21

STANDING COMMITTEE ON RAILWAYS
(2013-14)
FIFTEENTH LOK SABHA

MINISTRY OF RAILWAYS
(RAILWAY BOARD

MAJOR RAILWAY ACCIDENTS DURING THE LAST FIVE YEARS - CAUSES AND REMEDIAL MEASURES

TWENTY FIRST REPORT

LOK SABHA SECRETARIAT
NEW DELHI

December, 2013/ Agrahayana 1935 (Saka)

SCR NO. 183

TWENTY-FIRST REPORT

STANDING COMMITTEE ON RAILWAYS
(2013-14)

FIFTEENTH LOK SABHA

MINISTRY OF RAILWAYS
(RAILWAY BOARD)

MAJOR RAILWAY ACCIDENTS DURING THE LAST FIVE YEARS- CAUSES AND REMEDIAL MEASURES

Presented to Lok Sabha on 18.12.2013

Laid in Rajya Sabha on _____

LOK SABHA SECRETARIAT
NEW DELHI

December, 2013/ Agrahayna 1935 (Saka)

CONTENTS

Constituted on 31.08.2013

COMPOSITION OF STANDING COMMITTEE ON RAILWAYS (2013-14)

Shri T. R. Baalu - Chairman

MEMBERS

LOK SABHA

2. Shri Partap Singh Bajwa
3. Dr. Ram Chandra Dome
4. Smt. Maneka Sanjay Gandhi
5. Shri Pralhad Joshi
6. Shri Bhaskar Rao Patil Khatgonkar
7. Dr. Nirmal Khatri
8. Shri Surendra Singh Nagar
9. Shri Devender Nagpal
10. Shri Anand Prakash Paranjpe
11. Shri Rayapati Sambasiva Rao
12. Shri Rudra Madhab Ray
13. Shri Magunta Sreenivasulu Reddy
14. Smt. Satabdi Roy
15. Smt. Yashodhara Raje Scindia
16. Shri Ganesh Singh
17. Shri Lal Ji Tandon
18. Shri Ashok Tanwar
19. Shri Harsh Vardhan
20. Dr. Vivekanand
21. Smt. Dimple Yadav

RAJYA SABHA

22. Shri Husain Dalwai
23. Shri Prabhat Jha
24. Shri Om Prakash Mathur
25. Dr. Barun Mukherji
26. Shri K. Parasaran
27. Shri Ambeth Rajan
28. Shri Tarini Kanta Roy
29. Shri Bashistha Narain Singh
30. Shri Ishwar Singh
31. Shri Nandi Yellaiah

Constituted *vide* LS Bulletin No.5635 dated: 04.09.2013

LOK SABHA SECRETARIAT

1.	Shri K. Vijayakrishnan	-	Joint Secretary
2.	Shri Abhijit Kumar	-	Director
3.	Shri Arun K.Kaushik	-	Additional Director
4.	Ms. Banani Sarker Joshi	-	Sr. Executive Assistant

INTRODUCTION

I, the Chairman of the Standing Committee on Railways (2013-14), having been authorised by the Committee to present the Report on their behalf, present this Twenty-First Report of the Standing Committee on Railways on 'Major Railway Accidents during the last five years – Causes and Remedial Measures'.

2. The Committee took evidence of the representatives of the Ministry of Railways (Railway Board) on 07.01.2013 and 20.05.2013.

3. The Committee considered and adopted the Report at their sitting held on 17.12.2013. Minutes of the related sittings are given in appendix to the Report.

4. The Committee wish to express their thanks to the officers of the Ministry of Railways (Railway Board) for appearing before the Committee and furnishing the material and information which the Committee desired in connection with the examination of the subject. They would also like to place on record their deep sense of appreciation for the valuable assistance rendered to them by officials of Lok Sabha Secretariat attached to the Committee.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

NEW DELHI;
17 December, 2013
26 Agrahayana, 1935

T.R. BAALU
Chairman,
Standing Committee on Railways

REPORT

PART I

CHAPTER I

INTRODUCTION

The Indian Railways is one of the longest rail networks in the world spread over 64000 route kilometres, carrying around 23 million passengers and hauling nearly 2.7 million tonnes of freight daily. That being so, the safety of operations on the Railways and the safety and security of the millions availing the services of the Railways are of paramount importance.

Classification of Accidents

1.2 The Railways have classified accidents, as an occurrence in the course of working of Railways which does or may affect the safety of the Railways, its engine, rolling stock, permanent way and works, fixed installations, passengers or servants or which affect the safety of others or which does or may cause delay to train or loss to the Railways. A train accident has further been classified as 'consequential train accident' and 'other train accidents'. Consequential train accidents include train accidents having serious repercussions in terms of loss of human life, human injury, loss to Railway property or interruption to Rail traffic. Train accidents under the following classifications are termed as consequential train accidents:-

Collision : All cases under categories A-1 to A-4.

Fire : All cases under categories B-1 to B-4

Level Crossing : All cases under categories C-1 to C-4

Derailment : All cases under categories D-1 to D-4

Miscellaneous : All cases under category E-1

The classification of accidents under category A to E is given in **Annexure-I**.

1.3 Other train accidents: All other accidents which are not covered under the definition of consequential train accidents are treated as "other train accidents". These include accidents under categories B-5, B-6, C-5 to C-8 and E-2.

1.4 This report deals with only consequential train accidents which met with loss of lives of 10 or more during the last five years, i.e, from 2008-09 to 2012-13.

1.5 On being asked about the methods, the Ministry followed to account for accidents, they submitted that account of train accidents is maintained on the basis of categorisation into consequential and non-consequential. All consequential train accidents are reportable to Railway Board. Accident of a train carrying passengers which led to loss of life or which resulted in grievous hurt to a passenger or passengers in the train, or with serious damage to railway property of the value exceeding Rs. 2 crore (enhanced from Rs. 25 lakhs earlier), or interruption to through communication that more than the prescribed number of hours (e.g. total disruption to traffic is more than 3 hours or partial disruption to traffic is more than 6 hours on important Broad Gauge routes) are put in the category of consequential train accidents. However, cases of trespassers run over and injured or killed through their own carelessness or of passengers injured or killed through their own carelessness are excluded.

1.6 The Ministry also clarified that accidents are not categorised into 'major' or 'minor' accidents. Traditionally, consequential train accidents resulting in loss of lives of 10 or more persons have been treated under the category of Major accidents and this has been the basis for publication of a list of these accidents in the Annual Booklet on Indian Railway Safety Performance which is laid in Parliament along with the Railway Budget documents.

1.7 When the Ministry was asked to clarify if accidents occurring in manufacturing units, warehouses, depots, etc., were also included in the definition of accidents, in reply, the Ministry has stated that such accidents are not included in the category of consequential train accidents as these incidents do not involve a train as defined in the instructions issued by the Railway Board.

1.8 Further, on the issue of passengers/pedestrians being run over while crossing railway tracks, the Ministry submitted that the incidents of run over of passengers/ pedestrians while crossing railway track are not considered under railway accidents since such accidents take place due to the negligence on the part of passengers/ pedestrians. Such cases are reported to, registered and investigated by the Government Railway Police concerned of State Governments and as such no data is maintained by the Ministry of Railways.

1.9 The Zone-wise and category-wise number of consequential train accidents that led to loss of lives of 10 or more persons during the last five years, i.e., from 2008-09 to 2012-13, is as under:

Zonal Railway	**Collision**	**Derailments**	**Manned level crossing accidents**	**Unmanned Level Crossing Accidents**	**Fire in trains**
East Coast	-	-	-	2	-
East Central	-	-	-	2	-
Eastern	1	-	-	-	-
North Central	2	1	-	-	-
North Eastern	-	-	1	3	-
Northern	-	-	1	-	-
South Central	-	-	-	-	2
South Eastern	1	-	-	-	-
Southern	1	-	-	-	-

West Central	1	-	-	-	-
South Western	1	-	-	-	-
Total	7	1	2	7	2
Grand Total	**19**				

1.10 Brief particulars on each of these accidents, loss of lives and injuries suffered therein along with their cause(s) as per the findings of the Commissioner of Railway Safety (CRS)/ Enquiry Committees are at **Annexure-II**.

Process of investigation of accidents

1.11 When asked about the methodology followed by the Indian Railways in the investigation of an accident, the Ministry replied that as per the provisions of the Railways Act, 1989, in the course of working of the Railways, any accident that resulted in loss of any human life or grievous hurt or an accident involving a passenger train or an accident resulting in loss of railway property of more than the norm prescribed is informed to the Commissioner of Railway Safety under the Ministry of Civil Aviation for investigating the same. If, for any reason, the Commissioner of Railway Safety is not able to hold an inquiry or desires the Railway Administration to hold the inquiry instead, then such cases are investigated by the Railway Administration. All other incidents that are not reportable to the Commissioner of Railway Safety as per the provisions of the Act, are also investigated by the Railway Administration. In some serious accidents, a Judicial Commission of Inquiry may also be appointed under the Commission of Inquiries Act, 1952 to inquire into the accident. The Commissioner of Railway Safety discontinues any inquiry, if already commenced, on appointment of any such Judicial Commission of Inquiry.

1.12 In the event of an accident being attributable to human failure, disciplinary action is initiated against the staff found responsible and punishment is awarded as per the prescribed norms in a time-bound manner.

Accident Compensation

1.13 Further, the Ministry was asked to outline the system of compensation provided whenever there are human casualties. They have stated that as per the extant rules, the amount of compensation payable in train accidents and untoward incidents, as defined under Section 124/124-A of the Railways Act, 1989, is Rs. 4 lakh in cases of death and Rs. 32000/- to Rs. 4 lakh in cases of injury (depending upon the gravity of the injury).

1.14 As defined under Section 124/124-A of the Railways Act, 1989, compensation is paid by the Railways to the victims of train accidents after a claim is filed by the claimant in the Railway Claims Tribunal and a decree is awarded by the Tribunal in favour of the claimant and the decree so awarded is decided to be satisfied by the Railways. The Railway Claims Tribunal is a quasi-judicial body, independent from the Railways. Judicial process for settling the claims by the Tribunal involves different stages, like filing of written statements, filing of evidence and arguments, which is a formalized process having no fixed timeframe. The disposal of railway accident/untoward incident compensation claims in the Tribunal depends upon the facts and circumstances of each case. After satisfying the decree awarded by the Tribunal, Railways make all efforts for early disbursal of compensation. Prior finance concurrence in respect of accident compensation claims cases has been dispensed with. After sanction of the decreed compensation amount, Railways have to ensure that cheques are issued and dispatched within a period of 15 days.

1.15 When it was enquired from the Ministry whether there was a policy to provide employment to the dependents of the deceased in train accidents, the Committee were informed that there was no policy to provide employment to the dependents of deceased in train accidents. In the past, wherever employment has been given, it is in pursuance of a specific announcement made by Hon'ble Minister of Railways, in exception to rules and purely as a humanitarian gesture. Such appointments have been given in erstwhile Group

'D' categories (Grade Pay Rs. 1800/-) by way of engagement as fresh face Substitute. However, a Committee of Executive Directors has been formed to bring uniformity in the norms of employment to be given in such cases. Report of the said Committee is awaited.

CHAPTER-II

SPECIAL RAILWAY SAFETY FUND (SRSF)

Since the early nineties, the Railways have not been able to provide fully for the depreciation needs due to severe financial constraints. Further, the steep increases in the working expenses of the Railways also resulted in an erosion of the Railways' capacity to generate investible surplus. Consequently, there was an accumulation of over-aged assets awaiting renewals. In the wake of this, the Railway Safety Review Committee recommended that the Central Government should provide a one-time grant to the Railways to wipe out arrears in renewal of over-aged assets within a fixed time- frame. In order to implement this recommendation, the Central Government set up in October 2001, a non-lapsable Special Railway Safety Fund (SRSF) of Rs. 17000 crore to wipe out the arrears in renewal of over-aged assets, namely, tracks, bridges, signaling gears, rolling stock, etc. within a fixed time-frame. It also included certain safety enhancement measures such as track circuiting of stations, upgradation of training facilities, including training aids in training institutes, simulators for loco motive drivers, development of computer based training modules, etc. The non-lapsable Special Railway Safety Fund of Rs. 17000 Cr. was set up w.e.f. 01.10.2001 for five years (upto 2006-07) with contribution from the Ministry of Finance to the extent of Rs. 12000 Cr., and the balance Rs. 5000 Cr. from the Ministry of Railways. The currency of the Fund was then extended up to 2007-08. The total expenditure on closure of SRSF on 31.03.2008 was Rs.16318 crore.

