सत्यमेव जयते

GOVERNMENT OF INDIA

MINISTRY OF CIVIL AVIATION

COMMISSION OF RAILWAY SAFETY

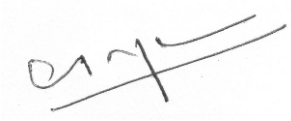
ANNUAL REPORT FOR 2015-2016

BY

CHIEF COMMISSIONER OF RAILWAY SAFETY

LUCKNOW

As enjoined by section 10 of the Railways Act, 1989 and Section 12 of Metro Railway (Operation & Maintenance) Act, 2002, the Annual Report of the Chief Commissioner of Railway safety, detailing the activities of the Commissioner of Railway safety such as opening of new lines, investigation of serious train accidents and sanction given by them and activities of Commissioner of Metro Railway Safety during the financial year 2015-2016, has been prepared and is forwarded herewith.



(S. NAYAK)

Chief Commissioner of Railway safety

PLACE : LUCKNOW

DATE : 12.01.2017

SUMMARY OF THE ACTIVITIES OF COMMISSIONERS OF RAILWAY SAFETY HIGHLIGHTS

I.	Inquiries of serious accidents	(a) Statutory inquiries conducted by commissioners	**14 Nos.**	Chapter III Para 3.3 and Appendix I
		(b) No of recommendation made arising out of (a) above	**57 Nos.**	
II.	Statutory Inspections of Lines by Commissioners before authorizing Passenger Services	(a) New Lines	**1037.503 Kms.**	Chapter II Para 2.1
		(b) Additional Lines	**747.124 Kms.**	-do-
		(c) Conversion of gauge	**1062.679 Kms.**	-do-
		(d) Deviation lines	**8.497 Kms.**	-do-
		(e) Introduction of Electric Traction	**1729.902 Kms.**	-do-
		(f) Delhi Metro Lines Corridors (Electrified double lines)	**14.482 Kms.**	-do-
		(g) Bangaluru Metro Rail Corridor	**9.854 Kms**	-do-
		(h) Rapid Metro Limited Gurgaon	**NIL**	-do-
		(i) Kolkata Metro	**NIL**	-do-
		(j) Mumbai Metro	**NIL**	-do-
		(k) Chennai Metro	**10.177 Kms**	
		(l) Hyderabad Metro	**8.1 Kms**	
		(m) Jaipur Metro	**9.63 Kms**	
III.	Sanction ccorded by commissioners	(a) Sanctioning of proposals for execution of New Minor Works.	**4342 Nos.**	Chapter II Para 2.2
		(b) Condonation of cases of infringements to Schedule of dimensions.	**19 Nos.**	Chapter II Para 2.3

	(c) Sanctioning of cases for movement of over dimensioned	**01 Nos**.	Chapter II Para 2.4
	(d) Consignments sanctioning for running of new types of Rolling stock	**113 Nos.**	Chapter II Para 2.5
IV. Proposals recommended for sanction by Central Government.	(a) Application for condonation of infringements to the Schedule of Dimensions.	**10 Nos.**	Chapter II Para 2.3
	(b) Application for the running of new types of rolling stock	**07 Nos.**	Chapter II Para 2.5
V. Inspection of Govt. Railways	Periodic inspections	**14126 Kms.**	Chapter II Para 2.6

CONTENTS

CHAPTER – I

ORGANISATION AND FUNCTIONS

1. INTRODUCTION –

In 1939, the Pacific Locomotive Committee, set up in connection with the Bihta disaster, recommended that Railway Inspectorate should be separated from the Railway Board, on the principle that those responsible for the inspection of Railways should be independent of the Authority administering the Railways, as contemplated in Section 181(3) of the Government of India Act, 1935. This recommendation was approved by the Legislative Assembly in 1939, the Council of State in 1940 and accepted by the Government. Accordingly in May 1941, Railway Inspectorate was separated from the Railway Board. Post of Chief Government Inspector of Railways, through whom Government Inspectors would report to Government, was created. Inspectorate was placed under the Department of Communication (Now it is under Ministry of Civil Aviation).

Chief Government Inspector of Railways was redesignated as Commissioner of Railway Safety and Government Inspectors of Railways, as Additional Commissioners of Railway Safety on 1.11.1961.

From June, 1979 designation of Commissioner of Railway Safety was changed to Chief Commissioner of Railway Safety (CCRS) and Additional Commissioner of Railway Safety, to Commissioner of Railway Safety (CRS).

