 6500 crores to Rs. 6250 crores due to non-availability of resources. According to this, 50 crore formed part of the reduction."

Installation of Safety Devices

(i) *Interlocking*

23. To guard against the possibility of conflicting train movements, it is a universal practice to interlock signals with points. By March 1995 out of 6197 block stations, 5567 had been interlocked.

The following systems of interlocking are in use in Indian Railways:

24. Panel Interlocking: In Panel interlocking, the operation of signals and points at stations is centralized and controlled from a panel installed in Station Master's Room. The panel interlocking has so far been provided on 1396 stations in the trunk routes and mainlines, as on 31.3.95.

Year-wise figures of installation of panel interlocking is as below:

1990-91	58
1991-92	197
1992-93	54
1993-94	43
1994-95	87

25. The Railway Reforms Committee (1983) has recommended that replacement of existing two cabin mechanized signalling on trunk routes and main lines whenever due, should be done by panel interlocking.

26. The representative of IRSTA in this regard stated:

> "At present, at 3102 stations inter-locking equipment are overdue for replacement. It has a life of maximum 25 years. There are 1710 equipment which are between 25 years and 30 years old. These equipment should be replaced as far as possible. When they are being replaced panel interlocking should be provided. The percentage of overaged equipment comes to more than 60 percent."

27. Route Relay Interlocking: At important junction stations and terminals, where a large number of trains are dealt with, control of movement is spread over a wide area and a large number of officials are associated with the movement of a train. Route relay interlocking by replacing several cabins by single cabin, aims at abolition of dispersal of control among the various officials.

As on March 1995, 166 stations have been provided with route relay interlocking.

28. Railway Reforms Committee in their report had recommended that Route Relay Interlocking should be provided for all junction stations/ terminals, on trunk routes and important main lines.

29. Centralized Traffic Control (CTC): In CTC control the movements over a whole section is centralized at one focal point.

The Railway Reforms Committee had recommended that the Railways should go in for installation of computer aided CTC for suburban sections serving the four metropolitan cities which are subjected to heavy density/ high speed traffic.

(ii) *Track circuiting*

30. Track circuiting is an important device to detect presence of train or vehicle in a section of railway track. Various Enquiry Committees *viz.* Kunzru Committee in 1962, Wanchoo Committee in 1968 and Sikri Committee in 1978 recommended the installation of track circuiting on all trunk routes and main lines. The Railway Reform Committee in 1983 also recommended that track circuiting be provided by 31.3.90 at all the trunk routes and mainlines and at important junctions and stations on branch lines, it being essential in the interest of safety. RRC had further recommended that track circuiting of lines should not be confined only between fouling marks but should also extend upto block section limits.

31. The Ministry of Railways have given the overall position of track circuiting as follows:

Total number of stations interlocked as on 31.3.1995	5567 Nos.
Fouling Mark to Fouling Mark Track circuiting on run through lines	2866 Stations
Percentage of total number of stations	51%
Fouling Mark to Fouling Mark Track circuiting in Loop Lines	1271 Stations
Percentage of total number of stations	22.8%
Fouling Mark to Block Section Limit Track Circuiting	1285 Stations
Percentage of total number of stations	23%

32. The Committee enquired the reasons for not providing complete track circuiting as has been recommended by various Committees from time to time, the Member (Electrical) during the evidence stated:

> "The development of concrete sleepers for points was a major problem which we could do only three years ago. It was very essential to do track circuiting from fouling mark to block section limit. Seeing the effect of such mistakes which have happened, we have decided that we shall provide track circuiting from fouling mark to Block Section limit excluding point zone. This step we are taking as an interim measure. So, we have already taken a decision in this regard."

33. The Ministry of Railways' action plan for complete track circuiting is as under:

(i) FM to FM is proposed to be provided on run through lines on 3228 stations in all the trunk routes and Main lines.

(ii) FM to BSL is to be provided only at 1964 stations in all trunk routes and important main lines.

(iii) FM to FM on loop lines is proposed to be provided at 1310 stations on those stations with Panel Interlocking.

34. As regards implementation of Action Plan the Ministry have stated as under:

S. No.	Nomenclature	No. of Stations involved	No. of Stations already completed	No. of Stations Remaining	Planning for 1995-96	Completion 1996-97
1.	FM to FM	3228	2866	362	146	216
2.	FM to BSL	1964	1285	679*	275	404
3.	Other looplines	1310	1271	39	17	22

* In view of shortage of point sleepers these are proposed to be immediately provided excluding the point zone. The point zone will also be covered later.

35. The Member (Electrical) during evidence informed the Committee that out fo 5567 stations that were totalling inter-linked, 3228 stations (i.e. 60%) on trunk routes and mainlines would be covered under track circuiting from fouling mark to fouling mark.

Asked by what date Railway proposed to provide this device at all the 5567 stations, the Member (Electrical) stated that 'the present traffic levels at the rest of stations was not very heavy and so, they have not yet considered provisions of track circuiting in those lines."

36. In this connection, the Confederation of Signalling and Telecom Organization has in a note stated as under:

> "Track circuit is essential for safe operation and has been accepted as essential safety device in all developed Railway systems of the

world. In India only limited number of stations would qualify for complete track circuiting. At times stations were provided with track circuits on the main berthing Lines leaving parts of the Main Line and other running lines exposed to the danger of accidents of the nature that recently occurred on Northern Railway claiming hundreds of innocent lives. Had complete track circuits been provided through the stations including portions between fouling mark to advanced starter of the station, these could have been avoided. Carrying out works of these nature in bits and pieces, apart from being ineffective, is also economically and operationally injurious. A complete track circuiting work can be executed in much less cost with least disturbance to operations and would at the same time give unfailing protection."

37. The Commission of Railway Safety have also given top priority to the installation of track circuiting and have recommended speedy installation of the device many times. The Commission were of the view that the recent collision between Purshottam Express and Kalindi Express at Ferozabad on 20th August 1995 could have been avoided if the Commission's recommendation regarding track circuiting given from time to time had been followed by Railways.

(iii) *Axle Counters*

38. Axle counters are electronic devices employed for detecting presence of a vehicle in a defined length of railway track. Apart from their many other uses, axle counters are also utilized as a substitute for conventional track circuiting. Unlike conventional track circuiting, axle counter do not depend on the bulk use of wooden/concrete sleepers. And in view of the continuing shortage of wooden sleepers and the unsuitability of present design of concrete sleeper for unrestricted use in track circuiting, the Railway Reform Committee had recommended the installation of axle counters in lieu of the conventional track circuiting in a big way.

39. Asked about the progress made in installation of the devices, the representative of Ministry of Railways during evidence stated:

"The major problem with the axle counter is that we have just reached the stage of perfecting, the design. The performance of axle counter has not been up to the mark."

40. In a subsequent note the Ministry have stated,

"1150 of axle counters have been provided as on 31.3.1995.

Axle counter is costlier than ordinary track circuit. Therefore its provision will be dependent upon circumstances where provision of standard track circuit is technically inferior. Its provisions, is therefore, decided upon local conditions on case to case basis and will be done accordingly."

(iv) *Auxiliary Warning System (AWS)*

41. It is a system of giving visual and audible warning to the driver regarding the stop signal ahead and automatic application of brakes in case driver fails to acknowledge the warning within a specific time.

AWS exists on the entire system of the Japanese National Railways. In Germany, this system is provided on all sections having speed higher than 100 Km./hr. On the British Railways, provision of AWS is mandatory on lines having speed of 120 Km./hr. or more, whereas in US AWS is provided on lines having maximum permissible speed of over 130 Km./hr.

42. The Railway Reforms Committee (1983) recommended to provide AWS at all Suburban sections as also other sections having maximum speed of 120 Km./hr. or over but the same has been installed at only 313 Kms. on busy suburban section of Bombay. During the evidence the Ministry of Railways, it was stated that this device was not installed due to large scale theft of track magnets.

43. When asked if there was any possibility of providing a substitute for track magnets and whether the private sector had been involved in it, the Ministry in a note to the Committee stated,

> "As clarified earlier AWS has been provided on suburban section of Western Railway on 313.62 Kms. We have also been trying to develop systems which are much less theft prone but the industry had not so far come up with a satisfactory solution.
>
> We are again getting in touch with the industry."

44. The Commission of Railway Safety has also time and again recommended for installation of AWS in all suburban sections. The Commission in a note furnished to the Committee has referred to two accidents that has taken place due to non-implementation of their recommendations for provision of AWS Magnets in D.C. Electric Locomotive in Central Railway suburban systems.

(a) An accident took place on 20.5.94 on Bombay suburban section of Central Railway when the driver of 8001 Dn Bombay Howrah mail failed to observe the "red" aspect of a signal ahead and caused a collision with 6063 Dn Dadar-Madras Chennai Exp. and in the process collided with an EMU local at Matunga station. It was suggested by Commission Railway Safety/Central Circle during the inquiry that had the DC electric locomotive hauling 8001 Dn been fitted with AWS (Auxiliary Warning System), the collision could have been averted. The Zonal Railway Administration have not accepted the above recommendation. The Chief Commissioner of Railway Safety in his "Note" had strongly upheld the view of CRS/Central Circle.

(b) On 10.11.95 an electric light engine collided with the rear of 1069 Dn Bombay VT-Allahabad Tulsi Express which was stationary at a signal ahead. The *prima facie* cause (inquiry is still in progress by the Central Railway Administration) appear to be the ignoring of a "red" signal by the driver of light electric engine. This accident could have been easily averted had the earlier recommendation of CRS/Central Circle been accepted and implemented *viz.* fitment of AWS magnets in DC electric/diesel engines plying on Bombay suburban section.

(v) *Train Radio Communication System*

45. Train Radio Communication provided in the driver's cabin can be used to forewarn the driver about obstruction, if any, on the track. This system enables the driver to be in constant communication with control and Station Master. Thus the driver is able to seek guidance and also inform about any dangerous condition while he is on run.

46. During evidence, Member (Electrical) stated,

"We are trying to develop communication system between guard and driver and the control room. We had provided for this equipment in about 1000 km. between Durg-Nagpur, Nagpur-Itarsi and Itarsi-Bhusawal with optic fibre. But our experience has not been happy. We are thinking of taking it up, at the national level."

He also informed the Committee:

"We have got a substitute also. We provided one telecom socket at a distance of every one k.m. on the track and we have given emergency telephone instrument to the driver. Since a multiple system was there, we requested Bharat Electronics to come up with an radio communication system between the train & station. We have tried this equipment in South Eastern Railways and the result is very good.

For mobile train radio communication, we are thinking of having direct line of control, otherwise it cannot be effective. However, we found that this system is very effective. This provides radio communication to the Driver and Guard of each train so that in case of emergency, the Guard/Driver can talk to each other and also to the nearest station. It will also have an SOS provision by which distress signals can be picked up by other trains within a range of 5 kms. It has been able to communicate upto 95 per cent. So, in our opinion, this system is very useful. We are planning to introduce this system all over the country."