2.2 Some of the major works undertaken with the funds allocated under the SRSF is shown below:

Works Identified	**Targets**	**Achievements**	**Achievement (%)**
Track Renewal	16538	16533	99.97%
Repairing and	2286	2191	95.8%

rehabilitation of distressed bridges			
Renewal of signalling Gears	1448	1315	90.81%

2.3 Further, it was informed that that out of the allocated amount of Rs.16694.66 crore, an amount of Rs.16318 crore (97.74 %) had been spent under SRSF upto its closing in March, 2008.

2.4 Regarding the impact of the SRSF, the Ministry has informed that though any specific impact assessment study with regard to funds made available under SRSF has not been undertaken, the non-lapsable Special Railway Safety Fund of Rs. 17000 crore has proved to be very essential and useful in clearing the backlogs of renewal and replacement of over-aged assets, namely tracks, bridges, rolling stocks, signaling gears, etc. and also in undertaking various safety enhancement works in a time bound manner. After clearing of the backlogs, renewal and replacement of assets are being taken care of on an year to year basis on the basis of allocations made under the Depreciation Reserve Fund. As a result of the various works completed under SRSF, the number of consequential train accidents has come down from 415 in 2001-02 to 194 in 2007-08. Accident per million train kilometer has also come down from 0.55 in 2001-02 to 0.22 in 2007-08 at the time of closure of SRSF in March 2008. Year-wise, the number of consequential train accidents has decreased from 415 in 2001-02 to 351 in 2002-03, 325 in 2003-04, 234 in 2004-05 and 2005-06, 195 in 2006-07, 194 in 2007-08, 177 in 2008-09, 165 in 2009-10, 141 in 2010-11, 131 in 2011-12 and further to 121 in 2012-13. Accident per million train kilometer, an important index on railway safety, has also come down. The Chairman, Railway Board, during the course of evidence stated: "In the year 2000-01, it was 0.65 accident per million train kilometre; in 2001-02 it was .55; in 2002-03 it was .44; in 2003-04 it was .41; in 2004-05 it was .29; in 2005-06 it was .28; in 2006-07, it was .23; in 2007-08 it was .22; in 2008-09 it was .20; in 2009-10 it was .17. That was the figure which

we have said we would like to achieve in 2012-13. In 2010-11 it was .15; in 2011-12 it was .14; and 2012-13 it was .13".

2.5 When asked if there was any proposal to have a new safety fund on similar lines, the Ministry has replied in the negative stating that there is no such proposal at the moment. However, in response to a query on the quantum of funds that would be required for the Indian Railways to move to the next level of safety on the Indian Railways system which would include collision avoidance systems, higher infrastructure regarding tracks, bridges and signalling which would contribute significantly to safety, the Chairman, Railway Board, replied that "that in case we have to move to the next level of safety on the Indian railway system, which includes collision avoidance systems also, and higher infrastructure regarding track, bridges, signalling, etc. which contribute significantly to safety, we require another investment of about almost Rs.60,000 crore over the next 5-7 years. But this amount that we require, in fact, has been calculated and docketed in the Ministry of Railways; but if this is the kind of investment that is required, certainly the entire amount cannot come from the internal generation because we do not have internal generation of that order".

CHAPTER-III

Allocation and Utilization of Funds

In terms of funding meant specifically for safety related works, the Committee was informed that there is no specific head meant solely for safety; expenditure on safety related activities forms part of both Plan and non-Plan outlays. Item of works related to safety under both Plan and non-Plan expenditure include Repairs and Maintenance of Permanent Ways, Repairs and Maintenance of Motive Powers, Repairs and Maintenance of Carriages and Wagons, Repairs and Maintenance of Plant & Equipment, Acquisition, Construction & Replacement of level crossings and Road Over Bridges and Road Under Bridges, Track Renewals, Bridge Works, Signalling and Telecom Works, Workshops.

3.2 The statement below shows the Budget provisions for safety related works. It includes the Budget Estimates and the actual expenditure on both non-Plan and Plan expenditure.

Budget Provision for Safety Related Activities

(Rupees in crores)

	BE 2008-09	Actual 2008-09	BE 2009-10	Actual 2009-10	BE 2010-11	Actual 2010-11	BE 2011-12	Actual 2011-12	BE 2012-13	Actual 2012-13 (prov)
Non-Plan Expenditure (Gross) Safety:										
Repairs & Maintenance of Permanent Ways & Works	5412	5891	6909	7497	7157	7387	8156	7795	8787	8164

Repairs & Maintenance of Motive Powers	2571	2861	3307	3479	3349	3424	3661	3600	4016	3838
Repairs & Maintenance of Plant & Equipment	2959	3318	4010	4307	4063	4167	4673	4421	5062	4766
Operating Expenses-Traffic-600-Safety	12	4	13	6	12	7	12	7	21	8
Total Non-Plan (Safety):	16389	18310	21664	23146	22106	22785	24776	24208	27197	25808
Plan Expenditure (Gross):										
Assets-Acquisition, Construction & Replacement										
Road Safety Works-Level Crossings	600	250	700	359	700	414	800	519	600	527
Road Safety Works-Road Over/Under Bridges	700	316	1000	541	1000	687	1200	810	1400	1057
Track Renewals	4700	5249	5135	4106	5000	4985	4964	5286	6003	5427
Bridge Works	606	422	500	371	408	354	330	319	464	322
Signalling and Telecom Works	1530	1382	1061	1056	1124	965	1102	845	2007	939
Workshops	1591	1022	1549	1083	1290	923	1552	1122	1112	1519

Total Plan (Safety):	9727	8641	9945	7516	9522	8328	9948	8901	11586	9790
Total (Non-Plan+Plan)	26116	26951	31609	30662	31628	31113	34724	33109	38783	35598

CHAPTER-IV

CAUSES OF TRAIN ACCIDENTS

Accidents at Level Crossings

Of all categories of major Rail Accidents in India, accidents at level crossings - both manned and unmanned - account for almost fifty percent of the total accidents. When asked the reasons for the high incidence of accidents at level crossings, the Ministry has replied that the main factor responsible for high rate of accidents at level crossings is negligence of road users. As per Section 131 of the Motor Vehicles Act, 1988 and Section 161 of the Railways Act, 1989, the onus for safe movement over unmanned level crossings is entirely on the road users.

4.2 **Section 131 of Motor Vehicle Act – Duty of the driver to take certain precautions at unguarded railway level crossing –**

> **"**Every driver of a motor vehicle at the approach of any unguarded railway level crossing shall cause the vehicle to stop and the driver of the vehicle shall cause the conductor or cleaner or attendant or any other person in the vehicle to walk up to the level crossing and ensure that no train or trolley is approaching from either side and then pilot the motor vehicle across such level crossing, and where no conductor or cleaner or attendant or any other person is available in the vehicle, the driver of the vehicle shall get down from the vehicle himself to ensure that no train or trolley is approaching from either side before the railway track is crossed".

4.3 Further, the Railways have clarified that accidents at unmanned level crossings are caused mainly due to trespassing by road vehicles across Railway tracks. Railways have the 'Right of Way' across unmanned level crossings. **Section 161 of the Railways Act, 1989 – Negligently crossing unmanned level crossing:-** "If any person, driving or leading a vehicle is negligent in crossing an unmanned level crossing, he shall be punishable with imprisonment which may extend to one year".

4.4 When asked about the number of level crossings in India, the Ministry has informed that currently there are **31,254** level crossings in India out of which **18,672 (60%)** level crossings are manned and the balance 12,582 (40%) are unmanned.

4.5 The Railways Vision-2020 document envisages the elimination of all unmanned level crossings. However, the Ministry has stated that elimination of all the unmanned level crossings is a gigantic task and it involves a lot of manpower, resources and budgetary support. It is a continuous process and is done as per need, inter-se priority of works, availability of funds and co-operation of State Governments, particularly, in getting consent for closure of level crossing and undertaking to maintain road and drainage in future for subways. A multi-pronged strategy has been adopted to achieve this end. While some level crossings would be closed by merging them with the nearby level crossing by constructing connecting road, other level crossings would be provided with Road under bridge or Limited Height Subways (LHS) and also by manning of qualifying unmanned level crossings. The quantum of funds required for this gigantic task would be to the tune of Rs.10,000 crore.

4.6 Regarding the progress of elimination of Unmanned Level Crossings in the last five years, the Ministry has submitted the information given in the Table below:

Year	**Target for Elimination**	**Progress achieved**
2008-09	600	556
2009-10	600	553
2010-11	811	800
2011-12	906	481
2012-13	669	700
TOTAL	**3586**	**3090**

4.7 With regard to the manning of Unmanned Level Crossings, the Ministry has provided year- wise figures as under:

Year	Target for Manning	Progress achieved
2008-09	436	259
2009-10	304	377
2010-11	1500	434
2011-12	2045	777
2012-13	1066	463
TOTAL	**5351**	**2310**

4.8 The total outlay for safety related work and the actual expenditure incurred are given in the table below:

Gross allotment for road related safety works			
Year		**Road Safety Works- Level Crossings**	**Road Safety Works- ROBs/RUBs**
			(Rs in crore)
2008-09	Budget Estimates	600.00	700.00
	Actual Expenditure	249.68	315.89
2009-10	Budget Estimates	700.00	1000.00
	Actual Expenditure	358.58	541.49
2010-11	Budget Estimates	700.00	1000.00
	Actual Expenditure	414.23	687.22
2011-12	Budget Estimates	800.00	1200.00
	Actual Expenditure	518.94	810.12
2012-13	Budget Estimates	600.00	1400.00
	Actual Exp (Prov)	527.47	1056.53

ROBs/RUBs

4.9 When enquired as to what were the alternatives to level crossings, the Committee was informed that grade separators, i.e, Road Over Bridges (ROBs) and Road Under Bridges (RUBs) were being constructed to eliminate level crossings.

4.10 The Committee was also informed that Road Over Bridges (ROBs) and Road Under Bridges (RUBs) across level crossing are constructed on the following basis:

- Cost sharing basis with the State Government.
- At Railway Cost
- On deposit terms

4.11 Regarding the criterion for construction of Road Over Bridges and Road Under Bridges on cost sharing basis with the State Government, the Committee was informed as under:

i. Level crossings with Train Vehicle Unit (TVU) of more than 1 lakh qualify for replacement by ROBs/RUBs on cost sharing basis.

ii. Level Crossings in the following areas with TVU of less than 1 lakh can also be considered for replacement by ROBs/RUBs on cost sharing basis:
    - Suburban sections having high frequency of train services; and
    - Near stations where detentions to road traffic are very high on account of either shunting operations or multi-directional receipt/despatch of trains or stabling of trains, etc.
    - Wherever Dedicated Freight Corridor (DFC) lines are running parallel to tracks of Indian Railways, all level crossings are being eliminated by ROBs/RUBs.

4.12 For sanction of works on cost sharing basis, State Govts. have to give the consent for:

- Closure of LC after commissioning of ROB/RUB
- Sharing of cost
- Providing encumbrance-free land on approaches
- Undertaking the maintenance, lighting & drainage work after completion of ROBs/RUBs
- Providing diversion route to road traffic to facilitate construction.

4.13 In respect of sanction of works of (ROBs/RUBs) at Railway cost, the Ministry has informed as under:

> ROBs/RUBs are constructed on Railway cost mostly for elimination of unmanned level crossings and some percentage of manned level crossings. In these cases, also State Govt. has to give consent for closure of level crossing, giving encumbrance-free land for construction of approaches and to undertake maintenance, drainage & lighting of the roads.