Commissioners of Railway Safety are still recruited from amongst officers of Indian Railways, but they do not revert back to Railways and are absorbed in Inspectorate cadre.

2. ORGANISATIONAL STRUCTURE –

2.1 Chief Commissioner of Railway Safety (CCRS), at Lucknow, acts as Principal Technical Advisor to Central Government in all matters with which Commissioners are concerned. There is one Deputy Commissioner of Railway Safety (General) to assist CCRS.

CCRS Office, at Lucknow, is part of Ministry of Civil Aviation and is called Railway Safety wing. It has Sr. Private Secretary (1), Section Officer (1), Assistants (4), Personal Assistant (1), UDC (2), LDC (2) and Multi Tasking Staff.

2.2 There are 9 Commissioners of Railway Safety (CRS).

Commissioner's offices (called circle offices) have 9 to 11 office staff consisting of Sr. Private Secretary (1), Office Superintendent(1), Safety Assistant(1), UDC(1-2), LDC(2-4) and Multi Tasking Staff.

Metro Railway Safety circle offices have not been sanctioned until now. Some Commissioners have been assigned functions related to Metro Railways.

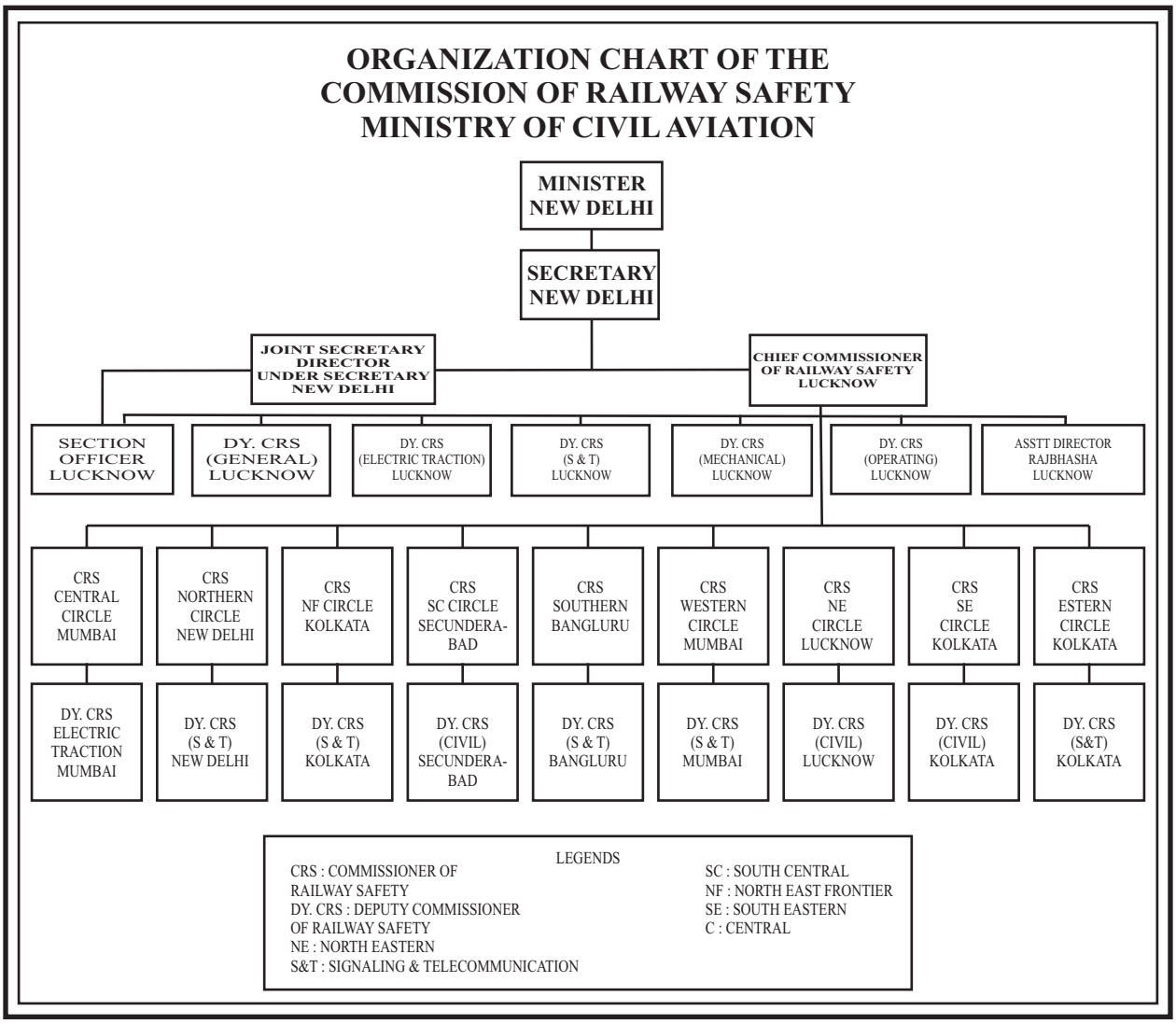
One post of Deputy Commissioner of Railway Safety is sanctioned for each circle. Dy. CRS posts in Northern Eastern Circle, South Central Circle and South Eastern Circle are for Civil Engg. discipline, Dy.CRS in Central Circle is from Electric Traction and Dy. CRS posts in Northern, Eastern, Northeast Frontier, Western and Southern Circle are from S&T discipline.