(vi) *Train Actuated Warning System*

47. This is being developed specially for unmanned level crossings. When the train is at a distance of 2 Kms. away while approaching a level

crossing, it will actuate a device which will trigger an audio visual alarm at the level crossing.

48. In view of the increase in the number of unmanned level crossings, there is an urgent need to install the train actuated warning system. The Ministry of Railways during the evidence stated that they were trying to develop it for the last 10 years with no satisfactory results. However, the Confederation of S&T Engineering Organization stated during evidence that they were in a position to supply this device to the Railways with best results.

49. The Committee enquired from the Ministry of Railways, if they had approached private sector units for developments/installation of these devices, the Ministry in a written note stated:

> "Yes. But only M/s BEL, Bangalore has developed a train actuated audio visual warning system for unmanned level crossing gates. Two prototypes manufactured by M/s BEL have been installed at the level crossing gates near Bangalore. So far, it has worked satisfactorily. The system will be installed progressively on completion of trials and tuning the system as found necessary for satisfactory performance."

Safety Performance

50. The number of train accidents on Indian Railways since 1990-91 has been as follows:

Train Accident on Indian Railway

Number of Accidents

Year	Collisions	Derailments	Level X-ings	Fire in trains	Total	Movement of traffic i.e. train kms. run (in Millions)	Incidence of train accidents per million train kms.
1990-91	41	446	36	9	532	617.1	0.86
1991-92	30	444	47	9	530	629.2	0.84
1992-93	50	414	51	9	524	632.3	0.83
1993-94	50	401	66	3	520	634.2	0.82
1994-95	35	388	73	5	501	641.9	0.78
1995-96 (April-May)	3	48	6	1	58	—	—
1994-95 (April-May)	11	54	11	—	76	—	—

51. According to Ministry of Railways the incidence of accidents per million train kilometers which is the universally adopted safety indicator has come down from 0.86 in 1990-91 to 0.78 in 1994-95.

However during the evidence, the Member (Traffic) admitted that there was a lot of scope for improvement and they were working towards that because they wanted to eliminate it altogether. He stated,

> "Infact when we give targets to the Railways, safety is one item when we say that nil accidents should be the target."

52. An analysis of accidents shows that 81% of the accidents have taken place due to derailments, 14% due to collision and remaining due to fire accidents, sabotage etc.

53. Giving Railway-wise number of derailments occurred on various Railways in 1994-95, the Ministry furnished the following information:

Central Railway	—46
Eastern	—28
Northern	—54
North Eastern	—16
North East Frontier	—49
Southern	—31
South Central	—39
South Eastern	—84
Western	—41
	—388

54. Asked the reasons of abnormal number of derailments in South Eastern Railway, the Ministry stated:

> "South Eastern Railway handles considerable proportion of the entire freight traffic on the Indian Railways. The terrain, grades curves on this system and more intensive utilisation of assets leads to more vigorous interaction between rail and the wheel. In addition, the activities of the saboteurs led to a spurt in derailment."

55. Asked about the concrete action taken to avoid derailments in derailment prone areas, the Ministry in their written note stated as under:

> "Railways have been asked *inter-alia* to formulate an Action Plan taking into consideration the following aspects:
>
> 1. Completion of 'Zero missing fitting gangs and maintenance of such status.
> 2. Training in the knowhow and maintenance of long welded rails.
> 3. Inspection of track on foot at various levels.
> 4. Elimination of fishplated joints to be taken up as a mission on a route by route basis.

5. Maintenance of proper track geometry based on track recordings and adequate maintenance of track in the yards and provision of requisite standard of track on loop lines.

6. Proper maintenance of work sites and adequate follow-up action in cases involving dip lorries/material trollies.

7. Dealing sternly with absenteeism in gangs.

In addition, the following steps have been/are being taken to bring down the incidence of derailments on Indian Railways:

(i) Track circuiting, panel interlocking and axle counters have been/are being provided on important routes.

(ii) Carriage and wagon examination of rolling stock has been strengthened and rationalized.

(iii) Special attention is being given to brake gear, roller bearing and bogie frame repairs during POH/ROH.

(iv) To prevent cases of cold breakage, all ROH depots have been equipped with ultrasonic testing equipment for timely detection of cases of flaws developing in the axles.

(v) Safety drives are launched periodically and staff fond wanting are educated and taken up.

56. As regards broad causes of consequential train accidents in Indian Railways during 1990-91 to 1994-95 the Ministry had informed as follows:

Broad Causes of Consequential Train accidents on Indian Railways during 1990-91 to 1994-95

S.No.	Broad Causes	90-91	91-92	92-93	93-94	94-95 (Provisional)
1.	Failure of Railway Staff	366	384	363	358	333
2.	Failure of persons other than Railway Staff	42	51	60	72	80
3.	*Failure of equipment*					
	(a) Rolling Stock	50	35	33	27	16
	(b) Track	24	18	24	27	23
	(c) Electrical	—	—	—	1	—
	(d) S&T	—	—	—	—	—
4.	Sabotage	16	14	16	16	8
5.	Combination of factors	4	8	2	2	1
6.	Incidental	25	15	17	8	10
7.	Causes could not be established	5	5	9	9	4
8.	Under investigation	—	—	—	—	26
		532	530	524	520	501

From the above table it is seen that about 80% of train accidents are caused by human failure and remaining 20% due to other reasons as is evident from the fact that out of 501 train accidents occurred during

1994-95, 413 accidents (333 due to failure of Railway Staff and 80 due to failure of persons other than Railway Staff) occured due to human failure.

57. The Ministry of Railways have furnished the following information as regards casualities in train accidents:

Year	Passangers		Railway Staff		Others		Total	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
1991-92	98	451	20	112	111	321	229	884
1992-93	96	467	46	101	140	255	282	823
1993-94	179	446	20	89	180	370	379	905
1994-95	84	427	19	91	200	158	303	676

During 1993-94 although the number of accidents has been marginally less than during 1992-93, the number of casualities had shown marked increase (379). In 1994-95 the number of accidents was lower but the number of casualities were more than 300.

58. After the disastrous train accident on 20th August 1995 at Ferozabad, the Ministry of Railways have set up a High Level Group on Railway Safety on 4 September 1995, to improve the safety standards.

The terms of reference of the High Level Group are as under:—

(i) To review the action taken by the Railways on the recommendations made by various Committees;

(ii) To identify factors leading to human error and to suggest ways and means of eliminating/reducing human errors;

(iii) To study safety measures/equipment/technology as adopted by the Railways of some of the advanced countries and to suggest introduction of new Safety measures as also upgradation of the existing safety measures in the Indian Railways.

(iv) To suggest a scheme for maintaining records of those passengers who travel on unreserved seats;

(v) To suggest simplification of procedures in sanctioning of compensation to the victims of train accidents; and

(vi) To review and recommend revision of ex-gratia payment to the injured and to the next of kin of those who lose their lives in train accidents.

Training of Staff

59. The Wanchoo Committee (1968) had observed that as the Railways had introduced/extended the use of modern sophisticated equipment in various fields of railway operation *viz.* signalling, motive power, etc. it was imperative that the staff entrusted with responsibility of handling operation and maintenance of all such equipment was imparted adequate and

intensive training. With technological advances in the various departments and consequent changes in the method of working, updating the skills of the personnel of various departments on a continuous basis becomes a necessity.

The Committee have observed that modern signalling techniques require highly intelligent, technically qualified and thoroughly trained staff for handling and for operation of the equipment.

60. The Running staff of Railways are given training as under:

Initial training for Asstt. Driver	One year inclusive of foot plate training.
Refresher course for Asstt. Drivers	Once in 5 years for 2 weeks duration.
Refresher course for Drivers	Once in 3 years for 2-4 weeks duration.
Promotional courses for Asstt. Drivers/Shunter/Drivers	12 weeks duration with foot plate training, learning road and loco handling.

61. The Ministry have informed that all supervisors are also subjected to initial training in which safety is an integral part. In addition special training modules are framed for accident prevention and safety for senior supervisors of Mechanical, Signal, Engineering, Electrical and Traffic Dept., Drivers, Guards and Loco Inspectors.

62. As regards the evaluation of performance of the trainees after training the Ministry informed the Committee that feedback was received from them, when meetings of the officers nominated to look after training activities of various departments were held from time to time, so that the existing training techniques and courses may be updated for better performance of staff.

63. The representative of the Indian Railways Promote Officers' Association during the course of his evidence stated that the major cause of human failure was lack of technical knowledge among the staff which was due to faulty recruitment systems promotion policies and inadequate training. He maintained that the available training facilities were not being utilized fully.

According to their assessment, only 40% of the training facilities were being utilized. There were not more than 15 to 16 persons in an Institute where training facility for 40 persons existed. He attributed the basic reason for that was they did not have enough trainee reserve posts available on Indian Railways.

64. The representative further stated during evidence,

"Adequate number of instructors are also not available. It is a sidelined post. Persons who are not able to give results in the operational duties are normally posted to sideline posts."

65. When the Committee enquired about the number of posts lying vacant in Ghaziabad Training School, the Ministry of Railways informed that out of total strength of 19 posts of faculty members in S & T Training Centre, Ghaziabad, 11 posts are filled up and the remaining eight are lying vacant.

66. The Chairman, Railway Board during evidence admitted:

"Many people are not prepared to come and work in the Training Schools. We used to give 30 percent of the basic pay now it has come down to 15 percent."

67. When asked to express their views about the training being imparted to the Staff of the Indian Railways, the Commission of Railway Safety in their note stated as under:

"Training given to the Railway staff of various disciplines under the Railways is generally of a high quality. However, there are certain areas where the Commission feels an improvement will go a long way in reducing the number of accidents. A few suggestions are enumerated below:—

(i) The present cadres of Asstt. Mechanical Engineers and Asstt., Electrical Engineers are generally filled up with promoted supervisors drawn from maintenance categories (e.g. Asst. Electrical Engineers are mostly from traction supervisors, designers etc.). This leaves a void in proper control and supervision of running staff. To remedy the situation, promotional courses are needed for running staff to enable them to come out successful in Group 'B' selections.

(ii) Instructors in Zonal Training Schools in charge of mech. electrical running staff often do not have the requisite experience on "running duties" viz. footplate experience. This leads to ineffective training being imparted to trainees. A simulator (akin to that installed in Tughlakabad and Kanpur) is required to be installed for proper training in all Zonal Railway Training Schools.

(iii) A number of directly recruited Asstt. drivers get into the Drivers' seat rather fast *i.e.* within a few years. Even though there are extant instructions that they should first work as shunters for a minimum period of two years (to have adequate "hands on" training), very often it is observed they are put on drivers' duties even without completing the above stipulation. There is a need for ensuring that Asstt. drivers should work as shunters for 2 years failing which at least they should be properly trained to handle heavy freight trains, by a suitable intensive course.