4.14 According to the Railways, the major challenge being faced in construction of ROBs/RUBs is non-cooperation from the State Governments. Most of the times, progress of ROBs/RUBs is hampered due to the following reasons:

- Late sanction of corresponding work in the State Budget
- Inadequate fund allocation by the State Govt.
- Non-submission of General Arrangement Drawing (GAD) & estimate by the State Govt.
- Frequent changes in alignment of approaches
- Late finalisation of tender for the work of approaches
- Non-availability of encumbrance free land for construction of approaches
- Not providing undertaking to maintain road and drainage in future for RUBs
- Delay in providing consent of closure of level crossings.

4.15 In the last five years, i.e, during 2008-09 to 2012-13, a total of **2830** ROBs/RUBs/Subways have been constructed which include Cost sharing, Deposit, BOT, NHAI and accommodation works on new lines & gauge conversion. Year-wise break-up is as under:

Year	ROB	RUB/Subway	Total
2008-09	67	65	132
2009-10	192	102	294
2010-11	257	384	641
2011-12	226	653	879
2012-13	236	648	884
TOTAL	**978**	**1852**	**2830**

4.16 The following table illustrates the progress of construction of ROBs/RUBs under cost sharing basis during the last 5 years:

Year	ROBs/RUBs sanctioned on cost sharing basis	Completed
2008-09	139	38
2009-10	107	80
2010-11	137	67
2011-12	186	83
2012-13	379	90*

*Progress is till March 31st, 2013.

4.17 Regarding the funding of Road Safety Works-ROBs/RUBs, the Ministry has informed that it is done under Plan Head 30. During the last 5 years, i.e, 2008-08 to 2012-13, a total amount of Rs.5300 crore was allocated out of which Rs.3411 crore was utilized. Year-wise break up is given in the following table:

Year	Allocation	Utilization (Rupees in crores)
2008-09	700	315.89
2009-10	1000	541.49
2010-11	1000	687.22
2011-12	1200	810.12
2012-13	1400	1056.53 (Prov.)
TOTAL	**5300**	**3411.25**

4.18 It is seen from the above that the funds for construction of RUBs/ROBs has been grossly under-utilized.

4.19 The Committee wanted to know what steps the Ministry was taking to actively curb accidents at level crossings, in reply, they have outlined the following steps:

(i) Proper Road Signs have been provided on approaches to level crossings so that road vehicle drivers become aware of the existence of a level crossing. To improve their visibility, the signboards are being made of retro-reflective sheets.

(ii) Road Signs, Speed breakers/rumble strips have been provided on approaches to level crossings so that road vehicle drivers are reminded to reduce their speed.

(iii) Whistle boards are also provided alongside the rail track on approach to level crossings from where train drivers continuously whistle to caution the road users.

(iv) Road users have still not got used to faster speeds of Mail/Express trains. A train travelling at 90 KMPH covers 25 meters per second. Thus, although to the road user the train appears to be 250

meters away, in terms of time, it is only 10 seconds away. This message is being conveyed to them by various publicity campaigns.

(v) To educate road drivers about safety at unmanned level crossings, publicity campaigns are periodically launched through different media like quickies on TV, cinema slides, posters, radio, newspapers and street plays etc.

(vi) Joint Ambush Checks with civil authorities are conducted to nab errant road vehicle drivers under the provisions of the Motor Vehicles Act, 1988 and the Railways Act, 1989.

(vii) Involvement of Village Panchayats is also organized in Railways' public awareness programmes.

(viii) Where the visibility distance is inadequate, speed restrictions for trains are imposed to allow for longer time interval for road traffic to pass in the face of approaching trains.

(ix) Surprise checks and night inspections are regularly conducted to check the alertness of gatemen.

(x) Manned level crossings having heavy traffic density are being progressively interlocked with signals on a planned basis.

(xi) Telephones are also being provided at all manned level crossing gates.

4.20 The Train Actuated Warning Device (TAWD) is another innovation introduced by two Railways to warn users of approaching trains. This Device gives audio-visual warning to road users about an approaching train at a level crossing gate. Trial of TAWD based on Digital Axle Counters (DACs) was undertaken at level crossing gates and found unworkable/ unsuitable due to

various reasons such as law and order problems, theft, inaccessibility of site, poor power supply and public vandalism resulting in non-availability of system. Provision of Train Actuated Warning System at unmanned level crossings can be implemented after an effective and theft proof system is developed by RDSO.

Derailment

4.21 Derailment, by definition, is an incident where the train runs off its tracks. The Indian Railways have classified derailments from D1 to D4 categories. After accidents at level crossings, derailments account for the most number of accidents on the Indian Railways. The Member Engineering, during the course of evidence, outlined the rail replacement criterion: "The rail replacement criteria has three factors. Number one is the total amount of traffic carried in Gross Million Tonnes (GMT). For each rail we have prescribed a certain GMT. For example, for 52 kg 90 UTS rail we have prescribed a GMT of 550; for 60 kg rail it is 825. So, if the traffic carried on the train exceeds this figure, then we get the rail changed. The second is the condition of the rail. In the condition come two factors. One is the corrosion. Because the night soil and water fall on the track and also some of the rails are laid in the corrosion-prone areas, the rail bottom gets corroded and the thickness there reduces. So, we have fixed a criteria also that if it is more than three millimetres, then within one year we should change it.

There is another criteria about the angle. On the top portion if the angle is more than 26 degrees, then it should be rejected because it has been found by experiments and also by studies that after this angle there is a possibility of the wheel riding the rail. These are the three criteria based on which we change the rails."

4.22 Derailments can occur due to a variety of reasons, but the overriding reason can be attributable to improper/poor maintenance of tracks. To a

query on the percentage of train accidents that can be attributed to tracks, the Ministry has provided the following data related to the last 5 years:

Year	No. of Consequential Train Accidents	Consequential Train Accidents due to Track defects	Percentage
2008-09	177	22	12.43%
2009-10	165	13	7.87%
2010-11	141	10	7.09%
2011-12	131	27	20.61%
2012-13	121	22	18.18%

4.23 Further, the allocation and utilization figures and the physical targets vis-a-vis actual achievement are given in the table below:

Year	Budget Allocation (Gross)	Expenditure incurred (Gross)	Target	Achievement
	(figures in crores of Rs.)		(Figures in Complete Track Renewal Units)	
2007-08	4395	4479	3789	4002
2008-09	4700	5249	3750	3841
2009-10	5135	4106	3500	3840
2010-11	5000	4985	3150	3465
2011-12	4964	5286	3000	3300

4.24 The Railways have outlined the measures they are taking to reduce derailments; these include:

- Upgradation of Track Structure consisting of Pre-Stressed Concrete (PSC) sleepers, 52 kg/60 kg, high strength (90kg/mm2 ultimate tensile strength) rails on concrete sleepers, fanshaped layout on

PSC sleepers, Steel Channel Sleepers on girder bridges adopted on most of the routes.

- Track structure is being standardized with 60 kg rails and PSC sleepers on all the Broad Gauge routes, especially on high density routes to reduce fatigue of rails under higher axle-load traffic.
- New construction and replacement is done with PSC sleepers only.
- Long rail panels of 260 Meters/130 Meters length are being manufactured at the steel plants to minimize number of welded joints.
- Reduction in Thermit welded joints on rails, use of SPURT Cars for Rail flaw detection.
- All rails and welds are ultrasonically tested as per laid down periodicity.
- Progressively shifting to flash butt welding which is superior in quality compared to Alumino Thermit (AT) welding.
- Progressive use of modern track maintenance machines viz. Tie Tamping, Ballast Cleaning Machines, Track Recording Cars, Digital Ultrasonic Flaw Detectors, Self Propelled Ultrasonic Rail Testing Cars, etc.
- Complete mechanization is proposed to be implemented by 2020.
- Two Rail Grinding Machines are being procured. Rail Grinding and rail lubrication for enhanced rail life and reliability have been recently introduced.
- Electronic monitoring of track geometry is carried out to detect defects and plan maintenance.
- Modern Bridge inspection techniques for determining health of the bridges.
- Introduction of Wheel Impact Load Detector (WILD)
- Regular patrolling of railway tracks at vulnerable locations, including night patrolling and intensifying patrolling during foggy weather.
- To minimize effects of accidents, coaches with Centre Buffer Couplers are being manufactured with anti-climbing features.

4.25 The Ministry further elaborated on the Flash-Butt technology. In this method, heat is generated by electric resistance method. The ends of the two rails to be welded are firmly clamped into the jaws of the welding machine. One of the jaws of the machine is stationary, whereas, the other one is movable and as such the gap between the two rail ends can be adjusted. The rail ends are moved automatically to and fro by the machine till the temperature rises to a fusion limit in the range of 1000 to 1500^0C. At this juncture, the rail ends are pressed together with an upset pressure. Final flashing takes place joining the two rails together.

4.26 Main features of Flash Butt Welding Technology are as under:

1. High quality welding with shorter burn off lengths.
2. Less time required for welding.
3. Reduction of preparatory works.
4. Fully automated alignment control and welding process.
5. Optimized, high wear resistant trimming cutters.

4.27 When asked whether the Flash-Butt Technology was used over the entire rail network, the Committee was informed that Flash Butt Welding is being done on zonal railways departmentally in Stationary Flash Butt Welding Plants. Mobile Flash Butt Welding Plants are also being used in different zonal railways for In-situ or stationary flash butt welding of rail joints. Zonal Railways have been instructed to use Mobile Flash Butt Welding on large scale in new construction projects and on track renewal sites. Thus flash butt welding technology is being adopted over the entire rail network.

4.28 On the system of inspection of tracks, the Ministry has informed that an elaborate system of inspections of track has been laid-down in the Indian Railways Permanent Way Manual (IRPWM) for Keymen, Gangmate, Junior Engineer (Permanent Way), Section Engineer (Permanent Way) & Assistant

Engineer. Higher officials not only conduct technical inspections but also keep check on quantity and quality of inspections conducted by their juniors. The periodicity of track inspection has been defined in the IRPWM. Track renewal is a continuous activity taken up every year on Indian Railways, as and when track becomes due for renewal on age-cum-condition basis. The criteria for track renewal have been prescribed in IRPWM. The main parameters on the basis of which rail is considered due for renewal are as under.

I. Traffic carried in terms of Gross Million Tonnes (GMT)

II. Incidence of rail fractures

III. Wear of rails

IV. Maintainability of track to prescribed standards

V. Plan based Renewals

Bridges

4.29 The Indian Railways network has over one lakh bridges and between 30-35 percent of them are over one hundred years old. Therefore, it is imperative that they have a well defined system of inspection of bridges, as any accident on bridges would be far more disastrous in terms of loss of lives and rail property. The Ministry have informed that a regular and rigorous system of inspection of railway bridges is followed on the Indian Railways. Under this system, all the bridges are thoroughly inspected once a year by designated officials. In addition, the inspecting officials also inspect the bridges during their routine inspections. The bridges are inspected visually every year. Non-destructive testing is also carried out, wherever considered necessary. Under Water inspection of those railway bridges whose sub-structure normally remains under water round the year is also carried out. Bridges are maintained through Departmental resources as well as contractual agencies. Besides routine maintenance, rehabilitation/ strengthening/ rebuilding of bridges is undertaken on the basis of their physical condition as ascertained during their regular inspections. The Chairman, Railway Board,

during the course of evidence, stated: "On approach to bridges, we have made a lot of infrastructural changes like 100 per cent joggling of the welds even though the welds may be proper but to strengthen it further, we have joggled it. The bridges themselves are being checked regularly to see if they require to go into a corrective mode, then that correction action is taken straightaway and the bridges are either replaced or attended to."