2.3 There is a technical wing consisting of 4 Dy. Commissioners of Railway Safety of various disciplines, in the headquarters at Lucknow for assisting CCRS and Commissioners as and when required. Office of technical wing has one Assistant Director (Official Language), Junior Hindi Translator(1), Technical Assistant (2) LDC(2), Stenographer(2), Staff Car Driver (1) and Multi Tasking Staff (4).

Deputy Commissioners assist Commissioners in matters related to Mechanical Engineering, Electrical Engineering, Signal & Telecommunication Engineering and Transportation.

Deputy Commissioners are not statutory authorities. Deputy Commissioners come from Railways on deputation basis and go back after completion of their deputation period.

2.4 Organizational Chart is given below:-



3. VACANCIES IN THE COMMISSION -

As on 31.3.2016, actual strength of Commissioners was seven against nine sanctioned posts. Strength of Deputy Commissioners was seven and there were seven vacancies.

4. CHANGE IN ORGANISATION -

4.1 All the posts of Dy. Commissioners (technical) were upgraded to Selection grade w.e.f.14.06.2010. Recruitment rules for Dy. CRS (technical) in selection grade were notified vide GSR No. 136 dated 29.5.2012.

5. INCUMBENCY OF OFFICERS (01.04.15 TO 31.03.16) –

5.1 Office of Chief Commissioner of Railway Safety, Lucknow

(i)	Chief Commissioner	Full Period	Shri R.K.Kardam
(ii)	Deputy Commissioner (General)	Full Period	Shri L.B. Singh

5.2 Commissioners of Railway Safety

(i)	Central Circle, Mumbai	1.04.15 to 31.10.15 1.11.15 to 31.03.16	Shri. Chetan Bakshi Vacant
(ii)	Eastern Circle, Kolkata	1.04.15 to 8.07.15 9.07.15 to 31.03.16	Vacant Shri. P.K. Acharya
(iii)	Northern Circle, New Delhi	1.04.15 to 20.10.15 21.10.15 to 31.03.16	Vacant Shri S.K.Pathak
(iv)	North Eastern Circle, Lucknow	Full Period	Shri. P.K. Bajpai
(v)	Northeast Frontier Circle, Kolkata	1.04.15 to 8.07.15 9.07.15 to 20.10.15 21.10.15 to 31.03.16	Vacant Shri. S.K. Pathak Vacant
(vi)	Southern Circle, Bangaluru	Full Period	Shri. S.K. Mittal
(vii)	South Central Circle, Secunderabad	Full Period	Shri D.K. Singh
(viii)	South Eastern Circle, Kolkata	Full Period	Shri. S. Nayak
(ix)	Western Circle, Mumbai	1.04.15 to 9.0715 10.07.15 to 31.3.16	Vacant Shri S.Chandra

5.3 Commissioners of Metro Railway Safety

(i)	Metro Railway Safety, New Delhi	1.04.15 to 20.10.15 21.10.15 to 31.03.16	Vacant Shri S.K.Pathak
(ii)	Metro Railway Safety, Bangaluru	Full Period	Shri. S.K. Mittal
(iii)	Metro Railway Safety, Chennai	Full Period	Shri S.K. Mittal
(iv)	Metro Railway Safety, Jaipur	1.04.15 to 9.0715 10.07.15 to 31.3.16	Vacant Shri S.Chandra
(v)	Metro Railway Safety, Mumbai	1.04.15 to 9.0715 10.07.15 to 31.3.16	Vacant Shri S.Chandra
(vi)	Metro Railway Safety, Hyderabad	Full Period	Shri D.K. Singh