(iv) For way-side stations, both the Guards and Drivers are required to certify the brake power of a train for further movement. Unless the Guard is properly trained in the technical aspects of air and vacuum braked stock, it would not be possible for him to assess the adequacy of the available brake power of the train. It is, therefore, necessary that the Guards should be given proper technical training.

(v) The category of Train Examiners is filled up either by Direct Recruitment or by Intermediate apprentices or by normal departmental promotions. While the training given to the first two categories is considered adequate, the training to the 3rd category *viz.* promotees needs to be reviewed.

This is due to their induction being from multivarious categories such as safaiwala, khalasi, helpers etc."

68. In this connection the representative of S & T Staff Association during evidence stated:

"In the cadre of Signalling & Telecommunication maintenance the Ministry of Railways have accepted that highly qualified people are necessary. They have increased the qualification for the recruitment of staff but they are not being given proper scales. Proper people are not coming. Thus these people are stagnating for months and years."

He further stated,

"Most of the pointsmen are illiterate persons. The qualification for promotion to the post of switchman is that he should be in a position to read and write. He is promoted without that qualification. He has been entrusted the responsibility of granting line clear, which is normally given to the station master."

69. The representative from Indian Railway S & T Association during evidence further stated:

"In this modern age of technology we are purely depending on the alertness of the driver, the Cabin Man and the Station Master. I would say that sometimes we are depending on one person only. We are actually putting the lives of so many passengers at their disposal. We simply say that they are responsible. Infact, there are so many technical updating where block lock is required."

70. In reply to a question why only class III & IV employees were held responsible for human failure in case of accidents and not higher officers, the Members (Traffic) stated wherever specific responsibility was fixed, action was taken only against him. Whenever there was a system failure, action was taken against the higher level officers.

Duty Hours of Loco Running Staff

71. The Indian Railway Loco Running Staff Association during their evidence stated that drivers were compelled to work for more than

10 hrs. despite the agreement with the loco running staff that the duty hours should be limited to 10 hours.

With regard to the duty hours, the Member (Traffic) stated during evidence:

> "About 10 to 15 percent cases are there when the duty exceed 10 hours and we are always striving to bring that down."

72. Asked about the difficulties in limiting the duty hours to 10 hours, the Member (Traffic) stated:

> "Sometimes there are reasons beyond the control of Railways. At that time, it is not possible to bring the duty hours down to 10 hours. In that situation, the running of trains will become difficult and the wages of the drivers will also come down. Apart from their salary, they get allowance for running kilometers also. Secondly, the traffic clearance will suffer and there will be congestion. We have to keep a balance between the running of the drivers and the running of the train."

73. On being pointed out that there were a large number of vacancies which were not being filled up, the Member (Traffic) stated that the Railways had never imposed a ban on the increase of the running staff.

However, the All India Loco Running Staff Association stated during evidence that there were 30% vacancies in loco running staff including trainee reserve posts.

Safety Standards being Lowered

74. The Indian Railway Promotee Officers' Association during their evidence stated that earlier every goods train used to be examined after about every 400 Kms. Now this limit has been raised to 800 Kms. or 1000 Kms. or even 1200 Kms. in some cases. Now very recently a decision has been taken that a goods train will only be examined 'end too end'. This decision was taken by a Committee consisting of 3 Members and this matter has not been referred to RDSO for their concurrence. This matter has also been referred to by Commission of Railway Safety in their note to the Committee.

Commission of Railway Safety

75. The Commission on Railway Safety directs and advices the Railway Administration through its regulatory, inspectorial and investigatory roles, thereby ensuring that adequate measures are taken in regard to safety of train operation and soundness of railway construction. The Commission of Railway Safety is headed by Chief Commissioner of Railway Safety and works under the Ministry of Civil Aviation independently of Ministry of Railways. The duties of Commissioner are laid down in the Railway Act 1989 as under:

(a) inspect any railway with a view to determine whether it is fit to be

opened for the public carriage of passengers and report thereon to the Central Government as required by or under this Act;

(b) make such periodical or other inspection of any railway or of any rolling stock used thereon as the Central Government may direct;

(c) make an inquiry under this Act into the cause of any accident on a railway; and

(d) discharge such other duties as are conferred on him by or under this Act.

76. In addition to Chief Commissioners of Railway Safety, the Commission has 10 Commissioners of Railway Safety one for each zone & one for Calcutta Metro Railway. The Chief Commissioner is of the rank of the Special Secretary to the Government of India and other Commissioners are of the rank of Additional Secretaries to the Government of India. They are supported by Deputy Commissioners which are on deputation from different services of the Railways.

During evidence the Chief Commissioner of Railway Safety informed the Committee that the Commissioners were required to interact with General Managers of Zonal Railways and he interacted with members of the Railway Board. He however, suggested that to have effective interaction the status of Commissioners should be at par with that of General Managers of Zonal Railways and the Status of the Chief Commissioner at par with the Members of the Railway Board.

77. To a query of the Committee, the Chief Commissioner of Railway Safety (CCRS) stated that their recommendations were not mandatory but most of them about 90% were accepted. He admitted that even if 5% were not accepted that meant the Railways were running the system ignoring their objections.

In reply to another query about action taken by the Commission on the cases where their recommendations were not accepted, the Commissioner stated:

> "When they do not accept our recommendation, they have to give some reasoning and if we feel that some of the recommendations are very important, then we raise them in our Annual Report."

78. The Chief Commissioner of Railway Safety also informed the Committee that all the reports of the Commission were confidential because there was an internal noting of the Law Ministry. They should not be used by any person for a court case or any other purpose.

79. The Committee enquired on the analysis made by Commission of Railway Safety on acceptance and implementation of their recommendations by Railways for Safety Measures and Maintenance of Assets, the Commission furnished the following information:

"An analysis of those issues, appearing in the Annual Report, which the Commission has not been able to resolve with the Railways from 1980-81 to 1993-94, has been made under the following categories:

Category	Description	No. of times appearing
A.	Those safety recommendations accepted by the Railways but implementation is slow	17
B.	Those safety recommendations accepted by the Railways but not implemented	2
C.	Those safety recommendations not accepted by the Railways with reasons on which the Commission has reservation	12
D.	Those maintenance recommendations accepted by the Railways but not implemented	1
E.	Those maintenance recommendations not accepted by the Railways with reasons on which the Commission has reservation	1
	TOTAL	32"

Short details of the 32 cases are given in the Annexure II.

Safety of New Works

80. The Railways as a part of developmental programme are constantly engaged in new works e.g. opening of new lines, doubling, gauge conversion etc. All these new works are to be certified safe by the Commission of Railway Safety.

The Chief Commissioner of Railway Safety stated during the evidence that after the Railways completed the new work they approached them before opening to the general traffic. They do not come in at the stage of construction or planning.

81. When enquired about the extent of acceptance of their recommendations on a new works by the Railways the Commission informed the Committee that about 90% of the recommendations were accepted by the Railways. The Committee were also informed that there had been instances where the recommendations had not been accepted and the 'new works' were opened.

On being asked to give instances where new works had been opened despite objections from the Commission, the Commission in a note stated as under:

> At the outset, it is clarified that the term new works is deemed to include cases where the Railways have applied to the Commission for recommendation/sanction. As already informed to the Hon'ble

Standing Committee, there have been few instances where the recommendations have not been accepted; some of which are given below:—

1. **Speed restriction on unmanned level crossings with restricted visibility.**

   The Indian Railways Permanent Way Manual (IRPWM) imposes a certain responsibility on the Railway to observe reduction in speeds of trains when approaching an unmanned level crossing where the visibility distance to the road user of an approaching train is inadequate. This is a safety measure imposed in addition to the provisions of the Motor Vehicles Act (according to which the driver of the road vehicle is fully responsible for the safety of his vehicle when passing over the railway track at an unmanned level crossing). A gauge converted line was cleared by Commissioner of Railway Safety with suitable speed restrictions on visibility considerations at unmanned level crossings on the basis of the Zonal Railways application. After conversion however, in May' 1995, the Zonal Railway approached the Railway Board and got their approval for totally relaxing such speed restrictions. This was objected to by the Commission of Railway Safety since it was felt that safety was being compromised in the interests of speeding up the trains.

   The reason given by the Railway Board is that while negotiating unmanned level crossings in the face of an approaching train, a road user's *Adrenaline secretion* gets increased resulting in increased mobility. The Commission has not been able to appreciate this point of view.

2. **Reduction of water ways in bridges in gauge coversion projects.**

   There are elaborate instructions available in the Indian Railway Bridge Rules on 'Free Board' and 'Vertical Clearance' in connection with the design of water way of bridges. In a particular gauge conversion project the Railway Board had given instructions that the above provision need not be adhered to in gauge conversion projects since in many cases it would involve heavy regarding of the existing alignment of track. As such the existing water-ways which were originally for M.G. have been retained for the B.G. System. In some cases, the water way has been reduced by inserting pipes or box culverts or jacketing within the existing opening. This has been mainly done to reduce the cost of re-construction of bridges in gauge conversion projects.

   The commission had been objecting to such a short-sighted approach while opening the gauge conversion projects, but the Railway Board had given instruction over-ruling the Commission's views.

3. **Introduction of EMU stock on Kakurgachi chord line in Sealdah Division of Eastern Railway.**

   Owing to heavy infringement, the Commission did not recommend the introduction of 12 ft. wide EMU stock on this chord line in June '83. The view point of the Commission was over ruled by the Railway Board and the Railway Board sanctioned the running at a speed of 30 kmph for a period of two years with the stipulation that the Railway should remove the infringement within that time.

   The infringement has not been removed till date.

4. **Introduction of AC 3-tier coaches on the Indian Railways.**

   To meet the growing demands of passengers, the Indian Railway have introduced AC 3 tier coach in lieu of AC chair car in Rajdhani trains from 1994. Since the design of the above coach involves certain basic modifications to the existing standard ICF coach, it constituted a new rolling stock as per extant provision under the Indian Railways Act. The Commission had insisted upon route-proving trials to be carried out on the above coach on the routes on which it was proposed to be introduced, as per extant policy decision of the Railway Board. However, the commission's view was over-ruled and the coach was introduced for service by the Railway Board.

5. Railway's proposal of September '94 to *increase the speed of Poorva/Magadh Express* between Ghaziabad and Mughalsarai from 110 to 120 kmph was not recommended by the Commission listing out numerious deficiencies in the signalling devices, working of level crossings, tres passing, maintenance of coaches etc. Railway Board over-ruled the above observations and sanctioned the increase of speed.

6. **Introduction of Push-Pull system of train operation.**

   The Commission had objected to the introduction of push pull train operation by modification of existing general service coaches and allowing passengers to occupy areas which are at present earmarked for toilets. These areas are highly vulnerable to extensive damages in case of collision. It would be appreciated that the above areas in a normal coach form part of anti telescopic arrangement which acts as an effective absorbent to reduce damages due to collission forces, thereby saving human lives.