Accidents caused due to fire

4.30 Accidents in trains as a result of fire is classified in the Class-B category of accidents by the Indian Railways. The table below indicates the number of accidents that occurred due to fire incidence over the last 5 years:

Year	Fire in train
2008-09	3
2009-10	2
2010-11	2
2011-12	4
2012-13	8*

*upto March 2013

4.31 The Railways have outlined the measures they are taking to prevent incidents of fire on trains. These include:

- Indian Railways have always endeavoured to enhance fire worthiness of coaches by using fire retardant furnishing materials to mitigate effect of fire such as Compreg Board/PVC for coach flooring, laminated sheets for roof, ceiling wall and partition panelling, Rexene and cushioning material for seats and berths, FRP Windows and UIC Vestibule, etc. Specifications for such furnishing materials have been periodically reviewed to incorporate fire retardant parameters in line with UIC and other international norms. All new manufacture of coaches/periodical overhauling of existing coaches is being carried out with fire retardant

specifications of the furnishing materials wherever condition based replacements are warranted.

- With a view to improve fire safety in running trains, a pilot project for provision of Comprehensive Fire and Smoke Detection System has been taken up in one rake of Rajdhani Express on East Coast Railway. Similar automatic fire alarm system in 20 more rakes for extended field trails has also been decided.
- Guard-cum-Brake Van, AC Coaches and Pantry Cars in all trains are provided with portable fire extinguishers to cater for emergencies due to fire accidents.
- Improved materials for electrical fittings and fixtures such as MCB, light fittings, terminal boards, connectors, etc., are being used progressively.
- Detailed instructions have been issued to zonal railways for observance of safe practices in handling of pantry cars and for ensuring periodical inspection of electrical and LPG fittings in the pantry cars.
- Intensive publicity campaigns to prevent the travelling public from carrying inflammable goods are regularly undertaken.
- Two separate Fire Safety Audit Teams have been constituted recently to plan fire safety audits.

CHAPTER-V

Safety Measures on Indian Railways

The Indian Railways envisage accident prevention and mitigation directed towards continuous reduction in risk level to its customers. This is being done by adopting new technologies and improvement in the asset reliability to reduce human dependence. One major effort is aimed at progressively achieving reduction of accidents which are attributable to human failure. Some of the new technologies being introduced are outlined below:

Anti-Collision Device (ACD)

5.2 The ACD was developed by the Konkan Railway Corporation Limited (KRCL), a PSU of the Indian Railways. This initiative was taken as an indigenous R&D project after the serious accident at Gaisal, Northeast Frontier Railway on 02.08.1999.

5.3 The Anti-Collision Device was taken up as a pilot project on single/double line non-electrified Broad Gauge section and was first introduced on the Northeast Frontier Railway (NFR) in Katihar-New Jalpaiguri-Guwahati-Lumding-Tinsukia-Dibrugarh-Ledo route in June 2007 covering 1736 Route KMs. Based on the experience of the NFR, to improve reliability and dependability of ACDs and to test its functioning on multiple lines as well as electrified routes, the specifications and design configuration were revised and the system as evolved was tried on electrified multiple lines, automatic signalling section of the Southern Railway in 2010-2011. Work has already been sanctioned on 1600 routes kms on the Southern, South Central and South Western Railway. Further, work has also been sanctioned on 5160 route kms on four more zones, i.e., East Central Railway, East Coast Railways, Eastern Railways and South Eastern Railway in 2011-12.

5.4 The main operational difficulties noticed during the pilot project included operational & technical problems like large number of unwarranted brakings, requirement of large number of repeaters prone to failures, problem

of fouling protection, collision like situations due to failure of communication, generation of wrong messages/junk data, etc., that have been experienced in Southern Railway trials. However, KRCL has developed an improved ACD version 1.1.2 for which provisional clearance has been issued by RDSO for initial deployment limited to the Tinsukia Division. KRCL was expected to complete deployment of ACD Ver 1.1.2 in Tinsukia Division by 31.07.13. Further clearance for ACD Ver 1.1.2 for deployment on other Divisions of NFR shall be subject to satisfactory performance of the system in the Tinsukia Division.

5.5 When asked whether there was any possibility of the ACD being used over the entire rail network, the Ministry has stated that currently it is in use on Northeast Frontier Railway (NFR) where it is in service trials since 2006. It will be possible to proliferate this system on complicated and High Density Routes (HDN) on other Zonal Railways after the operational & technical issues are resolved comprehensively by KRCL.

Train Protection Warning System (TPWS)

5.6 The Train Protection Warning System (TPWS) based on international safety standards eliminates accidents caused by human error like Signal Passing at Danger and over speeding. The main features of the TPWS are:

a. Prevent Signal Passing at Danger
b. Speed Regulation
c. Enforce Permanent Speed restrictions
d. Provide in-cab signalling

5.7 The TPWS is currently being implemented as a pilot project in two sections. The first pilot project of TPWS was commissioned in May 2008 on the Chennai-Gummidipundi Suburban Section of Southern Railway (50 RKms). For the second pilot project on the non-suburban section on Delhi-Agra section (200 RKms) on Northern / North Central Railway, commercial trials in nominated trains are in progress.

5.8 On the issue of operation and technical improvements that were carried out during the execution of the pilot projects, the Ministry has indicated that it had taken the following measures:

(a) Use of shield twisted pair (STP) cable to eliminate Electro Magnetic Induction (EMI) interference.

(b) Power quality issues have been resolved by (i) Provision of power supply filter for DMI to avoid blanking; (ii) Line side Electronic Unit (LEU) power supply backup with UPS; & (iii) Condenser banks provision for LEU power supply.

(c) On Board interface issues have been resolved by (i) Removal of antenna protection plates that were causing reflections & (ii) Modification of Train Interface Unit (TIU) software.

(d) Environmental issues have been resolved by modifying location box design with provision of dual metal wall for air cooling and ventilation

(e) Training inputs have been given to Loco pilots.

5.9 To a query on the quantum of funds required to finance the TPWS, the Ministry has informed that the TPWS has been provided on NR & NCR. TPWS works have been sanctioned at a cost of Rs.1768 crore covering 3397 Route Kilometers over 8 Zonal Railways, viz. Central, Eastern, Northern, North Central, Southern, South Eastern, South Central and Western Railways covering Automatic Block Signalling (ABS) sections of the Indian Railways. In the first phase, EMUs, MEMUs and locomotives running in automatic signalling sections are proposed to be equipped with TPWS (ETCS Level 1) covering 1600 Kms on Eastern, South Eastern, & North Central Railways. In the next phase, balance sanctioned works of TPWS shall be taken up. TPWS is also under commissioning on the Metro Railway, Kolkata. Till date, approx. Rs. 116

crore have been utilised for TPWS projects. The outlay for the current year for TPWS works is approx. Rs. 77 crore.

Train Collision Avoidance System (TCAS)

5.10 This system was initiated by the Indian Railways based upon the experience gained from the ACD and TPWS systems. According to the Railway Board, TCAS shall be a fusion of functionalities of TPWS and ACD and shall prevent Signal Passing at Danger (SPAD) and collisions. The TCAS has the following features:

i. It is fusion of train collision and automatic train protection (ATP) functionality.
ii. System is also interfaced with Signalling system to provide feature of prevention of SPAD.
iii. Displays aspect of Signal on the route in the Locomotive along with speed control functionality.
iv. Facility of Manual SOS both from Loco and Station.
v. System presently developed is suitable for Absolute Block System.
vi. Final system shall be fail safe and validated to SIL-4.

5.11 After success of field concept trials, extended field trials on 200 Kms for safety validation and assessment of operational performance over different rolling stock and under various traffic conditions over Absolute Block System working on South Central Railway shall now be taken up by RDSO.

5.12 To a query on whether the TCAS would be rolled out across the Indian Railways, the Ministry has stated that based on the successful demonstration of Proof of Concept trial of the TCAS technology, extended trials are now planned to be conducted on 200 Kms section of South Central Railway by RDSO. After safety assessment, validation and conclusion of extended field trials and based on results of these trials, further deployment on Indian Railways will be considered. After extensive field trials and safety assessment are carried out, final Indian product for proliferation over entire IR network is

expected to be available for Absolute Block Signalling System by December 2014.

5.13 In respect of funding of the TCAS, it was stated by the Ministry that for extending trial of TCAS on 200 Kms section, work has been sanctioned at a cost of Rs.20 crore and funds to the tune of Rs.6 crore has been allocated during the current year 2013-14.

Vigilance Control Device (VCD)

5.14 The Vigilance Control Device (VCD) is a device provided on locomotives which monitors the alertness of the drivers through all normal actions performed by them while driving, such as use of throttle handle, braking horn, etc. If the driver performs no action for a certain time interval (60 seconds), he gets audio-visual indications, and if still he does not react, emergency brakes get applied automatically. This device consists of small LCD display, LED indicators, buzzer for giving event based real time arnings, indications and messages. 99% of Electric Locomotives and 98% of Diesel Locomotives are equipped with VCDs.

5.15 Regarding the funding pattern, the Ministry has informed that for provision of VCDs on all electric and diesel locos, funds of Rs 39.73 crore and Rs. 75.33 crore were provided during the last 3 years. All funds have been utilized except for Rs. 2.0 crore for electric locos and Rs. 1.0 crore for diesel locos required for this year.

SIGNAL PASSING AT DANGER

5.16 Signal passing at danger by loco pilots is one of the areas of concern as this directly involves human failure.

5.17 When questioned about the working hours of the loco pilots, the Ministry has submitted that the working hours and period of rest of Railway

employees, including loco pilots, are governed by provisions contained in the Railways Act, 1989 and the Railway Servants (Hours of Work & Period of Rest) Rules, 2005.

5.18 Loco Pilots on Railways are classified as 'Continuous' and are statutorily required to work for 54 hours a week on an average in a two-weekly period of 14 days. But the rostered hours of loco pilots have been fixed at 104 hours in a two-weekly period of 14 days. Presently, the duty hours of loco pilots are regulated in accordance with guidelines given by CAT/ Ernakulam and statutory provision of the Railways Act, 1989. Due to the very nature of their duties and keeping in view round-the-clock operation of the Railways, loco pilots cannot be put on daily fixed roster. As such, only in exceptional circumstances like accidents, floods, agitations and equipment failures, loco pilots may be required to work beyond rostered hours.

5.19 Section 133(2) of the Railways Act, 1989, provides that any locomotive or traffic running staff be granted, each month, a rest of at least four periods of not less than thirty consecutive hours each or at least five periods of not less than twenty-two consecutive hours each, including a full night.

PART II

RECOMMENDATIONS

The Committee note that the Railways have a very comprehensive and well developed definition of the different types of accidents which have been graded according to their severity. Consequential or major accidents have been classified on the basis of loss of lives of 10 or more passengers or serious damage to Railway property of the value exceeding Rs.2 crore or interruption of rail traffic ranging from 3 to 6 hours on broad gauge routes. The Committee are of the considered view that the Railways should strictly comply with this classification to facilitate speedier investigation and consequent corrective measures, wherever required. The Committee also suggest that the Railways should review the classification, if so desired, to rationalise the categories further.

2. The Committee are, however, concerned that incidents of run over of passengers/pedestrians by trains are not accounted for as accidents under the Railway classification scheme. They feel that there is a lack of adequate deterrence insofar as pedestrians and vehicular traffic is concerned. The Committee strongly urge the Ministry to take appropriate measures to discourage road users and vehicles from crossing railway tracks by putting up physical barriers,

considering punitive fines and giving wide publicity on the disastrous consequences and dangers of such acts.

3. The Committee understand that the Railways have defined the liability of the Rail Administration in the event of a consequential accident under Section 124 of the Railway Act of 1989. However, the Committee note that the award of compensation to victims are dependent on the decree awarded by the Railway Claims Tribunal, the formalized process of which has no fixed time frame. The Committee take strong exception to this and recommend that in the case of accidents accompanied by loss of life, limb or livelihood, the Railways should dispose of cases in the shortest possible time so that compensation is not denied or delayed when most needed. The Committee wish to remind the Ministry that when the general public travels on trains, the Railways have a moral responsibility to transport them safely to their destinations. Further, the Committee find that there is no policy to provide employment to the dependents of the deceased in train accidents. The Committee find it distressing that the Ministry take the view that this is done only in those cases where the Minister of Railways makes an announcement. This position is certainly not desirable, since the Committee feel that there has to be a clear and consistent policy in this regard. Though it is understandable that it may not be feasible to provide employment to all families affected by train accidents, yet the Committee urge

the Ministry to examine compassionately and in a humane manner those cases where the head of the family/sole earning member has lost his/her life, subject to laid down guidelines. The Committee also recommend that investigation into accidents should be expeditious and time-bound and compensation issued to the victims' families without inordinate delay. Where action is to be taken against erring officials or in the case of follow up action for remedial measures, these too should not be kept pending.