5.4 Deputy Commissioners in Technical Wing/Lucknow

(i)	Operating	Full Period	Smt. Indu Rani Dubey
(ii)	Electric Traction	Full Period	Shri. Shalabh Tyagi
(iii)	Signal & Telecom	Full Period	Vacant
(iv)	Mechanical	Full Period	Shri. Uttam Prakash

5.5 Deputy Commissioners in Circle Offices

Deputy Commissioners (Signaling & Telecommunication)			
(i)	Eastern Circle, Kolkata	Full Period	Vacant
(ii)	Western Circle, Mumbai	Full Period	Vacant
(iii)	Northeast Frontier Circle, Kolkata	Full Period	Vacant
(iv)	Northern Circle, New Delhi	Full Period	Shri. Rajmal Khoiwal
(v)	Southern Circle, Bangaluru	Full Period	Shri. E. Srinivas

Deputy Commissioners (Civil Engg)			
(vi)	South Eastern Circle, Kolkata	Full Period	Vacant
(vii)	South Central Circle, Secunderabad	Full Period	Vacant
(viii)	North Eastern Circle, Lucknow	Full Period	Vacant
Deputy Commissioner (Electric Traction)			
(ix)	Central Circle, Mumbai	Full Period	Shri G.P Garg

6. JURISDICTIONS OF CIRCLES -

6.1 Route kilometrage of Railways under the jurisdiction of circles, as on 31st March, 2016 was as under:-

NAME OF CIRCLE	HEAD QUARTER	ROUTE KM	RAILWAY ADMINISTRATIONS
Central Circle	Mumbai	7907.141	Central Railway, West Central Railway and Konkan Railway
Eastern Circle	Kolkata	6919.141	Eastern Railway & East Central Railway
Northern Circle	New Delhi	7529.079	Northern Railway
North Eastern Circle	Lucknow	6936.351	North Eastern Railway & North Central Railway
Northeast Frontier Circle	Kolkata	4204.062	Northeast Frontier Railway
Southern Circle	Bangaluru	8777.105	Southern Railway & South Western Railway
South Central Circle	Secunderabad	6107.418	South Central Railway
South Eastern Circle	Kolkata	8293.277	South Eastern Railway , South East Central Railway & East Coast Railway
Western Circle	Mumbai	12296.946	Western Railway & North Western Railway

6.2 Some Commissioners of Railway Safety are at present also functioning as Commissioners of Metro Railway Safety. Route Kilometrage of Metro Railways in the jurisdiction of Circles as on 31st March 2016 was as under:-

Northern Circle	New Delhi	229.426	Delhi Metro Rail Corporation
		6.292	Rapid Metro Rail, Gurgaon
Northeast Frontier Circle	Kolkata	27.280	Metro Railway Kolkata.
Southern Circle	Bangaluru	16.652	Bangaluru Metro Railway Corporation
		19.985	Chennai Metro Rail Limited
Western Circle	Mumbai	11.230	Mumbai Metro Rail Corporation
		9.630	Jaipur Metro Rail Limited
South Central Circle	Hyderabad	8.100	Metro Rail, Hyderabad

7. FUNCTIONS:-

7.1 Duties of Commissioner of Railway Safety, spelt out in Section 6, Chapter-III of The Railways Act 1989, are as under:-

(a) to inspect new railways with a view to determine whether they are fit to be opened for the public carriage of passengers, and to report thereon to the Central Government as required by or under this Act;

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

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

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

7.2 Functions of a Commissioner of Railway Safety are:-

(a) Examination of references for opening of new railway lines and electrification.

After inspection, he submits reports to CCRS, who forwards it to Railway Board with his remarks.

(a) Commissioners have been delegated powers of Central Government to sanction opening of a line, if satisfied with its fitness;

(b) Examination of application before execution of works, affecting the safety of running lines and sanction thereof;

(c) Examination of proposals for movement of over dimensioned consignments and sanction thereof;

(d) Examination of proposals for introduction of new rolling stock.

After examination, he sends proposal, with his recommendations, to CCRS. Commissioners have powers delegated to them to sanction use of rolling stock, running of which has sanction of Central Government on any other railway;

(e) Examination of proposals for sanction of Infringement of Schedule of Dimensions

He sends proposals with his recommendations to CCRS.