   Since the driving cabs have been modified from the existing general service coaches, it was the considered opinion of the commission that this constituted a change in type and design of that coach and attracted the provisions of section 27 of the Railway Act 1989 and required specific Central Government's approval before introduction. This has not been taken but the services have been introduced.

7. **Subjecting passengers for journeys upto 4 hours without the facilities of toilets.**

   It has been the considered opinion of the Commission that it is not proper to subject passengers to journeys upto four hours without the facilities of toilets. This aspect has been repeatedly brought to the notice of the Railway Board while extending EMU services in the metropolitan towns. In spite of the objections of the Commission, this has been implemented.

Gauge Conversion Works

82. There have been massive gauge conversion in the country during the last 3 years. Some 4800 Kms. of MG has been converted to BG in 3 years. With gauge conversion there needs to be upgradation of safety system. The Standing Committee in their Third Report on Gauge Conversion had brought out some of the areas where safety norms were not being followed by Railways.

83. In the conference of Commissioner's of Railway Safety held at Lucknow on 5.11.93, the Commissioner of Railway safety in a note has stated that 'the unprecedented rapid pace at which gauge conversion projects are being executed in Indian Railways at present has inevitably led to lowering of quality of construction and standards of safety. Long term needs of safety are being compromised with, and as a result many of the recently converted BG sections may become hazardous to safety within the near future.'

He enumerated that the following areas where such compromises had been effected:

1. Formation
2. Ballasting
3. Track Lining
4. Welding of rail joints
5. Bridge structures
6. Waterways of bridges
7. Loading standards of bridges
8. Station yards
9. Signalling & Interlocking

The Commissioner has further pointed out the procedures adopted in the projects currently under execution are generally in conformity with a fresh set of guidelines given in a number of letters issued by the Railway Board during the period from January, 1992 to May, 1992 which goes contrary to Safety norms which are as follows:

— utmost economy is to be effected in the gauge conversion projects.

— gauge conversion are to be primarily treated as replacement of permanent way.
— planning is to be for just widening of the gauge from 3'-3 3/8" to 5'-6" and nothing more.
— facilities in yards are to be kept to the barest minimum.
— Signalling & Telecommunication are also to be kept to the barest minimum.
— proposals for rebuilding important bridges are to be reviewed and speed restrictions on account of retention of old bridges are acceptable.
— Where ever ballast cushion on the MG Line is fairly clear, no deep screening need to be done and overhauling should be adequate.

84. The Committee enquired about the details of observations made by the Commission about gauge conversion. The Commission in their note to the Committee has detailed some of the objections by the Commission and action taken by Railways thereon.

It is seen that most of objections of the Commission (relating to Non-completion of ultrasonic testing of rails, re-modelled passenger platforms an foot over bridges and earthwork in embankment as per designed profile with required compaction, inadequate ballast under sleepers and on shoulders, use of combined sleepers for both BG and MG track without any equipments and maintenance instructions for such non-standard tracks etc.) have been met with imposing speed restruction till the shortcoming are removed.

On the Commission's objection on (i) the use of second hand rails without proper records of the extent of GMT traffic over than prior to laying in conversion as it would be difficult to decide on when to take up track renewals at later stage and (ii) failure of impose speed restriction at existing unmanned level crossings on the basis of visibility, no action has been taken by the Railways.

Maintenance of Tracks

85. With the increase in traffic density and the introduction of longer heavier trains with increased trailing loads, the tracks are subjected to more stresses. For smooth flow of traffic the tracks are to be constantly renewed and a constant vigil is to be done to detect flaws in tracks etc.

86. The Committee desired to know the number of rail failures occurred during the last 10 years. The Ministry informed as under:

Year	No. of rail failure
1	2
1985-86	9148 (2652)
1986-87	7216 (2286)

1	2
1987-88	6272 (2280)
1988-89	6025 (2264)
1989-90	6625 (2264)
1990-91	5713 (2123)
1991-92	4217 (1864)
1992-93	3710 (1684)
1993-94	3680 (1190)
1994-95	3051 (1108)

87. Giving route-wise break up of rail failure for 1992-93 and 1993-94, the Ministry stated:

1992-93

BG	A	B	C	D	E
	1628	850	50	499	464
	(980)	(476)	(7)	(94)	(57)

MG	Q	R	S
	113	994	12
	(50)	(20)	(–)

1993-94

BG	A	B	C	D	E
	1286	658	57	544	977
	(615)	(373)	(7)	(76)	(95)

MG	Q	R	S
	83	59	16
	(41)	(7)	(1)

(The figures shown in brackets are wel failures)

88. On an enquiry about the number of failures that occurred due to over due renewal of tracks, the Ministry furnished the following information:

Accidents on Indian Railways due to overaged tracks

Year	Total No. of Accidents	No. of accidents due to overaged track tracks					
		A	B	C	D	Other	Total
1990-91	532	—	—	—	--	—	53
1991-92	530	4	15	—	11	14	44
1992-93	524	9	15	—	17	12	51
1993-94	520	9	10	—	12	15	46
1994-95	501	7	10	—	13	16	46

89. The Ministry have further informed that as per present objective, it is proposed to liquidate renewals of A, B and C routes by the end of VIII Plan while such overdue stretches on D and E routes will be liquidated only in IX Plan. Efforts will be made to allocate adequate funds so that those objectives are met with.

90. The Ministry further informed that testing of routes by ultrasonic rail detectors is being carried out on all the routes of Indian Railways. The frequency of this testing ranges from about 2 months to 5 years depending upon the traffic density on the particular route, type of rails, age of the rails in terms of cumulative traffic carried, etc.

In regard to maintenance of tracks, the representative of All India Loco Running Staff has stated that tracks were not being maintained properly. Track maintenance has been given to private contractors who are not at all experienced in the maintenance of tracks because deep screening, packing etc. are involved in that, which required experienced persons.

Maintenance of Rolling stock

91. The Rolling stock of Railways *viz.* Locomotives, Coaches and Wagons need to be maintained properly for the safe running of trains. The codal life for Rolling stock has been fixed as follows:

Locomotives — 40 years
Coaches — 25 years
Wagons — 35 years

92. The Railways also undertake Periodical-Over Haul (POH) of the rolling stock in Railway workshops. In this regard the Ministry in a note have stated:

> "Railways have adopted a system of preventive maintenance for the rolling stock. Periodical Over Haul (POH) is undertaken in

96. Asked if the Commission was satisfied with the maintenance of Rolling stock by Railways, the Commission in a note to the Committee have stated,

major workshops equipped with full facilities and infrastructure. Intervals of such attentions varies from 9 to 18 months for coaches, 3½ years to 6 years for freight stock and 6 years for Diesel locomotives. Such periodicities are based on design structure and utilization point of view. Besides, whenever required, intermediate overhaul of coaching stock is undertaken in between consecutive POHs in workshops as in major depots. Similarly intensively used freight stock undergoes routine overhaul (ROH) in the depots, periodicity of which varies from 18 to 24 months. Diesel locomotives undergo strick regime of Maintenances Schedule at their Homing Sheds viz. 3 yearly, yearly, half yearly, quarterly, monthly. Similarly, Electric Locomotives are given various maintenance schedules varying from monthly schedule to 6 yearly POH schedule."

A system of ultrasonic testing of axles by means of ultrasonic flaw detectors have been put into practice at all the major workshops, locoshed and ROH depots for freight stock.

Besides the above schedule/fortnightly schedule for locomotive and terminal attention for freight stock/coaches are undertaken for smooth operation.

93. However, during the non-official evidence, the Committee were informed that 15% of rolling stock and 10% of goods stock was running where periodical overhauling was overdue.

In a subsequent note to the Committee the Ministry informed that an on 31.3.95 there were 2429 overaged Coaches in operation in Railways.

94. Enquired about overaged locomotives, coaches & wagons in operation in Railways, the Ministry have furnished the following information:

Overaged stock (BG) as on 31.3.94 is as under:—

Diesel locos	—	21
PCVs	—	1081
OCVs	—	1087
Wagons	—	35420.5

In addition, 41 DC Locos are also overaged.

In a subsequent note to the Committee the Ministry informed that as on 31.3.95 there were 2429 overaged coaches in operation in Railways.

95. During evidence the Chief Commissioner of Railway Safety stated that overall maintenance of the coaches had gone down. He said that the issue had been reflected in their Annual Report.

The CCRS also stated that checking and getting the Rolling stock was not his jurisdiction. He did not have the implementing staff or authority.

There are certain areas in maintenance of Rolling Stock on which the Commission has considerable reservations. A few cases of deficiencies are enumerated below:

1. In an accident Inquiry Report on derailment of an express train on the N. Rly. in May '94, the CRS had commented adversely on the maintenance practices of passenger coaches particularly regarding record keeping at coaching depot, maintenance of coaching rake, variation in wheel diameters. CRS had recommended that at the primary maintenance depot, actual dimensions of wheel dia, wheel gauge, buffer heights etc. should be measured and recorded in the register, adequate period should be provided for maintenance of coaches and duration of POH, size of wheels and other safety fittings should be kept with adequate margin to reduce the necessity of their changing in sick lines to the extent possible.
2. While conducting an accident enquiry into a derailment of EMU local train in Bombay Suburban Section, the Commissioner of Railway Safety, noticed that the hangers and pins of the under-gear were found to be of inferior quality which were the cause of the derailment. The main problems noticed in respect of the above items were:—
   (a) Material composition of the hangers not upto mark (as specified by RDSO/LKO).
   (b) RITES's inspection unsatisfactory, both during and after manufacture.
   (c) Procurement by Controller of Stores, Central Rly. was tardy, leading to severe shortage resulting in Fatigue failure of the above vital safety item.
   (d) Materials from approved firms not being procured.
3. Overaged and dilapidated coaches used for Accident Relief Medical Vans (ARME).
4. Fire instance in an EMU local on C. Rly. in March '93 brought out that fire prevention measures listed out in RDSO's "Code of Practice for prevention of fires on EMU stock" (Jan. 1980) had not been fully implemented on all the coaches.
5. During investigations into several passenger train accidents, it has been noticed by the Commissioners that the wheels of certain coaches had developed "biased wear". The Commission had suggested that this phenomenon should be studied in depth by RDSO/LKO and proper remedial measures be taken.
6. It has been observed by the Commission that in many cases in EMU rakes in Bombay suburban sections emergency lamps come into operation rather late when there is a power shut down. This aspect needs to be taken care of by the Railways.

7. In a number of accidents, the Commission had occasion to point out the inefficacy of Alarm Chain apparatus (ACP) both in vacuum braked and air braked stock.

8. During Accident investigations, the Commission had occasion to point out that Primary Maintenance of Mail/Exp. trains is not being carried out as per procedure laid down in the coaching manuals and especially in respect of the following points:—

   (a) No proper record of vital parameters.

   (b) Improper dash pot oiling.

   (c) Vacuum levels below prescribed limits.

   (d) Improper supervision by higher officials.

   (e) Instructions contained in RDSO's manual C-7103 not being followed.