4. The Committee note that the Ministry has utilized 97.7 per cent of Rs.16694.66 crore, i.e, Rs.16318 crore, allocated under the Special Railway Safety Fund (SRSF). Since the mandate of the SRSF was to wipe out the arrears in renewal of over-aged assets within a fixed time, close to cent percent utilization of funds points to its purposive implementation. The Committee further note that the renewal of tracks, bridges, signalling gears, rolling stock, etc., carried out have shown very positive results as is evident from the reduction of consequential train accidents from 415 in 2001-02 to 194 in 2007-08 and 121 in 2012-13. Similarly, accident per million kilometre has come down from 0.55 in 2001-02 to 0.22 in 2007-08 and eventually to .13 per million kms in 2012-13. The Committee are of the opinion that the Railways should now move to the next level of safety. For this purpose, the Ministry may consider requesting the Government to provide another fund on similar lines

to enhance the safety index of the Railways. The Committee would also like to recommend that the Railways should further strive to generate investible surplus from within its own resources to contribute towards the safety fund.

5. The Committee note with concern that there was lack of utilization of the allocated funds in the safety category during the last two financial years, i.e., 2011-12 and 2012-13 where there was shortfall in utilization. The Committee fail to understand how the Railways could have ended up with unutilized funds in such a critical category as safety. This reflects very poorly on the Railways as regards safety which involves the lives of millions of passengers who avail of the Railway services. The Committee forcefully recommend that the Railways should fully utilize the funds meant for safety so that accidents/untoward incidents are avoided.

6. The Committee are extremely distressed to note that more than fifty per cent of all accidents across the Indian Railways occur at level crossings, both manned and unmanned. The Committee are quite critical of the premise of the Railways that the main factor responsible for the high rate of accidents at level crossings is as a result of the negligence of road users. The Committee are equally critical of the fact that of the total 31254 level crossings across India, 12582 level crossings remain unmanned even today which

comes to about 40%. This is in spite of the fact that the Railways have committed in their 'Vision 2020' document to eliminate all unmanned level crossings. The Committee feel that the Railways is not addressing this serious issue with the desired purposiveness as is seen from the fact that the targets for elimination of unmanned level crossings have never been achieved in the last five years. It is even more distressing that the progress of manning of unmanned level crossings has been woefully inadequate, with only 2310 of the 5351 level crossings identified having been actually manned. The Committee also find with consternation that funds meant for road related safety works have consistently been underutilized during the last five years – at times to the tune of less than 40 per cent utilization. The Committee take a very serious view of this apathetic attitude of the Railways, especially their stand that the onus of safety at level crossings is on the road user. The Committee wish to remind the Railways of their social and moral responsibility towards the travelling public as also the road users and urge them to take proactive measures to put an end to accidents at level crossings. While noting that the task of elimination of level crossings is gigantic, the Committee reiterate their position that the Ministry should urgently take measures to discourage people/vehicles from using level crossings rashly.

The Committee understand that the alternatives to level crossings are grade separators, i.e., ROBs/RUBs. They are, however,

greatly concerned that there has been very tardy progress in respect of construction of ROBs/RUBs during the last five years. The Committee, in several meetings, have emphasised the need for speedy and time-bound completion of work on ROBs/RUBs so that accidents and loss of life at unmanned level crossings could be eliminated. However, not much has been done by the Railways in this regard. It is pertinent to mention again that utilization has fallen short of allocation by up to forty per cent in all years from 2008-09 to 2012-13 which is reflective of the lackadaisical approach of the Railways to a very serious safety issue. The Committee are not convinced by the reasons forwarded by the Ministry for under-achievement of targets such as late sanction of corresponding work in the State Budget, inadequate fund allocation by the State Government, non-availability of encumbrance-free land, etc. The Committee are of the view that the Ministry should give focused attention towards resolving these problems and take expeditious measures to achieve the set targets and achieve optimum utilization of allocated funds.

7. The Committee further observe that requisite manpower, fully equipped and adequately trained, is a prerequisite for the safety of the travelling public. However, the Committee are surprised to note that currently there exists 5209 vacancies in the posts of gateman or staff manning level crossings. The Committee observe that such a

scenario is not at all desirable or satisfactory and recommend that recruitment and deployment of these personnel should be done with utmost urgency. The Committee would like to be kept apprised of the progress in this regard.

8. The Committee note that the Railways have initiated the project of Train Actuated Warning Device (TAWD) which gives audio-visual warning to road users about an approaching train. The Committee further note that there were certain lacune detected in this system which are being investigated and corrective action being taken by the RDSO. The Committee call upon the Railways to hasten the deployment of TAWD so that accidents/casualties at level crossings can be avoided/lowered. The Committee would like to be kept apprised of the progress in this regard.

9. The Committee find that the Anti-Collision Device (ACD) was developed by the Konkan Railway Corporation Limited (KRCL) to prevent collision like situation of trains. It was taken up as a pilot project on the North East Frontier Railway (NFR) in June 2007 covering 1736 Route Kilometers. Though some operational difficulties were noticed in the pilot project, the Ministry is actively trying to resolve these issues. Considering that several years have gone by in various trials, the Committee urge the Ministry to take appropriate steps to resolve the operational difficulties so that the

benefit of this safety measure can be made available on the entire rail network. The Committee would like to be kept apprised of the position in this regard and urge that all help should be rendered to KRCL for glitch-free installation of ACD in Indian Railways.

10. The Committee have observed that the Train Collision Avoidance System (TCAS) was initiated by the Indian Railways based on the experience gained from the ACD and Train Protection Warning System (TPWS). Currently, it is under trial over 200 kms for safety validation and assessment of operational performance over different rolling stock and under various traffic conditions. However, as in the case of the ACD, trial has been going on for several years. The Committee would like to state that the Railways should work towards making it available on the entire rail network by December 2014 and ensure that the deadline is met. The Vigilance Control Device (VCD) too should be equipped in all diesel and electric locomotives.

11. Insofar as derailment is concerned, the Committee note with concern that poor maintenance of tracks is the major cause of such derailment. The Committee, however, find that the Railways are making strenuous efforts to improve the condition of tracks. In fact, there has been optimum utilization of the allocated funds and achievement of targets has been satisfactory. The Ministry is also

taking proactive steps, including introduction of technological innovations to improve tracks. Further, the Committee note that the Railways have a well defined inspection mechanism to ensure rail-worthiness of tracks.

12. The Committee are of the opinion that 'Signal Passing at Danger' is a major cause of concern as it points to human failure. Therefore, the early introduction of the Train Protection Warning System which seeks to eliminate accidents caused due to human error is certainly very much needed. The Committee, while appreciating this initiative by the Ministry, urge them to proactively eliminate all bottlenecks in its implementation all across the railway network so that the added benefits can accrue to both the Railways and the travelling public.

13. With over one lakh bridges, out of which 30-35 per cent being hundred years old, the Committee feel that the Railways should stringently monitor their carrying capability and special emphasis must be laid on their proper maintenance. Inspection procedures must be strictly complied with, and appropriate action taken whenever required. The Committee would appreciate if the Railways could initiate a comprehensive survey of all bridges on its network with focused attention on the more than hundred- year-old ones, so

that any safety issue could be accordingly dealt with and where required rehabilitation/rebuilding could be effected.

14. Another area of concern for the Committee is that of accidents due to fire which have been classified as Class B Category accidents by the Railways. Accidents occurring as a result of fire have a very high casualty rate. The Committee, while taking note of the measures introduced by the Railways to prevent incidents of fire on train, urge the Ministry to take steps to ensure that inflammable/combustible material are not carried on board through a system of rigorous security checking at entry points at stations. Further, trains originating at such places where combustible/inflammable materials are manufactured (such as crackers) should be more thoroughly and meticulously checked for prevention of carriage of such materials. There should be very stringent checks during festival seasons in different parts of the country. The Committee also urge the Ministry to conduct awareness campaign regularly among the travelling public of the dangers of carrying such materials on board so that there is self-deterrence on the part of the passengers. At the same time, the Railways should also address other factors responsible for fire incidents in the trains.

15. The Committee wish to reiterate that technology upgradation should be a consistent endeavour of the Railways. Technological advancements can go a long way in reducing the risk of accidents. The Railways should focus on increasing efforts towards this end and at the same time learn from the best practices prevalent in other countries. Filling up of vacancies, skill development of personnel, and regular monitoring of their health parameters should also be a top priority.

16. The Committee would also like to emphasize that the usefulness of any project, however well intentioned it be, will be lost if there are inordinate delays in its implementation. As such, the Committee recommend that the Ministry should take corrective steps to ensure that the deadlines of all projects should be met and that there are no spill-overs.

NEW DELHI;
17 December, 2013
26 Agrahayana, 1935

T.R. BAALU
Chairman,
Standing Committee on Railways

ANNEXURE-I

Detailed classification of Accidents

Class 'A' – Collisions

A-1 Collision involving a train carrying passengers, resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property of the value exceeding Rs.2 Crore and/or (iii) interruption of any important through line of communication for at least 24 hours.

A-2 Collision involving a train NOT carrying passengers resulting (i) in loss of human life and/or grievous hurt and/or (ii) damage to Railway property of the value exceeding Rs.2 Crore and/or (iii) interruption of any important through line of communication for at least 24 hours.

A-3 Collision involving a train carrying passengers, not falling under A-1 above.

A-4 Collision involving a train NOT carrying passengers not falling under A-2 above.

A-5 Other collision, i.e. collisions occurring in shunting, marshalling yards, loco yards and siding etc. but not involving a train.

Class 'B' – Fire in trains

B-1 Fire in a train carrying passengers resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property of the value exceeding Rs. 2 Crore and/or (iii) interruption of any important through line of communication for at least 24 hours.

B-2 Fire in a train NOT carrying passengers resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property of the value exceeding Rs. 2 Crore and/or (iii) interruption of any important through line of communication for at least 24 hours.

B-3 Fire in a train carrying passengers not falling under B-1 above but (i) loss to Railway property is Rs.50,000 or above and/or (ii) interruption to traffic is more than the threshold value and/or (iii) resulting into detachment of coaching stock/stocks from the train.

B-4 Fire in a train NOT carrying passengers and not falling under B-2 above but (i) loss to Railway property is Rs.50,000 or above and/or (ii)

interruption to traffic is more than the threshold value and/or (iii) resulting into detachment of goods stock/stocks from the train.

B-5 Fire in a train carrying passengers not falling under B-1 or B-3 above.

B-6 Fire in a train NOT carrying passengers and not falling under B-2 or B-4 above.

B-7 Fire occurring in shunting, marshalling yards, loco yards and siding etc. involving rolling stock but not involving a train.

NOTE :

In case of an inquiry by a committee into a fire accident in Railway Premises or in a train leading to damage to Railway property and/or booked consignments, a representative of the Railway Protection Force should also be included as a member of the Committee.

Class 'C' – Train running into road traffic, and/or traffic running into trains, at level crossings.

C-1 Trains carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property and/or (iii) interruption to traffic is more than the threshold value.

C-2 Trains NOT carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property and/or (iii) interruption to traffic is more than the threshold value.

C-3 Trains carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property and/or (iii) interruption to traffic is more than the threshold value.

C-4 Trains NOT carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property or/and (iii) interruption to traffic is more than the threshold value.

C-5 Trains carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings but not falling under C-1.

C-6 Trains NOT carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings but not falling under C-2.

C-7 Trains carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings but not falling under C-3.