(f) Inspection of running lines to keep themselves familiar with Railway working; and

(g) Investigation into Serious Railway Accidents and review of reports of other train accidents, inquired by committee of Railway officers.

7.3 Chief Commissioner of Railway Safety advises Central Government in all matters relating to Railway Safety, recruitment of officers, postings and promotions, budget and expenditure etc. Chief Commissioner deals with: -

(a) Transmission of reports of inspections of new lines done by Commissioners of Railway Safety to Railway Board with his views;

(b) After scrutiny of reports of statutory inquiries into accidents done by Commissioners, he forwards his considered opinion to Railway Board with such recommendations as he considers necessary;

(c) Scrutiny of Railway administration's proposals, received with Commissioner's recommendations and transmission to Railway Board with his opinion;

(d) Examination of Railway Board's proposals for amendments of General Rules, Rules for Opening of a Railway, Schedule of Dimensions, in consultation with Commissioners and convey their views to Railway Board; and

(e) Preparation of the Annual Report on the activities of Commissioners of Railway safety.

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CHAPTER – II

ACTIVITIES OF COMMISSIONERS OF RAILWAY SAFETY

2.1 INSPECTION OF NEW LINES:

2.1.1 Section 22 of Railway Act, 1989, prescribes that Central Government shall, before giving its sanction to opening of a railway obtain a report from the Commissioner about fitness of the line for public carriage of passengers.

2.1.2 Section 14 of Metro Railways (O&M) Act, 2002 prescribes that the metro railway in the National Capital Region, metropolitan city and metropolitan area shall not be opened for the public carriage of passengers except with the previous sanction of the Central Government.

2.1.3 In 2015-2016, activities of inspections carried out by Commissioners of Railway Safety were as summarized below:-

(a)	New lines	**1037.503** Kms
(b)	Additional lines	**747.124** Kms
(c)	Conversion of gauge	**1062.679** Kms
(d)	Deviation lines	**8.497** Kms
(e)	Introduction of electric traction	**1729.902** Kms.
(f)	Delhi Metro Rail Corridors	**14.482** Kms.
(g)	Bangaluru Metro Rail Corridor	**9.854** Kms.
(h)	Rapid Metro Limited Gurgaon	**Nil**
(i)	Kolkata Metro	**Nil**
(j)	Jaipur Metro	**9.63** Kms
(k)	Chennai Metro	**10.177** Kms.
(l)	Hyderabad Metro	**8.1** Kms
(m)	Mumbai Metro	**Nil**

2.1.4 Lines inspected are listed below :-

A – NEW LINES

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	22.04.15	Budhlada - Mansa Stn.	North Central	15.867
2.	27.07.16	Tikamgarh - Mawai	North Central	12
3.	27.07.16	Mawai - Khargapur	West Central	23.51
4.	13.05.15	Dhatrigram - Purbasthali	East Central	22.52
5.	14.05.15	Majri Jn – Majri khandan	Central	1.316
6.	22.05.15	Bareth – Mandi Bamora	West Central	18.513
7.	12.06.15	Nawadih - Kawar line	East Central	53.200
8.	25.06.15	Katni South – Katni Murwara	Central	1.828
9.	07.07.15	Daniawan - Biharsharif	East Central	38.287
10.	22.06.15	Khukrana - Panipat station	Northern	7.450
11.	24.07.15	Dallirajahara - Dondi	South East Central	17.020
12.	27.08.15	Nossam - Yerraguntla	South Central	47.200
13.	10.12.15	Bhandai – Udi BG	North Central	112.710
14.	05.10.15	Sukhi Sewaniya – Nishatpur	West Central	8.600
15.	05.10.15	Ambala – Dhappar Stn.	Northern	20.949
16.	19.10.15	Palwal Yard – Asaoti Stn	Northern	11.230
17.	21.10.15	Pathankot Cantt. - Bharoli	Northern	1.340
18.	28.10.15	Sorai - Gulabganj	West Central	15.710
19.	15.10.15	Begonia – Raj sunakhala Stn.	East Coast	9.500
20.	06.11.15	Mandamari - Manchiryal	South Central	10.290
21.	15.01.16	Patlipuitra – Sonpur – Pahleza Parmanandpur	Eastern	17.399
22.	29.01.16	Peddampet - Ramagundam	South Central	4.570
23.	02.02.16	Pandupindara – Sonepat of Jind Sonepat Section	Northern	81.047
24.	09.02.16	Changrabandha Stn. – Coochbher Stn.	North East Frontier	67.101