9. There have been cases on the Indian Railways where trains have started rolling down steep grades in an uncontrolled manner leading to serious collisions. While investigating the above accidents, the Commissioners have observed that several components of the braking system-such as Distributor Valves etc. are not functional. Non availability of the prescribed Brake power was also a common factor.

10. CRT wagons which are derailment prone have been the cause of several serious accidents on Indian Railways. Even though RDSO/LKO had suggested certain improvement in the under-gear, the Commission has observed during investigations that such a modification has not been carried out in many CRT wagons still playing on the Indian Railways. The Commission strongly feels that unmodified CRT wagons should not be put into commercial use to prevent recurrence of any similar accident in future.

11. In several accident investigations, the Commissioners had pointed out defective speedometers/speed recorder charts etc. which are vitally needed not only for accident investigations but for day to day guidance of the running staff.

12. Arising out of an accident in which an Express train rolled down a steep ghat on Central Rly. on 1.12.94 without crew, the following suggestions were given:

   (a) Overhauling facilities for DC electric locomotives at Kalyan Electric shed C. Rly. need to be augmented.

   (b) Need for evolving a code of practice for "Fire prevention measures in DC electric locos by C. Rly.

   (c) Fire fighting appliances in Passenger coaches should be in the knowledge of train crew for emergencies.

(d) All coaching depots for air-braked coaches should have proper complement of trained staff, equipment for testing and spare stock of vital materials.

13. Investigations into accidents involving several air braked stock indicate that the issue of "air braked continuity certificate" does not receive due importance. This is an essential safety item,

14. There have been a few cases of passenger fatalities in vestibuled passenger trains, the cause of which has been investigated by the Commission and found to be due to deficient vestibule fittings. It may be mentioned that even though it is a safety item, due attention has not been paid during maintenance schedule.

15. Arising out of the derailment of a prestigious Rajdhani Exp. in W. Railway in October'93, the design of the brake gear of the high speed passenger coaches came for reveiw and the following specific issues were taken up by the Zonal Railway on the advise of the Commission:

(a) Provision of wire rope arrangement in place of the existing design of brake beam safety bracket.

(b) Revision of drawings for brake beam hanger and equalising stay rod.

(c) Modification to the existing anchor link design in ICF coaches, now under consideration of RDSO.

(d) Use of nylon bushes vis-a-vis steel bushes which is under consideration by Railway Board.

16. In an accident inquiry involving serious head-on-collision between a Passenger train and an air braked Goods train in Sept '93 on W. Rly., it was noticed that reliable pressure gauges were not available in the Brake Vans of air braked trains. This is also partly due to lack of modifications required in the air Braked Vans for fitment of air pressure gauge.

17. Arising out of the investigations into derailment of a Rajdhani Exp. in W. Rly. in June, it was noticed that the problem of leakage of dash pot oil in ICF coaches was acute. This problem has been faced during investigations into other accidents as well and requires to be looked into by the Railway Administration.

18. Several investigations into train accidents by the Commission have indicated that Primary and Secondary examination of passenger trains which are to be done on pit lines are not being carried out leading to inferior maintenance with respect to safety standards. In some of the cases, the Commission has also pointed out inadequate examination facilities such as want of proper pit lines, lighting arrangements, poor drainage system in pit lines etc. It is also worth mentioning that Railway Administration has been introducing more and more

prestigious long distance trains without creating the necessary maintenance infrastructure for proper up-keep and maintenance in service.

19. In Sept. '94, Railway Board issued directives to all Zonal Railways that secondary maintenance need not be done on passenger rakes covering upto 2500 kms. on a round trip. The above directive has been issued in relaxation of the earlier instructions prescribed in the existing manuals and Circulars issued by Railway Board from time to time. The Commission had pointed out that the above directive should not be implemented by the Zonal Railways unless and until an indepth study is carried out on the various implications arising out of it.

    The Board have also relaxed that points of examination for the Goods trains may be made at not less than 4500 kms. which again is a deviation from an age old practice. Here also the commission has advised that this relaxation should not be introduced without proper indepth study.

20. The continued use of overaged wagons has been causing concern to the Commission which has also been reported in Annual Reports. The Commission has been advocating that Railway Administration should strongly adhere to the IRCA rules laid down to ensure safety.

21. It has been noticed by the Commission that Goods trains are run with trailing loads in excess of the load prescribed in the RDSO haulage charts. This leads to maintenance problems.

Recommendations

97. There has been a continuous expansion in traffic in Indian Railways with increase in the density of traffic, trailing load and speed of the trains. The train operations have become more and more complex raising the hazards of accidents. In the years to come the Railways will be called upon to lift more and more traffic and therefore high priority shall have to be accorded to various safety measures to ensure greater safety in rail travel. Under these conditions, the Committee feel that the safety of train operation has attained paramount importance and under no circumstances, safety of train operations can be compromised.

98. For safe running of trains it is imperative that the Signalling and Telecommunication Systems should be modern and faultless. The Committee, however, have observed that with increase in traffic there has been no progressive modernization nor adequate expansion of Signalling and Telecommunication System. Signalling system has advanced tremendously the World over but India is still lagging much behind in the adoption of modern signalling methods. The Committee desire that the Ministry of Railways should ascertain the signalling system being followed in some of the advanced countries of the world so that the same may be suitably

adopted by the Indian Railways in a time-bound programme. Resource constraints should not be a hindrance in adoption of the latest technological developments in the field of safety.

99. From the information supplied to them, the Committee find that with drastic reduction in the allocations for the Eighth Five Year Plan from Rs. 45,600 crores to Rs. 27,202 crores the allotment for signalling and safety measures suffered the highest casualty. There was a sharp reduction of 73 per cent in this sector from Rs. 2575 crores to Rs. 675 crores during the Eighth Plan. It is disquieting to note that this huge cut in the signalling field was made on an ad-hoc basis and no exercise was done to make group-wise allocation. Such adhocism, in an area of critical importance, shows the lack of safety consciousness on the part of the Railway Board.

100. The Ministry have, however, informed the Committee that they propose to spend Rs. 1100 crores in all during the Eighth Plan against the minimum requirement of Rs. 1548 crores which is even now much less compared to their original demand of Rs. 2575 crores in the Eighth Plan for signalling and safety. The Committee hope that the Ministry will adhere at least to this revised Plan.

101. The Committee note that there has been a downward revision in the budgetary allocation for S&T works during 1994-95 on account of the assurance given by the Department of Telecommunication for providing the communication equipments. The Department of Telecommunication is reported to have later withdrawn the offer and execution of the work was delayed on that account. The Committee are unhappy that without taking firm commitment from the Department of Telecommunication, the Ministry of Railways provided less amount for this work.

102. The Committee are surprised to note that there is no long term integrated plan for installation of modern signalling devices in the Railways. The Ministry, have however, submitted to the Committee a conceptual Plan which is grossly inadequate and does not indicate any time-bound programme for installation of various safety devices. Undoubtedly, safety is not getting the importance it deserves. The Committee strongly recommend that a well defined time-bound integrated Plan should be formulated without any further delay for systematic installation of modern signalling devices.

103. The Committee note that the Government have appointed a high level group to improve the safety standards of the Indian Railways after the disastrous train accident at Ferozabad in August, 1995. They hope that the findings of the group will also be helpful in formulating a long term integrated plan on safety.

104. The Committee have been informed that track circuiting is a very safe and reliable device to prevent accidents as it eliminates chances of reception of trains on the occupied lines. Track circuiting is being widely used all over the world and was recommended by the successive Enquiry

Committees like Kunzroo Committee (1962), Wanchoo Committee (1968) and the Sikri Committee (1978). The Commission of Railway Safety had recommended a number of times for installation of this device at all trunk routes and mainline stations. The Railway Reforms Committee had also recommended in 1983 that track circuiting should be installed at all the trunk and main line stations by 31st March, 1990 from Fouling Mark to Block Section Limit. The Committee are distressed to find that track circuiting has not been given its due importance even after 33 years of the recommendation made by the Kunzroo Committee in 1962. The Committee are of the firm view that some of the major accidents that had occurred in the past could have been avoided had this device been installed as per the recommendations made by the various Committees from time to time. The Representatives of various Organizations including the Commission of Railway Safety who appeared before the Committee for expressing their views about the safety standards being maintained in the Indian Railways were of the unanimous opinion that the horrendous Ferozabad accident could have been averted had the Ferozabad station been track circuited.

105. In the Action Plan for complete track circuiting, the Railways now propose to cover 3228 stations from Fouling Mark to Fouling Mark in all trunk routes and main lines, 1964 stations from Fouling Mark to Block Section limit in all trunk routes but important main lines and 1310 stations from Fouling Mark to Fouling Mark on looplines by the end of Eighth Plan. The Ministry have stated that track circuiting would be done excluding the Point zone which would be covered later as there was a shortage of concrete sleepers required for point sections. The Committee do not approve of all this partial track circuiting which can mislead the driver and prove dangerous. The Committee, therefore, desire that track circuiting should be provided from Fouling Mark to Block Section Limit (BSL) on all 3228 stations on trunk routes and main lines as already recommended by the Railway Reforms Committee.

106. The Auxiliary Warning System (AWS) is a device which forewarns the Driver in case he jumps the red signal. The Committee note that the System is in operation in several developed countries of the world like Japan, Germany and USA where this System has been very successful. In British Railways provision of AWS is mandatory on lines having speed of 120 kmph or more. The Railway Reforms Committee had also recommended the installation of this System at all suburban sections and also other sections having maximum speed of 120 km/h or over. The Ministry of Railways had stated during evidence that the System could not be installed due to large scale theft of track magnets which are very costly. The Committee are not satisfied with the argument of the Ministry and desire that in view of the usefulness of the device, the Railways should increase the surveillance of tracks in suburban sections to check theft of magnets. The Committee feel that it would be worthwhile if automatic systems are introduced in all the high traffic density routes. In the

meantime the Ministry should, however, continue making efforts with the Industry to get a suitable and cheaper substitute for the track magnets.

107. Train Radio Communication System is an important device which provides means of communication between Guard and Driver and the Control Room. The Committee note that the Train Radio Communication System between Guard and Driver and the Control Room has been provided only in about 1000 km. track between Durg-Nagpur, Nagpur-Itarsi and Itarsi-Bhusawal with optic fibre but Railways' experience with this is stated to have not been very satisfactory. The Committee, however, were informed by some Private Sector Units during their evidence that they are capable of taking over the manufacture of this equipment to the Railways' satisfaction. The Committee desire that the private Sector should be involved in the development of this technology.

108. The Committee feel that Telecommunication is another important area from the point of view of train operation. In the modern era when Telecommunication technology is rapidly changing, the Railways are still relying upon the age old Telecommunication System. The Committee desire that the Railways should make perspective Plan for taking up modernization of the Telecommunication System in association with the Department of Telecommunication.