C-8 Trains NOT carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings but not falling under C-4.

C-9 Shunting engine with or without vehicles or loose vehicles running into road traffic and/or road traffic running into shunting engine with or without, vehicles or loose vehicles, at level crossings.

NOTE : If a road vehicle is not capable of being physically cleared off the track promptly by single person operating it, it should be termed as road traffic for the purpose of classifying such an accident as a train accident, irrespective of its mode of traction.

Class 'D' – Derailments

D-1 Derailment of a train carrying passengers resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property of the value exceeding Rs.20 million and/or (iii) interruption of any important through line of communication for at least 24 hours.

D-2 Derailment of a train NOT carrying passengers resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property of the value exceeding Rs.20 million and/or (iii) interruption of any important through line of communication for at least 24 hours.

D-3 Derailment of a train carrying passengers, not falling under D-1 above.

D-4 Derailment of a train NOT carrying passengers not falling under D-2 above but loss to Railway property and/or interruption to traffic is more than the threshold value.

D-5 Derailment of a train NOT carrying passengers not falling either under D-2 or D-4 above.

D-6 Other derailments, i.e. derailments occurring in shunting, marshalling yards, loco yards and siding etc. but not involving a train.

Class 'E' – Other Train Accident

E-1 Train running over or against any obstruction including fixed structure other than included under class "C" resulting in (i) loss of human life and/or grievous hurt and/or (ii) damage to Railway property and/or (iii) interruption to traffic is more than the threshold value.

E-2 Trains running into any obstruction including fixed structure but not covered up under Class 'C' or 'E-1'.

Annexure-II

DETAILS OF MAJOR ACCIDENTS ATTENDED WITH DEATH OF 10 OR MORE PERSONS DURING 2007-08 TO 2012-13

1. Dashing of one Mini Bus with Train No. 156 Up Chengalpattu – Arakkonam Passenger at Unmanned Level Crossing No. 36-C between Kanchipuram – Tirumalpur stations on Chengalpattu – Arakkonam section of Chennai Division of Southern Railway on 16.04.2007.

(i) **Brief Particulars**: On 16.04.2007 at 11.30 hrs., while the Train No. 156 (Chengalpattu – Arrakkonam) Passenger was on run between Kanchipuram and Tirumalpur stations of Chennai Division of Southern Railway, one mini bus dashed against train engine at Unmanned Level Crossing No. 36-C. TVU at the UMLC was 2103; road signs, whistle boards, speed breakers, levelled surface were provided and visibility was clear.

(ii) **Casualty**: Died -11; Injured -11 (Grievous -11, Simple-0) - all occupants of the Mini Bus.

(iii) **Level of Inquiry**: Junior Administrative Grade level Departmental inquiry was conducted

(iv) **Cause of the Accident**: Negligence of Road Vehicle Users

(v) **Responsibility**: Road vehicle users

(vi) **Penalty imposed**: Nil

2. Dashing of one Mini Bus with Train No. 4629 Up Ludhiana – Firozpur Express at Manned Level Crossing Gate No. 40-C between Jagraon and Ajitwal stations on Ludhiana – Firozepur section of Firozepur Division of Northern Railway on 14.12.2007.

(i) **Brief Particulars**: On 14.12.2007 at 08.23 hrs., while the Train No. 4629 Up Ludhiana – Firozenpur Satlaj Express was on run between Jagraon and Ajitwal Stations on Ludhiana- Firzepur section of Firozpur Division of Northern Railway, one mini bus dashed against the train engine at Manned Level Crossing No. C – 40. This was an Interlocked Manned Engineering gate and the normal position of the gate was 'Closed to Road Traffic'.

(ii) **Casualty**: Died -16, Injured -14 (Grievous -8, Simple -6; All occupants of the Mini Bus)

(iii) **Level of Inquiry**: Commission of Railway Safety, Northern Circle

(iv) **Cause of the Accident**: As per findings of the CRS, the Gateman on duty opened the level crossing gate without taking permission from Assistant Station Master/Ajitwal with whom the level crossing gate was connected and also did not provide alighted hand signal lamp displaying the red signal since there was heavy fog. The loco pilot of the train also did not reduce the speed of the train despite their being heavy fog and the visibility being very poor. He or his Assistant Loco Pilot also did not blow the horn continuously from the whistle board till the level crossing gate as they failed to see the whistle board due to dense fog and high speed of the train.

(v) **Responsibility**: Gateman on duty at the manned level crossing, loco pilot and Assistant Loco Pilot of 4629, Sutlej Express have been held primarily.responsible. No one has been held secondarily responsible

(vi) **Penalty imposed**: Gateman - Dismissed from service; CRS findings that LP and ALP were held as primarily responsible, was not accepted by the Board.

3. Incident of fire in Train No. 2738 Dn Gautami Express between Kesamudram – Tadlapusalapalli sations on Kazipet – Vijayawada section of Secunderabad Division of South Central Railway on 01.08.2008.

(i) **Brief Particulars**: On 01.08.2008 at 01.02 hrs., while the Train No. 2738, Gautami Express was on run between K Kesamudram – Tadlapusalapalli sations on Kazipet – Vijayawada section of Secunderabad Division of South Central Railway, fire broke out in one sleeper class coach (S-10) and then further spread to adjoining coaches.

(ii) **Casualty**: Died -31, Injured – 11 (Grievous -1, Simple -10)

(iii) **Level of Inquiry**: Commission of Railway Safety/South Central Circle

(iv) **Cause of the Accident**: As per the findings of the Commissioner of Railway Safety (CRS), South Central Circle, the accident was caused due to some unidentified highly combustible substance (in liquid or solid form) present in the S-10 coach which was kept their by some unidentified person or persons while the train was on run at a speed of 75 kmph and fire appeared to have originated from the floor level. The accident

accordingly falls under the category of 'Failure of persons/person other than railway staff'

(v) **Responsibility**: No railway staff has been held responsible.

(vi) **Penalty imposed**: Nil

4. **Dashing of a truck with Train No. 112 Dn Kanpur – Allahabad Passenger at Manned Level Crossing Gate No. 44-A after breaking the safety chain in Unchahar Yard on Rai Bareli – Allahabad section of Lucknow Division of Northern Railway on 25.01.2009.**

(i) **Brief Particulars**: On 25.01.2009 at 07.45 hrs., while the Train No. 112 Dn Kanpur Allahabad Passenger was approaching Unchahar station on Rai Bareli - Allahabad Section of Lucknow Division of Northern Railway, one truck entered into Manned Level Crossing Gate No. 44 A after breaking the safety chain and dashed against the train engine. Due to the impact of dashing, the truck fell on a nearby standing tractor trolley standing on the opposite direction resulting into loss of lives of the occupants of tractor trolley.

(ii) **Casualty**: Died – 12, Injured – 43

(iii) **Level of Inquiry**: Junior Administrative Grade level Departmental Inquiry was conducted.

(iv) **Cause of the Accident**: Station Master granted line clear to the train before ensuring closure of the gate.

(v) **Responsibility**: ASM/Unchahar Station, Loco Pilot of the Train No.112 Passenger, Gateman of the Manned Level Crossing Gate and Sr Section Engineer (Engineering) and Sr. Section Engineer (Signal) have been held primarily responsible.

(vi) **Penalty imposed**: ASM/Unchahar station – Reduced to lower stage with loss of seniority; LP – Reverted to Shunter's post; Gateman – Withholding of increment for three years; SSE/Engg.; Withholding of Pass/PTO; SSE/Sig. – Withholding of increment for one year.

5. **Dashing of a Bolero Jeep with Train No. 2894 Up Express at Unmanned Level Crossing No. JT-49 between Barapalli and Baragarh Road stations on Jharsuguda – Balangir section of Sambalpur Division of East Coast Railway on 22.02.2009.**

(i) **Brief Particulars**: On 22.02.2009 at 15.55 hrs., while the Train No. 2894 Up Express was on run between Barapalli and Baragarh Road stations on Jharsuguda – Balangir section of Sambalpur Division of East Coast Railway, one Bolero Jeep dashed against train engine at UMLC No. JT – 49. TVU at the UMLC was 1357 (September, 2007); road signs, speed breakers, whistle board and CC Blocks at the crossings were provided and the visibility was clear.

(ii) **Casualty**: Died -15; Injured -1 (Grievous -1, Simple – Nil; All occupants of the road vehicle)

(iii) **Level of Inquiry**: Junior Administrative Grade Level Departmental Inquiry.

(iv) **Cause of the Accident**: Negligence of Road Vehicle Users.

(v) **Responsibility**: Failure of other than Railway Staff.

(vi) **Penalty imposed**: Nil.

6. Dashing of a Bus with Train No. 134 Up Tanakpur – Kasganj Passenger at Unmanned Level Crossing No. 271-C between Ghatpuri and Badaun stations on Bareli –Kasganj section of Izzatnagar Division of North Eastern Railway on 28.02.2009.

(i) **Brief Particulars**: On 28.02.2009 at 15.50 hrs., while the Train No. 134 Up_Tanakpur – Kasganj Passenger was on run between Ghatpuri and Badaun stations on Bareli –Kasganj section of Izzatnagar Division of North Eastern Railway, one bus dashed against Train engine at Unmanned Level Crossing No. 271-C. TVU at the UMLC was 954 (April, 2007); road signs, speed breakers, whistle board and Pucca road surface at the level crossing were provided and the visibility was clear.

(ii) **Casualty**: Died – 11, Injured – 17 (Grievous -5, Simple -12; All occupants of the bus)

(iii) **Level of Inquiry**: Junior Administrative Grade level Departmental Inquiry

(iv) **Cause of the Accident**: Negligence of Road Vehicle Users

(v) **Responsibility**: Failure of other than Railway Staff

(vi) **Penalty imposed**: Nil

7. **Rear-end collision of Train No. 2779 Dn Goa Express with Train No. 2964 Dn Mewar Express between Mathura and Vrindavan Road Stations on Mathura - Palwal section of Agra Division of North Central Railway on 21.10.2009.**

(i) **Brief Particulars**: On 21.10.2009 at 04:55 hrs., while the Train No. 2964 Mewar Express was standing between Mathura and Vrindavan Road Stations on Mathura - Palwal section of Agra Division of North Central Railway due to Alarm Chain Pulling, 2779 Goa Express collided with it in the rear resulting into loss of lives of 23 passengers and severe damage to the SLR of 2964 Mewar Express.

(ii) **Casualty**: Died -23, Injured – 21 (Grievous – 16, Simple – 5)

(iii) **Level of Inquiry**: Commission of Railway Safety/North Eastern Circle

(iv) **Cause of the Accident**: As per the findings of CRS/NE Circle, the accident occurred "as the integrity of the signalling system in the automatic signalling territory was compromised due to manual intervention by Signal & Telecom Staff of Agra Division. The contributory factor in the accident was inability of the crew of Train No. 2779 Dn, Goa Express to spot Train No. 2964 Dn Mewar Express which was standing in the section due to Alarm Chain Pulling and control his train in time." Accordingly, the accident has been classified under the heading 'Failure of Railway Staff'.

(v) **Responsibility**: **Primary** - Electric Signal Maintainer, Agra Division.
Secondary – Nil
Blameworthy – LP and ALP of 2779, Goa Express, and S&T Department of Agra Division.

(vi) **Penalty imposed**: ESM/Agra Division removed from service, Withholding of increment for two years for Helper, Khalasi/Signal, Two set privilege passes stopped for LP and ALP of 2779 Goa Express.

8. **Dashing up of a truck with 441 Up Gorakhpur- Ayodhya Passenger train at Unmanned Level Crossing No. 15/C between Tikri and Nawabganj Halt stations on Mankapur- Katra section of North Eastern Railway on 01.11.2009.**

(i) **Brief Particulars**: On 01.11.2009 at 13.05 hrs., while the Train No.441 Up, Gorakhpur – Ayodhya Passenger was on run between Tikri and Nawabganj Halt stations on Mankapur- Katra section of North Eastern Railway , one truck loaded with sand dashed with the train engine at UMLC No. 15 – C. TVU at the UMLC was 1815 (June, 2003);

road signs, speed breakers, whistle board and Pucca road surface at the level crossing were provided and the visibility was clear.