25.	16.02.16	Arambagh – Goghat Stn.	Eastern	9.570
26.	09.02.16	Lingampet - Jagityal	South Central	50.395
27.	01.03.16	Mandi Bamora – Bina Stn.	West Central	16.623
28.	07.03.16	Beldanga – Palassey Stn.	Eastern	17.930
29.	09.03.16	Vidisha – Sorai stn.	West Central	5.520
30.	26.03.16	Jamalpur – Munger Station	Eastern	7.198
31.	11.03.16	Ramagundam - Raghavapuram	South Central	9.734
32.	11.03.16	Tiruvallur - Tiruvalangadu	Southern	16.470
33.	15.03.16	Chandan – Banka Stn.	Eastern	40.610
34.	26.03.16	Munger – Sahebpurr	Eastern	15.700
35.	30.03.16	Maharajpur – Sahibganj Stn.	Eastern	13.850
36.	06.04.16	Kharagpur (Excl) – Chhatarpur Stn.	North Central	46.080
37.	05.04.16	Kumarghat - Agartala (PH-II) Stn.	North East Frontier	101.351
38.	24.03.16	Nossam – Banaganapalli Stn.	South Central	45.300
39.	28.03.16	Sukhinda RoaJaipur Keonjhar Road BG - Kakhpura	East Coast	10.580
40.	31.03.16	New Bg line between Indore to Rhow stations of Ratlam Division	Western	11.435
			TOTAL	**1037.503**

B. ADDITIONAL LINES

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	09.04.15	Lilapur-Surendar Nagar station of Rajkot division	Western	33.33
2.	25.05.15	Brundamal – Lapanga	East Coast	8.796
3.	29.05.15	Keutiguda-Therubali	East Coast	2.318
4.	29.05.15	Manabar-Dummuriput	East Coast	1.228

5.	22.06.15	Khukrana and panipat station on Jind –Panipat	Northern	7.450
6.	27.06.15	Sakhigopal - Puri Station with Delang – Puri	East Coast	16.332
7.	24.07.15	IB Stn - Jharsuguda – Sambalpur Div	East Coast	8.619
8.	24.07.15	Jharsuguda - Jharsuguda	East Coast	2.072
9.	30.07.15	Almanda - Kurkunda	East Coast	7.105
10.	03.07.15	Patasahi Station - Bimalgarh Station	South Eastern	7.828
11.	19.08.15	Pendutri – Kottavalasa	East Coast	7.653
12.	10.08.15	Rajkharswan – Pendrasali	South Eastern	10.43
13.	01.09.15	Ghatpindrai – Belkhera	Central	5.561
14.	21.09.15	Tiruvennainallur - Vriddhachalam Line	Southern	38.560
15.	15.10.15	Hosadurga – Chikjajur Stn	South Western	29.550
16.	30.09.15	Harlapur – Bannikoppa	South Western	16.414
17.	5.10.15	Ambala – Dhappar Stn.	Northern	20.949
18.	19.10.15	Palwal Yard – Asaoti Stn	Northern	11.230
19.	21.10.15	Pathankot Cantt. - Bharoli	Northern	1.340
20.	15.10.15	Belakoba – Raninagar	North East Frontier	9.084
21.	06.10.15	Doubling -Vizianagaram & Korukonda	East Coast	10.540
22.	18.07.16	Sini – Gamariya	South Eastern	15.352
23.	13.11.15	Yeliyur -Naganahalli	South Western	27.444
24.	07.12.15	Tomka – sukinda Rd	East Coast	16.001
25.	28.01.16	Kasu – Nagothane Stn.	Central	13.230
26.	11.12.15	Chandrapura – Rajabera	East Central	10.640
27.	17.12.15	Bandhuakalan - Shivnagar	Northern	13.160
28.	31.12.15	Sagardighi – Morgram	Eastern	7.620
29.	01.01.16	Mansa – Bathinda Stn.	Northern	34.510
30.	24.12.15	Jaithari – Nigaura – Venkatnagar Hari	South East Central	28.100
31.	03.02.16	Keshavganj – Moribera	North West	20.610