109. The Committee note that the Railways propose to instal Emergency Communication System where a socket would be provided at every 1 km. of electrified section and Driver with emergency telephone instrument can speak to the nearest Railway station in case of emergency. Though this device seems useful but in actual practice it can not be a good substitute to Train Radio Communication where the Driver has to be in constant touch with the Control Room. In any event there should be no let up in installation programme of efficient Train Radio Communication System in Railways. Efforts should be made to instal more efficient alternative system with different available equipments.

110. The Committee have observed that there has been very substantial increase in the number of train accidents at level crossings. From the figure of 36 in 1991 it has risen to 7[illegible] in 1994-95. It is understood that the Railways are trying to develop train actuated warning device so that the road vehicles are forewarned about the incoming trains by Audio/Visual System. The Ministry have, however, stated that they are trying to develop it for the last 10 years but the results are not satisfactory. The Committee are, however, distressed to learn that even after 10 years, the Railways have not been able to get satisfactory results. In this connection, the Representative of Confederation of Signal and Telecommunication Engineering Organization had informed the Committee that they were in a position to supply this device to the Railways with best results. The Railways have, however, installed this device with the help of Bharat Electronics Limited (BEL) at the level crossing gates near Bangalore which

have given satisfactory results. The Committee, therefore, recommend that the services of BEL and other Private Sector Units should be utilized in this field to minimize the ever increasing number of level crossing accidents.

111. According to the Railways there has been an improvement of safety performance on the Railways as incidence of accidents per million train kms. has come down from 0.86 in 1991 to 0.78 in 1994-95. In the opinion of the Committee these indicators do not depict a true picture about the fall in the Railway accidents. From the figures supplied to them the Committee find that there has been a substantial increase in the number of casualties in rail accidents over the years. The number of people killed in accidents has sharply risen from 229 in 1991-92 to 379 in 1993-94. Though there was a marginal decrease in the persons killed in 1994-95 yet the figures for 1995-96 would still be further alarming as the number of precious lives lost in the Ferozabad accident alone might have crossed all the previous records. According to the Railways' own admission there was a lot of scope for improvement and that they are striving to eliminate these accidents altogether. More than 80% of the accidents have taken place on account of derailments, 14% due to collisions and the remaining due to fire accidents, sabotage etc. during the last 5 years. From the information made available to them it is seen that some sections of the railway network are derailment prone. The incidence of derailment was the highest in the South Eastern Railway during 1994-95 as out of 388 derailments, 84 occurred in South Eastern Railway alone followed by Northern Railway which accounted for 54 derailments during the same year. The position of other Railways is equally disturbing. The Committee feel that Railways should not feel satisfied with the fall in incidence of train accidents per million train kms. The Committee note that the Ministry of Railways have formulated an Action Plan to tackle the problem of derailments. The Committee, therefore, desire that Railways should make concerted efforts to eliminate this menace which is within their reach if the Action Plan defined by the Railways is translated into action.

112. The Committee have observed that more than 80% of the accidents are caused by human failure. They feel that the number of accidents on account of human failure though cannot be completely abolished but still can be minimized to a large extent if the modern safety devices are installed and there is less dependence on manual handling. The Committee feel that there is also a need to inculcate safety consciousness not only among the running and station staff but also among the higher officials.

113. Another grey area which needs immediate attention is the training imparted in the Training schools run by Railways. The Wanchoo Committee had observed as back as in 1968 that the Railways had introduced/extended the use of modern sophisticated equipment in various fields of Railway operation namely signalling, motor power etc., it was imperative that the staff entrusted with the responsibility of handling operation and maintenance of all such equipments are imparted adequate

and intensive training. From the information received by the Committee and the evidence tendered before them by various organizations, the Committee have noted that the number of persons and the quality of training being imparted in the training schools has been inadequate and not of the requisite standard. Not only the training schools are ill-equipped but also the number of Instructors is not adequate and well trained possessing training skills expected of them. The Committee find that only 40% of the training facilities are being utilized. There are not enough training reserved posts available on the Indian Railways. The working of the Ghaziabad Training School is a glaring example of the standard of training which might have been imparted there. Out of 19 posts of faculty members in S&T, 8 are lying vacant. To attract better instructors for Training Schools it is imperative that higher incentives should be given to them. It is surprising that the incentive of 30% of the basic pay being given earlier has been reduced to 15%. The Committee recommend that suitable incentive should be given to attract better Instructors for the Training Schools as these posts are at present considered as side-lined posts. It need hardly be emphasized that urgent steps should be taken to fill the vacancies of Instructors in the Training Schools.

114. It was brought to the notice of the Committee that training facilities are not being utilized fully as the Railways are not able to spare staff for the training. It is a very sad state of affairs and the Committee desire that due importance should be attached to the training of the staff which is very essential for the safe operations of the Railways. It need hardly be stressed that the modern safety gadgets should be made available to the Training Schools and the trainees should be taught proper application of these gadgets, which are to be put to use in the Railways.

115. During non-official evidence the Committee were informed that the post of Train Examiner is filled up by direct recruitment and also through Departmental promotions from Safaiwallas, Khalasis, Helpers etc. The Committee are of the view that the method of promotion of Promotee Train Examiners needs to be reviewed as it is a technical job and has bearing on the safe running of the trains. Therefore, Railways should prescribe some minimum technical qualifications for the Promotee Train Examiners and before promotion to the post of Train Examiner intensive training in train examination be given to them. They desire that for the post of Switchman also some minimum technical qualifications should be prescribed as modern signalling techniques require highly intelligent, technically qualified and thoroughly trained staff for handling and for operation of the equipment. The Committee also desire that there should be some mechanism to evaluate the training performance of trainees on completion of training and refresher courses. In case of non-satisfactory performance, the training period should be further extended. The Committee recommend that the syllabus for the training programmes should be constantly up-dated to keep pace with the modern technological developments.

116. The All India Loco Running Staff Association informed the Committee during evidence that there are generally 30% vacancies of Loco Running Staff in Railways with the result that they have to put in more than 10 hours of duty at a stretch. In this connection the Member (Traffic) stated that there were 10 to 15 per cent cases where duty hours exceeded 10 hours. The Committee feel that working for long hours do affect alertness of the Loco Running Staff and consequently the safety of the train operation. The Committee, therefore, recommend that the Ministry of Railways should fill up the existing vacancies and make adequate arrangements to ensure that the Loco running staff is not put on duty for more than 10 hours.

117. It was brought to notice of the Committee by the Indian Railways' Promotee Officers Association that the safety norms for the running goods trains have been lowered. Earlier the train examination which was done after every 400 kms. of run is now being done 'end to end'. This practice has not been approved by the Commission of Railway Safety also and they have included it as a non-resolved issue in one of their Annual Reports. The Committee feel that this recommendation of the Commission of Railway Safety has weight. The earlier practice seems to be quite sound for safe running of the trains. They, therefore, recommend that the Railways should revert to the old system of examination of the running train instead of 'end to end'.

118. The Commission of Railway Safety through its inspectorial, regulatory and investigatory roles directs and advises the Railway administration and ensures that adequate measures are taken for safety of train operation and soundness of Railway construction. However the recommendations of the Commission are only recommendatory and not mandatory. It is open to the Railways to accept or not to accept the recommendations of the Commission. Even though 90% of their recommendations are accepted by the Railways still there are 32 recommendations made from 1980-81 to 1993-94 which have not been accepted by the Railways as mentioned in the Annual Report of the Commission. The Committee find that there is no mechanism through which the Railways can be made to accept those recommendations where there has been disagreement between the Railways and the Commission. The Committee, therefore, recommend that some machinery may be devised to ensure that the recommendations of the Commission receive the attention they deserve at the highest level.

119. The Chief Commissioner of Railway Safety stated during evidence that the Railways approached the Commission for approval of the 'new work' before opening to the general traffic and that the Commission was not associated at the stage of the construction or planning. The Commission has given a number of instances where Railways had applied to the Commission for recommendation/sanction but their recommendations in

those cases have not been accepted by the Railways and these 'new works' have been opened for traffic. The Committee are not satisfied with the present arrangement. They feel that there is no point in approaching the Commission after completion of the 'new works' as the Commission do not get an opportunity to examine the 'new works' from its inception. They therefore, recommend that the Commission of Railway Safety should be associated right from the formulation of the proposal for starting a new work till its construction. This system would not leave any scope for rejection of the project or for suggesting major changes by the Commission after completion of the 'new works' involving considerable expenditure.

The Commission of Railway Safety has raised some serious objections to the large scale gauge conversion works being carried out by Railways disregarding safety norms for these works. The Committee strongly emphasize the safety norms should be strictly adhered to in carrying out the various gauge conversion works and no compromise should be made on the safety standards in execution of these works.

120. To make the functioning of the Commission more effective, the Committee also desire that the status of Chief Commissioner of Railway Safety should be equal to the members of the Railway Board and that of Commissioners, Railway Safety at par with the General Managers of Zonal Railways so that there is no clash of authority among them. The Committee are also of the view that the Reports of the Commission of Railway Safety should be laid on table of the House.

121. The Committee find from the information submitted to them by the Government that a good number of accidents take place due to non-renewals of overdue tracks. It needs hardly be emphsized that for smooth running of traffic, the track should be kept in a fit and proper running condition. The Committee have, however, been assured by the Ministry during evidence that the tracks which were overdue for renewals would be liquidated during the remaining period of Eighth Plan and during the Ninth Plan period for which adequate funds would be allocated. The Committee hope that the assurance given by the Ministry would be fulfilled in the promised period and in future due attention would be paid for timely renewal of overaged tracks as the rail tracks are the life line of the Railways. Looking into the enormity and importance of the job, the Committee desire that the work of track renewal and their maintenance should be entrusted to competent people under the supervision of the Engineering Division of the Railways.

122. For overhauling and maintenance of Rolling Stock, Railways have a defined periodicity. Periodic overhauling enhances the life span of the Rolling Stock. The Commission of Railway Safety has adversely commented upon the overall maintenance of the Rolling Stock especially the passenger coaches. The Committee desire that the preventive maintenance schedules laid down for periodical overhauling (POH) should be scrupulously adhered

to. They also desire that the deficiencies pointed out by the Commission from time to time in the maintenance of the Rolling Stock should be given due priority and removed within some time limit.

123. The Committee also desire that all the vacancies in the field of maintenance of tracks and rolling stock be filled up urgently so as not to neglect this important area of safety.

124. The Committee feel concerned to note that 2429 coaches in operation as on 31.3.95 in Railways have already surpassed their codal life. They feel that use of overaged coaches are safety hazard for travelling public and recommend that efforts should be made to withdraw them completely from the Railway fleet of coaches as early as possible.

NEW DELHI;
January 12, 1996

Pausha 22 1917 (Saka)

SOMNATH CHATTERJEE,
Chairman,
Standing Committee on Railway.