(ii) **Casualty**: Died – 18 (Train Passenger – 16, Others – 2), Injured – 37 (Grievous – 21, Simple -16 (All Train Passengers)

(iii) **Level of Inquiry**: Commission of Railway Safety/North Eastern Circle,

(iv) **Cause of the Accident**: Negligence of Road Vehicle Users

(v) **Responsibility**: Road Vehicle User; No Railway Staff was found responsible

(vi) **Penalty imposed**: Nil

9. Rear-end collision of 2418 Dn Prayag Raj Express with 2556 Dn Gorakhdham Express between Bhaupur and Panki Stations of Tundla - Kanpur section of Allahabad Division of North Central Railway on 02.01.2010.

(i) **Brief Particulars**: On 02.01.2010 at 08.46 hrs., while the Train No.2418 Dn Pra with it in the rear resulting into derailment of SLR and two coaches of 2418, Prayag Raj Express and train engine of 2556 Gorakhdham Express. OHE Mast also got damaged

(ii) **Casualty**: Died -12 (Train Passengers), Injured – 48 (Grievous – 13 Simple – 35 (Train passengers)

(iii) **Level of Inquiry**: Commission of Railway Safety/North Eastern Circle

(iv) **Cause of the Accident**: As per the findings of CRS, the accident occurred due to violation of G&SR No. 9.02 - Rules for passing Automatic Signal at Danger by the crew of 2556 Dn Gorakhdham Express. The accident is accordingly classified under the heading 'Failure of Railway Staff'.

(v) **Responsibility**: **Primary** – LP, ALP & Guard of 2556 Gorakhdham Express

Secondary – Training and Monitoring officials of the above running Staff

(vi) **Penalty imposed**: LP and ALP were dismissed from service. However, ALP was reinstated as ALP at the bottom of the grade for 3 yrs with loss of seniority. Guard of 2556 was reduced from Mail/Express Guard's Grade (Rs. 9300-34800/-) to Lowest Goods Guard Grade (Rs. 5200-20200/-) for one year with cumulative effect.

10. Derailment of Train No. 2102 Up (Howrah – Lokmanya Tilak Terminus) Jnaneswari Express followed by collision with Goods Train No. Dn.NSG/PRDP between Khemasuli and Sardiha stations of Kharagpur-Tatanagar section of Kharagpur Division of South Eastern Railway on 28.05.2010.

(i) **Brief Particulars**: On 28.05.2010 at 01.17 hrs., while the Train No. 2102 Up (Howrah – Lokmanya Tilak Terminus) Jnaneswari Express was on run between Khemasuli and Sardiha stations of Kharagpur-Tatanagar section of Kharagpur Division of South Eastern Railway, its 13 coaches along with train engine derailed and 5 coaches capsized infringing the Down line. In the meantime, Goods Train No. Dn.NSG/PRDP coming from the opposite direction hit the infringed coaches as a result, train engine and six wagons of the goods train also derailed and through communication was blocked.

(ii) **Casualty**: Died – 150, Injured – 171 (Grievous -58, Simple -113)

(iii) **Level of Inquiry**: Commission of Railway Safety/South Eastern Circle, Criminal angle involved in the accident has been investigated by Central Bureau of Investigation.

(iv) **Cause of the Accident**: As per the findings of CRS, the accident was caused due to tampering of track including removal of elastic rail clips and disturbance of cross level/alignment. Accordingly, the accident is classified in the Category 'Sabotage'. CBI has also arrived at the same conclusion and also carried out arrests of the miscreants.

(v) **Responsibility**: Miscreants; No Railway Staff found responsible.

(vi) **Penalty imposed**: Nil

11. Rear-end collision of Train No. 3148 Dn New Cooch Behar – Sealdah) Uttar Banga Express with Train No. 3404 Dn (Bhagalpur – Ranchi) Vananchal Express at Sainthia station of Bardhman – Rampurhat section of Howrah Division of Eastern Railway on 19.07.2010

(i) **Brief Particulars**: On 19.07.2010 at 02.02 hrs., while the Train No. 3404 Dn (Bhagalpur – Ranchi) Vananchal Express was leaving from Platform No.4 of Sainthia Station of Howrah Division of Eastern Railway, Train No. 3148 Dn New Cooch Behar – Sealdah) Uttar Banga Express collided with it in the rear resulting into severe damage to three coaches (SLR and two General coaches) of 3404 Dn Vananchal Express.

(ii) **Casualty**: Died – 66, Injured – 90 (Grievous – 44, Simple – 46)

(iii) **Level of Inquiry**: Commission of Railway Safety/Eastern Circle

(iv) **Cause of the Accident**: As per findings of CRS in the inquiry report, the accident was caused due to (a) failure of train crew of 3148 Dn to control the train on the face of home signal at 'ON' position and overshooting it at high speed and (b) the failure of the cabin master of West Cabin of Sainthia to isolate the occupied line by setting the points.

(v) **Responsibility**: **Primary** - LP, ALP of 3148 Dn Uttarbanga Express and Cabin Master of West Cabin, Sainthia.
Secondary - Guard of 3148 Dn Uttarbanga Express

(vi) **Penalty imposed**: LP and ALP of 3148 Dn had expired in the accident, the Cabin Master was removed from service, and the Guard of 3148 Dn was reduced to four stages below in the existing Pay Band and Grade Pay for two years (non-cumulative).

12. Head-on collision between Train No. Up BCN Goods and Train No. 1125 Dn (Indore – Gwalior) Intercity Express at Badarwas Station of Guna-Gwalior section of Bhopal Division of West Central Railway on 20.09.2010.

(i) **Brief Particulars:** On 20.09.2010, at 04.45 hrs., while Train No. 1125 Dn Indore-Gwalior Intercity Express was standing on Platform No. 1 of Badarwas Station of Guna – Gwaliar Section of Bhopal Division of West Central Railway, in the meantime Up Empty BCN Goods train collided head on with the standing 1125 Dn Indore-Gwalior Intercity Express, blocking through communication.

(ii) **Casualty:** Died – 24, Injured – 36 (Grievous – 17, Simple – 19)

(iii) **Level of Inquiry**: Commission of Railway Safety/Central Circle.

(iv) **Cause of the Accident:** As per the findings of CRS/Central Circle, the accident was caused "due to passing of Up Home Signal of Badarwas station at danger by Loco Pilot and Asstt. Loco Pilot of Up BCN Empty goods train". Accordingly, the accident is classified under the category 'Failure of Railway Staff'.

(v) **Responsibility: Primary:** LP & ALP of Up BCN empty goods train
Secondary: Guard of Up BCN empty goods train, SM/Badarwas, Dy SS/Shivpuri, Section Controller/Bhopal
Blamerworthy: Loco Inspector/GWL

(vi) **Penalty imposed**: LP & ALP – Dismissed from service; Guard & Dy. SS and Section Controller– Reduction to lower stage with cumulative effect; Loco Inspector; withholding one set of Pass.

13. Dashing of a Bolero Jeep with Train No. 12570 Up Garib Rath Express at Unmanned Level Crossing No. 17-C between Madhubani and Rajnagar stations on Darbhanga – Jaynagar section of Samastipur Division of East Central Railway on 22.05.2011.

(i) **Brief Particulars**: On 22.05.2011 at 12.38 hrs., while the Train No. 12570 Garib Rath Express was on run between Madhuban and Rajnagar stations of Samastipur Division of East Central Railway, one Bolero Jeep dashed against its Engine at unmanned level crossing No.17-C.

(ii) **Casualty:** Died – 20, Injured – 6 (Grievous – 5, Simple -1)

(iii) **Level of Inquiry**: Junior Administrative Grade Level Departmental Inquiry

(iv) **Cause of the Accident**: Negligence of Road Vehicle User

(v) **Responsibility:** Failure of other than Railway Staff.

(vi) **Penalty imposed**:Nil

14. **Dashing of a Bus with Train No. 15108 Up Mathura-Chhapra Express at Unmanned Level Crossing No. 209-C between Patiali and Daryaoganj stations on Kasganj – Farrukhabad section of Izzatnagar Division of North Eastern Railway on 07.07.2011.**

(i) **Brief Particulars**: On 07.07.2011 at 01.49 hrs., while the Train No. 15108 Dn Mathura Chapra Express was on run between Patiali and Daryaoganj Stations of Izzatnagar Division of North Eastern Railway, one bus dashed against the train engine at unmanned level crossing No. 209/C. The bus got entangled with the train engine and the train engine failed.

(ii) **Casualty**: Died – 39, Injured – 32 (Grievous – 15, Simple – 17) – all occupants of the bus.

(iii) **Level of Inquiry**: Commission of Railway Safety/North Eastern Circle

(iv) **Cause of the Accident**: Negligence of Road Vehicle User

(v) **Responsibility**: Driver of bus. No Railway staff was found responsible.

(vi) **Penalty imposed**: Nil.

15. **Derailment of Train No. 12311 Up (Howrah – Delhi) Kalka Mail at Malwan station on Allahabad – Kanpur section of Allahabad Division of North Central Railway on 10.07.2011..**

(i) **Brief Particulars**: On 10.07.2011 at 12.20 hrs., while the Train No. 12311 Up Howrah-Kalka Mail was passing through Malwan station on Allahabad – Kanpur section of North Central Railway, its train engine and 15 coaches derailed blocking Up and Dn lines.

(ii) **Casualty**: Died – 71, Injured – 264 (Grievous – 91, Simple – 173)

(iii) **Level of Inquiry**: Chief Commissioner of Railway Safety

(iv) **Cause of the Accident**: As per findings of Chief Commissioner of Railway Safety, the accident was caused due to "breakage of rail across the weld between left tongue rail and lead rail". Accordingly, the accident is classified under the categoty 'Failure of equipment-Permanent way". **Cause of the accident has not been accepted by the Board.**

(v) **Responsibility**: As per CRS report: **Primary**: Welder/Fatehpur; **Secondary**: SSE(P.way)/Fatehpur; **Blameworthy**: SSE(P.way)/Fatehpur

(vi) **Penalty imposed**: Since cause of the accident has not been accepted by Zonal Railway, disciplinary proceedings could not be initiated. CCRS' Final Note received in this matter in Board's office is under examination.

16. Rear end collision of Train No. 66017 Down Chennai Beach – Vellore MEMU Passenger with Train No. 56007 Arakkonam – Katpadi Passenger on Arakkonam – Katpadi section of Chennai Division of Southern Railway on 13.09.2011.

(i) **Brief Particulars**: On 13.09.2011 at 21.23hrs., while the train No. 56007 Dn Arrakonam – Katpadi Passenger was waiting at Dn Home Signal of Chitteri station between Melpakkam and Chitteri stations of Chennai Division of Southern Railway, 66017Dn Chennai Beach – Vellore Passenger MEMU collided in the rear of the train No. 56007, resulting into derailment of two coaches (SLR-1 and GS-1) of 56007 Dn and five cars of 66017 MEMU. Both Up and Dn lines got obstructed.

(ii) **Casualty**: Died – 11 passengers including Guard of Train No. 56007 Passenger,

Injuries -89 (Grievous -23, Simple -66),

(iii) **Level of Inquiry**: Commission of Railway Safety/Southern Circle

(iv) **Cause of the Accident**: As per findings of CRS/Southern Circle, the accident was caused due to "Motorman of 66017 Chennai Beach-Vellore Cantonment MEMU train passing semi-automatic gate signal at 'danger' without stopping and then proceeding at such speed that it could not be stopped short of obstruction". This accident is classified under the category 'Failure of Railway staff'.

(v) **Responsibility**: **Primary**: Motorman of 66017 MEMU; **Secondary**: Goods Guard of 66017 for his failure in drawing the attention of motorman for exceeding the speed limits.