32.	13.01.16	Yelhanka - Chennasandra	South West	13.240
33.	09.01.16	Handapa Stn. – Boinda Stn.	East Coast	7.333
34.	27.01.16	Madhi – Vyara UDN –JL	Western	15.140
35.	28.10.16	Kasu – Nagothane	Central	13.230
36.	09.02.16	Samba – basentar block hut	Northern	5.774
37.	09.02.16	Jalandhar Cantt. – Suchipind	Northern	2.961
38.	01.02.16	Tiruchchirappalli – Manaparai	Southern	36.240
39.	23.02.16	Dindigul – Tamaraipadi	Southern	8.460
40.	11.02.16	Machapur - Radhakishorepur	East Coast	2.187
41.	29.02.16	Jakhapura – Newgar - Madhpur	East Coast	13.760
42.	03.02.16	Chuli – Sukhpur Stn.	Western	10.570
43.	16.02.16	Bardoli – Madhi	Western	14.500
44.	09.03.16	Dharangoan – Paldhi Stn.	Western	18.627
45.	07.03.16	Jatpipli – Vasadva Stn.	Western	11.420
46.	07.03.16	Hotghi – Tilati Stn	Central	6.450
47.	19.03.16	Budhi - Chhan Arorian Stn.	Northern	6.482
48.	19.03.16	Lambhua - sultanpur Stn.	Northern	23.070
49.	03.03.16	Kambarganvi – Alnavar Jn.	Southern	11.606
50.	16.03.16	Lottegolahalli - Yalahanka	South western	8.164
51.	24.03.16	Mathur asriyalur	Southern	25.330
52.	10.03.16	Posita – Manoharpur	South Eastern	11.600
53.	16.04.16	Saragaron Deori - Kharsia	South Eastern	37.924
			Total	**747.124**

C – GAUGE CONVERSION

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	11.05.15	Sripani - Murkongselek	North East Frontier	72.317
2.	11.05.15	Balipara to Bhalukpong of Rangiya Division	North East Frontier	34.087

3.	03.06.15	Mumbra - CSTM	Central	40.00
4.	25.06.15	Ramganga bridge to Kasganj Line	North Eastern	98.614
5.	26.06.15	Sikar – Loharu line	North Western Railway	121.969
6.	22/23.06.15 (Dt of inspection)	New Haflong – Ditokcherra line of Lumding Division	North East Frontier	102.161
7.	15.09.15	Karunguzhi – Chengalpattu Line	Southern	20.309
8.	09.11.15	Barni – Gonda Stn.	North Eastern	105.070
9.	09.10.15	Pollachi – Palghat Town	Southern Railway	54.720
10.	06.01.16	New Mal Jn. – Changrabandha Stn.	North East Frontier	62.050
11.	24.02.16	Gogameri – Suratpura	North Western	75.860
12.	18.03.16	Arunachal – Jiribam Stn.	North East Frontier	51.000
13.	31.03.16	Badarpur – Kumarghat Stn.	North East Frontier	116.721
14.	23.03.16	Gogameri - Hanumangarh	North Western	98.210
15.	31.03.16	RHOW –MHOW Stn.	Western	9.591
			Total	**1062.679**

D - DIVERSION

S.No.	**Date of Authorisation**	**Section/Line Opened**	**Railway**	**Kms**
1.	01.01.16	Makrana – Parbatsar	North Western	8.497
			Total	**8.497**

E - ELECTRIFICATION

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	15.06.15	Coimbatore North(Excl.) - Mettupalaiyam (incl	Southern	32.240
2.	15.07.15	Gooty (Excl) - Dharamvaram (Incl.)	South Central	90.00
3.	21.07.15	Wadi Yard – Solapur Division	Central	4.00
4.	22.06.15	Khukrana - Panipat station	Northern	14.900
5.	04.08.15	Bhatni – Gorakhpur Cantt.	North Eastern	71.959
6.	29.09.15	Laksar Jn – Haridwar	Northern	26.650
7.	07.09.15	Angul - kerejanga	East Coast	14.308
8.	15.09.15	Karunguzha - chengalpattu	Southern	20.390
9.	24.09.15	Tiruvennainallur - Vriddhachalam	Southern	38.560
10.	15.10.15	Puntamba – Sarola Stn.	Central Railway	98.000
11.	05.10.15	Ambala – Dhappar Stn.	Northern	20.949
12.	19.10.15	Palwal Yard – Asaoti	Northern	11.230
13.	21.10.15	Pathankot Cantt. - Bharoli	Northern	1.340
14.	01.11.15	Garudabilli - Parvatipuram	East coast	65.631
15.	03.12.15	Meerut city–Meerut Cantt.	Northern	4.080
16.	03.12.15	Ghaziabad – Meerut City	Northern	45.000
17.	04.12.15	Allahabad (Excl) – Varanasi (Excl)	Northern	130.870
18.	17.12.15	Bandhuakalan - Shivnagar Station	Northern	13.160
19.	04.12.15	Phaphamau – Unchahar	Northern	75.690
20.	01.02.16	Tiruchchirappalli - Manaparai	Southern	36.240
21.	03.02.16	Garhwa Rd. (Excl) – Maralgram (Incl) Stn.	East Central	21.742
22.	03.02.16	Barauni Yard – Mansi (Incl)	East Central	130.680