ANNEXURE I

(*see* Para 16 of the Report)

Integrated Plan on Railway Safety as Furnished by Ministry of Railways

The S&T works which are directly connected with safety are as under :

(1) Track Circuiting
(2) Colour Light Signalling
(3) Second Distant Signalling
(4) Route Relay Inter-locking
(5) Automatic Signalling
(6) Auxiliary Warning System
(7) Emergency Communication System
(8) Train Actuated Warning System at unmanned level crossings.

the directives decided upon in this field are as under :

1) Track Circuiting : As already indicated, Track Circuiting is to be provided on all trunk routes and important main lines. The priority for provision of Track Circuits will be :

i) Fouling Mark to Fouling Mark on Main lines.

ii) Fouling Mark to block section limit and of loop lines on panel interlocked stations.

The over-all position and plans to complete the work are already furnished against Question No. 11.

2) Colour Light Signalling: This is provided on all routes being electrified. It is done alongwith electrification. On other routes, it is provided at stations were reliable electric power supply is available as justified by traffic clerance.

3) Second Distant Signalling : This is provided on sections where trains are proposed to be run at speeds more than 120 kmph. The following sections have been identified:

a) New Delhi — Banglore

b) New Delhi — Howrah (via Patna)

c) New Delhi — Jammu Tawi

d) New Delhi — Trivandrum

e) New Delhi — Bombay Central

Already sanctioned for provision at 360 stations and remaining 753 stations are expected to be covered in the next two years.

4) Route Relay Inter-locking : This is to be done only on major junction stations and yards. This will be done when the existing gear becomes due replacement. The details are as under :—

Total No. of stations	216
Already provided as on 31.3.95	166
Approved in 95-96 WP	4
Under process in 96-97 WP	7
Balance	39

5) Automatic signalling : This is provided only where justified according to traffic requirements. The present position is as under :

Length provided	*Length under provision*
as on 31.3.95 2724 Tr. km	56Tr. km

6) Auxiliary Warning System : This system is also provided in heavy density traffic routes. The system was initially sanctioned in Howrah and Mughalsarai and implementation also undertaken. Within a shortwhile, the system had to be abandoned because most of the track side equipments have been stolen away. For a vast network, control of theft will be stupendous and near-impossible. The system cannot therefore be introduced all over.

Where train operation is very intensive like suburban system etc., these are considered adaptable. This has already been introduced on the intensive Bombay suburban system covering 313.62 kms.

7) Emergency Communication system:

As far as train communication system is concerned, portable control telephone along with telescopic poles are used by the train crew for communication where overhead line wires are available along the track. Emergency telephone sockets installed at an interval of 1 km. is used in electrified area for establishing communication.

Train Radio Communication through optic fibre has been provided on Bhusawal-Itarsi, Itarsi-Nagpur-Durg Sections.

Train Radio Communication on Dhanbad-Mughalsarai section on 18 GHz system has been provided. Besides the above, Train Radio Communication on UHF is under commission between Delhi and Mughalsarai.

In order to facilitate and standardise the system, an Universal Emergency Communication System has been recently tried successfully. This is a simplex VHF system between the driver, guard and the station

master and works at a fixed dedicated frequency which is allotted to Railways. This also has an SOS facility whereby all trains within the range of 5 kms. from the affected train can be pre-warned. This system proposed to be introduced in a time span of 2 years i.e. by 1997-98.

8) Train actuated warning system for level crossings:

This is being developed specially for un-manned level crossings. When the train is at a distance of 2 Kms. away while approaching a level crossing, it will actuate a device which will trigger an audio visual alarm at the level crossing. Railways had earlier tried an equipment developed by M/s. CEL but the equipment's performance has not yet been satisfactory as yet.

Recently, the Railways have been trying another equipment by M/s. BEL. Trials on such equipment have been going on for the last 7 years but the system is still not proven. Once it is proven successfully, the Railways would be in a position to implement the system in a time span of 2 to 3 years.

(*See* Para 79 of the Report)

Details of the Analysis made by Commission of Railway Safety on Acceptance and Implementation of their Recommendations by Railways for (i) Safety Measures & (ii) Maintenance of Assets.

7.1 Important Items, relating to safety, on which the Commission has reservations on the decision of the Railway Board, are reflected in the Commission's Annual Reports along with the Railway's remarks and Commission's further views.

7.2 An analysis of those issues, appearing in the Annual Report, which the Commission has not been able to resolve with the Railways, from 1980-81 to 1993-94, has been made under the following categories:—

Category	Description	No. of times appearing
A.	Those safety recommendations accepted by the Railways but implementation is slow	17
B.	Those safety recommendations accepted by the Railways but not implemented	2
C.	Those safety recommendations not accepted by the Rlys. with reasons on which the Commission has reservation	12
D.	Those maintenance recommendations accepted by the Railways but not implemented	1
E.	Those Maintenance Recommendations NOT accepted by the Railways with reasons on which the Commission has reservation	1
		32

7.3 Short details of the 32 cases are given below:—

(1) End to end running of goods trains Without examination enroute. — Category E

(2) Driver's Vigilance Control Device — Category B

(3) Maintenance of High Speed Rakes	Category D
(4) Delay in provision of complete Track Circuiting in Stations provided with Panel Interlocking	Category A
(5) Lack of despatch in planning and implementing safety works on the Indian Railways	Category A
(6) Departure from the accepted policy on fixation of booked speed in relaxation to the maximum permissible speed	Category C
(7) Tardy progress in track circuiting on run through lines on high speed routes	Category A
(8) Provision of track circuiting of run through lines between fouling marks of stations on trunk routes and important main lines	Category A
(9) Track circuiting on runthrough lines from fouling marks of Advance Starter of stations on trunk routes and main lines	Category A
(10) Tardy progress in track circuiting on run through lines at stations on trunk routes and important main lines	Category A
(11) Delay in track circuiting at stations provided with panel interlocking with partial track circuiting	Category A
(12) Lack of despatch in planning and implementing safety works on Railways	Category A
(13) Inadequate facilities for maintenance of coaching stock at terminal stations	Category A
(14) Review of Recruitment Policy for Diesel/ Electric Engine Drivers	Category C
(15) Retirement age of Drivers	Category C
(16) Minimum qualifying service for promotion to higher grade in safety categories	Category C
(17) Running of trains without last vehicle indication	Category C
(18) Continued use of wagons over-due Periodical Over Haul (POH)	Category C
(19) Running of goods trains without brake-vans and/or Guards	Category C

(20)	Rationalisation of pattern of examination of freight stock	Category C
(21)	Expediting the development of Vigilance Control Device (VCD) for fitment of Locos	Category B
(22)	Running of goods trains without brake-vans and/or Guards	Category A
(23)	Provision of Auxiliary Warning System (AWS)	Category A
(24)	Unsatisfactory brake power of air braked trains	Category A
(25)	Policy of Recruitment and Promotion of Train Examiners and skilled staff under the Mechanical Department	Category A
(26)	Psychological Test at the promotion stage for Loco running Staff (Driver's Crew)	Category A
(27)	Derailment Proneness of CRT Wagons	Category A
(28)	Provision of Speed Recorders in Locomotive	Category A
(29)	Policy for Recruitment of Train Examiners	Category A
(30)	Violation of Section 27 of the Railways Act, 1989	Category C
(31)	Subjecting passengers for journey upto 4 hours without the facility of Toilets	Category C
(32)	Adequacy of Brake Power of Trains	Category C

PART II

MINUTES OF THE NINTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Monday, the 25 September, 1995 from 1500 hrs. to 1715 hrs. in Committee Room 'D', Parliament House Annexe, New Delhi.

PRESENT

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Shri Harilal Nanji Patel
3. Shri G. Madegowda
4. Smt. Santosh Chowdhary
5. Dr. Kartikeswar Patra
6. Shri Allola Indrakaran Reddy
7. Shri B.K. Gudadinni
8. Shri Anand Ahirwar
9. Smt. Sheela Gautam
10. Shri Phool Chand Verma
11. Shri Mangal Ram Premi
12. Shri Shrish Chandra Dikshit
13. Shri Basudeb Acharia
14. Shri S. Sivaraman
15. Smt. Girija Devi
16. Shri Brahmanand Mandal
17. Shri Brishin Patel
18. Shri Moreshwar Save
19. Shri P.C. Thomas

Rajya Sabha

20. Shri Rahasbihari Barik
21. Shri John F. Fernandes
22. Shri Mohinder Singh Kalyan
23. Smt. Sarala Maheshwari
24. Shri Radhakishan Malviya
25. Shri Ahmed Mohamedhbhai Patel
26. Shri Janardan Yadav

SECRETARIAT

Smt. Roli Srivastava— *Joint Secretary*
Shri T.R. Sharma — *Deputy Secretary*
Shri R.C. Gupta — Under Secretary

WITNESSES

1. Shri C.L. Kaw, Member (Traffic), Ministry of Railways (Railway Board).
2. Shri V. Santhanam, Member (Electrical), Ministry of Railways (Railway Board).
3. Shri R.P. Jain, Adviser (Civil Engineering), Ministry of Railways (Railway Board).
4. Shri P.V. Vasudevan, Adviser (Finance), Ministry of Railways (Railway Board).

2. The Committee took evidence of representatives of Ministry of Railways on 'Safety Measures and Maintenance of Assets in Railways.' The representatives of the Ministry informed the Committee on the various measures being taken by the Railways for the safe running of trains and also clarified various points raised by the Committee on the subject.

3. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE TENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Monday, the 16 October, 1995 from 1100 hrs. to 1315 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Shri Harilal Nanji Patel
3. Shri Allola Indrakaran Reddy
4. Shri B.K. Gudadinni
5. Smt. Sheela Gautam
6. Shri Shrish Chandra Dikshit
7. Shri Raj Narain
8. Shri Basudeb Acharia
9. Shri S. Sivaraman
10. Smt. Girija Devi
11. Shri Brahmanand Mandal
12. Shri Brishin Patel

Rajya Sabha

13. Shri Rahasbihari Barik
14. Shri John F. Fernandes
15. Smt. Sarala Maheshwari
16. Shri Radhakishan Malviya
17. Shri Sarada Mohanty
18. Smt. Malti Sharma
19. Shri Janardan Yadav

SECRETARIAT

Shri T.R. Sharma — *Deputy Secretary*
Shri R.C. Gupta — *Under Secretary*

WITNESSES

Indian Railways Signal & Telecommunication Staff Association

1. Shri N.S. Bhangoo, President.
2. Shri Tasildar Singh Jt. General Secretary.
3. Shri K. Hasan, Ex. General Secretary.
4. Shri S.N. Shukla, Treasurer/IRSTSA W. Railway.
5. Shri Shitala Prashad Tripathi.
6. Shri R.K. Saksena
7. Shri M.C. Yadav.

The Committee took evidence of representatives of Indian Railways S&T Staff Association (IRSTSA) on 'Safety Measures and Maintenance of Assets in Railways.'

The representatives expressed their views on various issues concerning the safety of train operations.

A verbatim record of the proceeding has been kept.