(vi) **Penalty imposed**: Motorman – Dismissed from service; Goods Guard – Compulsorily retired

17. Dashing of a Mini Van with Train No. 51976 Dn (Mathura – Kasganj) Passenger at Unmanned Level Crossing No. 302-C between Hathras and Mendu stations on Mathura –Kasganj section of Izzatnagar Division of North Eastern Railway on 20.03.2012.

(i) **Brief Particulars**: On 20.03.2012 at 07.23 hrs, while the Train No. 51976 Dn Mathura-Kasganj Passenger was on run between Hathras City and Kasganj stations of Izzatnagar Division of North Eastern Railway, one Mini Van dashed against its train engine at unmanned level crossing No.302-C.

(ii) **Casualty**: Died – 15, Injured – 3 (Grievous -2, Simple -1) – all occupants of the Mini Van.

(iii) **Level of Inquiry**: Junior Administrative Grad level Departmental Inquiry

(iv) **Cause of the Accident**: Negligence of Road Vehicle Users

(v) **Responsibility**: Other than Railway Staff.

(vi) **Penalty imposed**: Nil.

18. Rear-end collision of 16591 Hubli - Bangalore City Hampi Express with a stationary Goods Train at Penukonda Station of Dharmavaram - Bangalore section of Bangalore Division of South Western Railway on 22.05.2012.

(i) **Brief Particulars**: On 22.05.2012 at 3.10 hrs., while the Train No. 16591 Hampi Express was approaching Penukonda Jn. from Dharmavaram Jn., it overshot the Home Signal at Penukonda and collided in the rear of stationary MNGT 'N'Goods Train at penukonda Station. As a result, SLR of 16591 derailed mounted over its locomotive and there was also fire in the coach; another coach (third coach) also derailed.

(ii) **Casualty**: Died – 25, Injured – 54 (Grievous -14, Simple -40)

(iii) **Level of Inquiry**: Commission of Railway Safety/Southern Circle

(iv) **Cause of the Accident**: As per findings of CRS/Southern Circle, the accident was caused due to "train No.16591 Express passing the Home signal of Penukonda station at 'danger' and due to non-setting of point No. 63 on Road-2 against the line which was occupied by MNGT 'N'Goods train." This accident is classified under the category 'Failure of Railway staff'.

(v) **Responsibility**: **Primary**: LP(Mail) of 16591 Express and SM/Penukonda

Secondary: ALP of 16591 Express

(vi) **Penalty imposed**: LP, ALP & ASM removed from service.

19. Incident of fire in train No. 12622 New Delhi – Chennai Tamil Nadu Express while the train was passing through Nellore station of Vijayawada Division of South Central Railway on 30.07.2012.

(i) **Brief Particulars**: On 30.07.2012 at 04.18 hrs., while the train No. 12622 Up New Delhi – Chennai Tamil Nadu Express was passing through Nellore Station on Nellore – Gudur Section of Vijayavada Division of South Central Railway, Gateman of Level Crossing Gate No. 116 noticed fire in one coach (S-11), The Gateman immediately informed the Dy. Station Supdt./Nellore who attempted to stop the train and the train could stop only after passing the old South Cabin of Nellore.

(ii) **Casualty**: Died – 30, Injured - 28

(iii) **Level of Inquiry**: Commission of Railway Safety/South Central Circle.

(iv) **Cause of the Accident**: As per findings of CRS/South Central Circle, the accident was most probably caused "due to accidental igniting of fire crackers being carried in the coach. Accordingly, this unusual occurrence is classified under the category 'Failure of persons other than railway staff'.

(v) **Responsibility**: **Primary:** Unidentified person who either carried or left a baggage containing fire cracker material in Bay-7 of S-11coach of Tamil Nadu Express (12622 Up); **Secondary:** Nil; **Blameworthy:** Sr.TTE/Chennai/S.Rly.

(vi) **Penalty imposed**: CRS final report is under examination.

20. Dashing of a Goods Carrier Auto Rickshaw with Train No. 18105 Intercity Express at Unmanned Level Crossing No. ST-7 'C' between Sambalpur and Maneswar stations on Sambalpur – Angul section of Sambalpur Division of East Coast Railway on 24.08.2012.

(i) **Brief Particulars**: On 24.08.2012 at 08.42 hrs., while the Train No. 18105 Rourkela – Bhubneswar Intercity Express was on run between Sambalpur City-Maneswar stations of Sambalpur Division of East Coach Railway, one Goods carrier Auto-rickshaw dashed with it at unmanned level No.ST-7-C

(ii) **Casualty**: Died – 15, Injured – 5 (Grievous- 3, Simple -2) – all occupants of the Auto Rickshaw.

(iii) **Level of Inquiry**: Junior Administrative Grade level Departmental Inquiry

(iv) **Cause of the Accident**: Negligence of Road Vehicle Users.

(v) **Responsibility**: No railway staff was held responsible.

(vi) **Penalty imposed**: Nil

21. Dashing of a bus with train engine of Train No. 13019 Howrah – Kathgodam Express at Manned Level Crossing Gate No. 90-A Special between Siwan and Pachrukhi stations on Chhapra Kacheri - Gorakhpur section of Varanasi Division of North Eastern Railway on 26.09.2012.

(i) **Brief Particulars**: On 26.09.2012 at 15.05 hrs, while the Train No.13019 Howrah Kathgodam Express was on run between Siwan-Pachrukhi stations, one bus dashed against its train engine at Manned Level Crossing Gate No.90 'A Spl' resulting into derailment of train Engine. After the accident, the agitated mob put some coaches on fire.

(ii) **Casualty**: Died – 10, Injured - 8

(iii) **Level of Inquiry**: Senior Administrative Grade level Departmental Inquiry

(iv) **Cause of the Accident**: Signal Passing at Danger by the Loco Pilot of Train No. 13019 and Negligence of Station Master on duty.

(v) **Responsibility**: **Primary**: LP & ALP of Train No.13019, and ASM/N.E. Rly; **Secondary**: JE/PWay and Track Man of N.E. Railway

(vi) **Penalty imposed**: LP & ALP - reverted to lower grade; ASM – reduction to lower stage; JE/P Way & Trackman – withholding of increment; SS – censure.

*****

APPENDIX

MINUTES OF THE FOURTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (2012-13)

The Committee sat on Monday, the 7th January, 2013 from 1100 hrs. to 1245 Hrs. in Committee Room 'C', Parliament House Annexe, New Delhi.

PRESENT

SHRI T.R. BAALU - CHAIRMAN

MEMBERS

LOK SABHA

2. Shri Partap Singh Bajwa
3. Shri Ram Chandra Dome
4. Shri Anand Prakash Paranjpe
5. Shri Rudra Madhab Ray
6. Shri Magunta Sreenivasulu Reddy
7. Smt. Satabdi Roy
8. Shri Harsh Vardhan
9. Dr. Vivekanand

RAJYA SABHA

10. Shri Husain Dalwai
11. Shri Prabhat Jha
12. Shri Om Prakash Mathur
13. Dr. Barun Mukherji
14. Shri Ambeth Rajan
15. Shri Bashistha Narain Singh
16. Shri Ishwar Singh

SECRETARIAT

1. Shri K Vijayakrishnan - Joint Secretary
2. Shri Abhijit Kumar - Director

REPRESENTATIVES OF THE MINISTRY OF RAILWAYS (RAILWAY BOARD)

1.	Shri Vinay Mittal	Chairman, Railway Board & Ex.-officio Secretary to the Government of India
2.	Smt. Vijaya Kanth	Financial Commissioner, Railway Board & Ex.-officio Secretary to the Government of India
3.	Shri A.P. Mishra	Member Engineering, Railway Board & Ex.-officio Secretary to the Government of India
4.	Shri Kul Bhushan	Member Electrical, Railway Board & Ex.-officio Secretary to the Government of India
5.	Shri K.K. Srivastava	Member Traffic, Railway Board & Ex.-officio Secretary to the Government of India

2. At the outset, the Chairman welcomed the representatives of the Ministry of Railways (Railway Board) to the sitting of the Committee. Thereafter, the representatives of the Ministry briefed the Committee on the subject 'Major Railway Accidents during the last five years – Causes and Remedial Measures' which has been taken up by the Committee for examination. They also responded to the queries of the Members on the subject. During the sitting, the Members raised the issue of frequent killing of wild animals in rail accidents. The Committee then decided to take evidence of the representatives of the Ministry of Railways (Railway Board), Ministry of Environment and Forests, Principal Secretaries, Department of Forest and Environment (Governments of Odisha and West Bengal) and Chief Wildlife Wardens (Governments of Odisha and West Bengal), on the issue in their next sitting.

3. The Committee also proposed to seek approval of Hon'ble Speaker to undertake a study tour from 12 to 14 February, 2012 to Hyderabad, Mumbai and Mangalore on the subject 'Major Railway Accidents during the last five years-Causes and Remedial Measures' being examined by them.

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

The Committee then adjourned.

MINUTES OF THE TENTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (2012-13)

The Committee sat on Monday, the 20th May, 2013, at 1100 hrs. to 1200 hrs. in Committee Room 'E', Parliament House Annexe, New Delhi.

PRESENT

SHRI T.R. BAALU - CHAIRMAN

MEMBERS

LOK SABHA

2. Shri Rayapati Sambasiva Rao
3. Shri Rudra Madhab Ray
4. Shri Magunta Sreenivasulu Reddy
5. Smt. Satabdi Roy
6. Smt. Yashodhara Raje Scindia
7. Shri Lalji Tandon

RAJYA SABHA

8. Shri Om Prakash Mathur
9. Dr. Barun Mukherji
10. Shri K. Parasaran
11. Shri Ishwar Singh
12. Shri Nandi Yellaiah

SECRETARIAT

1. Shri K. Vijayakrishnan - Joint Secretary
2. Shri Abhijit Kumar - Director
3. Shri Arun K. Kaushik - Additional Director

2. At the outset, the Chairman welcomed the Chairman and other officials of the Ministry of Railways (Railway Board) to the sitting of the Committee. Thereafter, the Committee took oral evidence of the representatives of the Ministry of Railways (Railway Board) on 'Major Railway Accidents during the last five years – Causes and Remedial Measures'. The members of the Committee sought clarification relating to the subject and

the representatives of the Ministry of Railways (Railway Board) replied to the same. The evidence was concluded.

3. The Committee desired the Ministry of Railways to explore the possibility of introduction of more Double Decker AC trains in order to increase two-fold the existing passenger capacities in Indian Railways and introduction of general compartment with AC coaches at par with present facilities available on Metro Rail and recommended the same to the Ministry. The Committee then decided to issue a press release in this regard.

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

5. The witnesses, then, withdrew.

6. The Committee then discussed and proposed to undertake a study tour to Darjeeling, Kolkata, Salem Chennai and Goa from 10 to 15 May, 2013.

The Committee, then, adjourned.

MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE ON RAILWAYS (2013-14)

The Committee sat on Tuesday, the 17th December, 2013 from 1500 hrs. to 15 hrs. in Committee Room No. '62', Parliament House, New Delhi.

PRESENT

SHRI T.R. BAALU - CHAIRMAN

MEMBERS

LOK SABHA

2. Shri Partap Singh Bajwa
3. Dr. Ram Chandra Dome
4. Dr. Nirmal Khatri
5. Shri Anand Prakash Paranjpe
6. Shri Rudra Madhab Ray
7. Shri Ganesh Singh
8. Dr. Vivekanand

RAJYA SABHA

9. Shri Husain Dalwai
10. Shri K. Parasaran
11. Shri Ambeth Rajan
12. Shri Ishwar Singh

SECRETARIAT

1.	Shri K. Vijayakrishnan	-	Joint Secretary
2.	Shri Abhijit Kumar	-	Director
3.	Shri Arun K. Kaushik	-	Additional Director

2. At the outset, the Chairman welcomed the Members to the sitting of the Committee. Thereafter, the Committee took up for consideration the following draft Reports and adopted the same without any modifications:

(i) 'Major Railway Accidents during the last five years – Causes and Remedial Measures'; and

(ii) XXX XXX XXX.

3. The Committee also authorized the Chairman to finalise the Reports and present the same to Parliament.

The Committee then adjourned.