The Committee then adjourned

MINUTES OF THE ELEVENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Monday, the 16 October, 1995 from 1500 hrs. to 1715 hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

Present

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Shri Harilal Nanji Patel
3. Dr. Kartikeswar Patra
4. Shri B. K. Gudadinni
5. Shri Anand Ahirwar
6. Smt. Sheela Gautam'
7. Shri Raj Narain
8. Shri Basudeb Acharia

Rajya Sabha

9. Shri Radhakishan Malaviya
10. Shri Sarada Mohanty

SECRETARIAT

Shri T. R. Sharma — *Deputy Secretary*

Shri R. C. Gupta — *Under Secretary*

WITNESSES

1. Shri G. K. Khare, Chairman, Ministry of Railways (Railway Board).
2. Shri C. L. Kaw, Member (Traffic), Ministry of Railways (Railway Board).
3. Shri V. Santhanam, Member (Electrical), Ministry of Railways (Railway Board).

2. The Committee took further evidence of representatives of Ministry of Railways on the subject 'Safety Measures and Maintenance of Assets in Railways'. The representatives of Ministry of Railways replied to the points raised by the Committee members on the various aspects of safety measures and maintenance of assets by railways.

3. The verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE TWELFTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Friday, the 3 November, 1995 from 1100 hrs. to 1240 hrs. in Committee Room '62', Parliament House, New Delhi.

PRESENT

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Shri G. Madegowda
3. Shri Dileep Singh Bhuria
4. Dr. Kartikeswar Patra
5. Shri Allola Indrakaran Reddy
6. Shri Shri B. K. Gudadinni
7. Shri D. B. Shingda
8. Smt. Sheela Gautam
9. Shri Mangal Ram Premi
10. Shri Shrish Chandra Diskshit
11. Shri Basudeb Acharia
12. Smt. Girija Devi
13. Shri Brahma Nand Mandal
14. Shri Brishin Patel
15. Shri S.S.R. Rajendra Kumar
16. Shri P. C. Thomas

Rajya Sabha

17. Shri Prabhakar B. Kore
18. Smt. Sarala Maheshwari
19. Shri Radhakishan Malaviya
20. Shri Sarada Mohanty
21. Shri Satish Pradhan
22. Shri Kailash Narain Sarang
23. Smt. Malti Sharma

SECRETARIAT

Shri T. R. Sharma	—	*Deputy Secretary*

WITNESSES

1.	Shri A. K. Senagupta	—	*Chief Commissioner of Railway Safety*
2.	Dr. M. Mani	—	*Commissioner of Railway Safety*
3.	Shri V.S. Dutta	—	*Commissioner of Railway Safety*

2. The Committee took evidence of representatives of Commission of Railway Safety on 'Safety Measures and Maintenance of Assets in Railways.' The Committee heard the views of the Chief Commissioner and other Commissioners of Railway Safety on various issues relating to the subject.

3. A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE THIRTEENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Friday, the 3 November, 1995 from 1500 hrs. to 1645 hrs. in Committee Room '62', Parliament House, New Delhi.

PRESENT

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Shri Dilip Singh Bhuria
3. Dr. Kartikeswar Patra
4. Smt. Sheela Gautam
5. Shri Shrish Chandra Dikshit
6. Shri Basudeb Acharia
7. Shri Brahma Nand Mandal

Rajya Sabha

8. Smt. Sarala Maheshwari
9. Shri Radhakishan Malaviya
10. Shri Sarada Mohanty
11. Smt. Malti Sharma

SECRETARIAT

Shri T. R. Sharma — *Deputy Secretary*

WITNESS

Confederation of Signal & Telecommunication Engineering Organisation

1. Shri R. D. Sharma, President, M/s. Kalindee Rail Nirman (Engineers) Ltd.
2. Shri M. P. Singhal, Secretary, M/s. Crompton Greaves Ltd.
3. Shri Basu Santanu, Member, M/s. Eldyne Electro System Pvt. Ltd.
4. Shri V. Reghunatan, Member, M/s. Railway Products (X) Ltd.
5. Shri S. V. Dhandekar, Member, M/s. Asea Brown Boveri Ltd.
6. Shri D. M. Vijayakar, Member, M/s. Siemens Ltd.

All India Promottee Officers Association

1. Shri S. K. Bansal, President/NRPOA.
2. Shri Babban Singh, Divl. Secretary/NRPOA/Lucknow.
3. Shri R. S. Midha, Divl. NRPOA/DLI.
4. Shri Paramjit Kumar, Office Secretary/IRPOF.
5. Shri Surjit Singh, Jt. Genl. Secretary/IRPOF.

6. Shri K. Hasan, Secretary-General, Indian Railways Promotees Officers' Federation

The Committee took evidence of representatives of Confederation of S&T Engineering Organisation on Safety Measures and Maintenance of Assets in Railways and heard their views on the modern gadgets and techniques available which could minimise the scope of accidents in Railways.

Thereafter the Committee heard the views of representatives of Indian Railways' Promotee Officers Federation (IRPOF) on the subject and sought clarification on the training and recruitment of staff connected with safe running of the trains and the safety norms being maintained by the Railways.

A verbatim record of the proceedings has been kept.

The Committee then adjourned.

MINUTES OF THE FOURTEENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Monday, the 20 November, 1995 from 1500 hrs. to 1700 hrs. in Committee Room 'E', Parliament House Annexe, New Delhi.

PRESENT

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Shri G. Madegowda
3. Shri Dileep Singh Bhuria
4. Shri Ashok Gehlot
5. Shri Allola Indrakaran Reddy
6. Shri B. K. Gudadinni
7. Shri Phool Chand Verma
8. Shri Basudeb Acharia
9. Smt. Girija Devi
10. Shri Brahma Nand Mandal

Rajya Sabha

11. Shri Rahasbihari Barik
12. Shri John F. Fernandes
13. Shri Mohinder Singh Kalyan
14. Smt. Sarala Maheshwari
15. Smt. Malti Sharma
16. Shri Janardan Yadav

SECRETARIAT

Smt. Roli Srivastava — *Joint Secretary*
Shri T. R. Sharma — *Deputy Secretary*
Shri R. C. Gupta — *Under Secretary*

WITNESS

1. Shri S. K. Dhar, Secretary General, All India Loco Running Staff Association (AILRSA).
2. Shri Jit Singh Tank, Office Secretary, All India Loco Running Staff Association (AILRSA).

The Committee took evidence of representatives of All India Loco Running Staff Association and heard their views on the Safety measures and Maintenance of Assets in Railways.

The verbatim record of the proceedings has been kept.

The Comittee then adjourned

MINUTES OF THE SIXTEENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (1995-96)

The Committee sat on Friday, the 12 January, 1996 from 1500 hrs. to 1600 hrs. in Committee Room 'B', Parliament House, Annexe New Delhi.

PRESENT

Shri Somnath Chatterjee — *Chairman*

MEMBERS

Lok Sabha

2. Smt. Santosh Chowdhary
3. Dr. Kartikeswar Patra
4. Shri Manku Ram Sodhi
5. Shri Anand Ahirwar
6. Shri Ram Naik
7. Shri Mangal Ram Premi
8. Shri Shrish Chandra Dikshit
9. Shri Raj Narain
10. Shri Basudeb Acharia
11. Shri S. Sivaraman
12. Smt. Girija Devi
13. Shri Brahma Nand Mandal

Rajya Sabha

14. Shri John. F. Fernandes
15. Shri Mohinder Singh Kalyan
16. Shri Prabhakar B. Kore
17. Smt. Sarala Maheshwari
18. Shri Radhakishan Malaviya
19. Shri Sarada Mohanty
20. Shri Ahmed Mohamedhbhai Patel
21. Shri Satish Pradhan
22. Smt. Malti Sharma
23. Shri Janardan Yadav

SECRETARIAT

Shri T.R. Sharma — *Deputy Secretary*

Shri R.C. Gupta — *Under Secretary*

2. The Committee took up for consideration the Draft Nineteenth Report of the Committee on 'Safety Measures and Maintenance of Assets in Railways'.

3. The Report was adopted subject to the amendments/modifications shown in the Appendix.

4. The Committee authorized the Chairman to finalize the Report after making consequential changes, if any, arising out of factual verification by the Ministry of Railways and to present the Report to both the Houses of Parliament.

The Committee then adjourned.

APPENDIX

AMENDMENTS/MODIFICATIONS MADE BY STANDING COMMITTEE ON RAILWAYS IN THE DRAFT REPORT ON 'SAFETY MEASURES AND MAINTENANCE OF ASSETS IN RAILWAYS'

S. No.	Page No.	Para No.	Line	
01.	01	01	01	*For* are *Read* may be
02.	45	74	02	*For* every train *Read* every goods train
03.	71	100	07	*After* adhere *Add* at least
04.	71	101	11	*For* job *Read* work
05.	76	109	07	*Delete* very
06.	76	109	09	*For* is *Read* has to be
07.	76	109	10-12	*For* 'The Committee.....in Railways.' *Substitute* In any event there should be no let up in installation programme of efficient train Radio Communication system in Railways. Efforts should be made to instal more efficient alternative system with different available equipments.
08.	77	110	02	*For* tremendous increase in train accidents *Read* very substantial increase in number of train accidents
09.	77	110	03	*For* a meagre *Read* the
10.	78	111	2 from bottom	*For* some Railways *Read* some sections of the Railway

S. No.	Page No.	Para No.	Line	
11.	81	114	—	*Add at the end* which are to be put to use in the Railways.
12	82	115	—	*Add at the end* The Committee recommend that the syllabus for the training programme should be updated constantly to keep pace with the modern technological developments.
13.	83	116	12	*After* Railway should *Add* fill up the existing vacancies
14.	84	118	06	*For* The recommendations *Read* However, the recommendations
15.	84	118	13	*For* and have been included *Read* as mentioned
16.	85	119	—	*Add at the end* involving considerable expenditure
17.	85	119	—	*The following sub para be added in para 119:* The Commission of Railway Safety has raised some serious objections to the large scale gauge conversion works being carried out by Railways disregarding safety norms for these works. The Committee strongly emphasize that the safety norms should be strictly adhered to in carrying out the various gauge conversion works and no compromise should be made on the safety standards in execution of these works.
18.	86	120	—	*Add at the end* The Committee are also of the view that the Reports of Commission of Railway Safety should be laid on the Table of the House.

S. No.	Page No.	Para No.	Line	
19.	86	121	last line	*For* 'the people.....job.' *Substitute* 'competent people under the supervision of Engineering Division of the Railways.'
20.	86			*Add paras 123 & 124 after para 122 as under:* 123. The Committee also desire that all the vacancies in the field of maintenance of tracks and rolling stock be filled up urgently so as not to neglect this important area of safety. 124. The Committee feel concerned to note that 2429 coaches in operation as on 31.3.95 in Railways have already surpassed their codal life. The feel that use of overaged coaches are safety hazard for travelling public and recommend that efforts should be made to withdraw them completely from the Railway fleet of coaches as early as possible.