23.	19.01.16	Ghaziabad – Moradabad section	Northern	135.00
24.	22.02.16	Baruachak – Basti section	North Eastern	87.008
25.	23.02.16	Akolner - Sarola	Central	67.00
26.	25.02.16	Ramganj Mandi - Jhalawara	West Central	26.676
27.	11.02.16	Dumurikhud – Ramtek	South East Central	13.769
28.	13.03.16	Meerut Cantt – Saharanpur Stn.	Northern	105.920
29.	19.03.16	Budhi to Chhan Arorian Stn.	Northern	6.482
30.	19.03.16	Lambhua to Sultanpur Stn.	Northern	23.070
31.	24.03.16	Kallayi(Excl) - Charvattur Stn.	Southern	140.908
32.	26.03.16	Parvatipuram–SingapurRd.	East Coast	60.00
33.	28.03.16	Jharsuguda - Lapanga	East Coast	24.19
34.	30.03.16	AWR - REStn. Of JP/BKN Division	North Western	72.260
			Total	**1729.902**

F - METRO RAILWAY, KOLKATA

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	--	--	--	Nil

G - DELHI METRO RAIL CORRIDORS

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	03.06.15	Mandi House to ITO line	DMRC	0.920
2.	13.08.15	Between Badarpur to Escorts Mujesar Metro Stations	DMRC	13.561
			TOTAL	**14.482**

H – BANGALURU METRO RAIL CORRIDOR

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	08.04.15	Peenay Industries Station (excl) - Nagasandra (incl) of Banglore Metro Rail Corporation Limited	BMRC	3.16
2.	14.09.15	Metro line between Magadi road – Mysore Road Station	BMRC	6.694
			Total	**9.854**

I - RAPID METRO LIMITED GURGAON

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	--	--	--	Nil

J - JAIPUR METRO

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	30.04.15	Mansarovar - Chandpole line of Jaipur Metro Corporation	JMRCL	9.63
			Total	**9.63**

K - CHENNAI METRO RAIL LIMITED

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	29.04.15	Koyambedu - Ashok Nagar line of Chennai Metro Rail Limited	CMRL	7.27
2.	28.05.15	Ashok Nagar (excl.) – Yellandur (Incl.) line of CMRL	CMRL	2.907
			Total	**10.177**

L - METRO HYDERABAD LTD.

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	20.04.2016	Nagol – Mettuguda Stn.	Metro Hyderabad	8.100
			Total	**8.100**

M - MUMBAI METRO

S.No.	Date of Authorisation	Section/Line Opened	Railway	Kms
1.	-	-	-	Nil

2.1.5 Commissioners under powers delegated to them by Central Government sanctioned public carriage of passengers on these lines.

2.2 NEW MINOR WORKS:

2.2.1 Structural works affecting the safety of trains on running lines, such as provision of additional bridges, rebuilding or re-girdering of existing bridges, re-modeling of station yards, modification to signalling can be carried out by Railways only after obtaining the sanction of the Commissioner of Railway Safety. Such works, after being sanctioned by the Commissioner, are executed by the Railway Administration and opened to traffic under safety certificate signed by concerned railway officers, unless the Commissioner of Railway Safety decides to inspect them before these being brought into use.

2.2.2 During the year, 4342 minor works were sanctioned by Commissioners of Railway Safety.

2.3 WORKS INVOLVING INFRINGEMENTS OF STANDARD DIMENSIONS:

2.3.1 Certain minimum and maximum dimensions for location of structures near railway lines and maximum and minimum dimensions in respect of rolling stock have been prescribed and are laid down in "Schedule of Dimensions". Railways are required to obtain sanction of the Central Government or Commissioner of Railway Safety for deviation from these standard dimensions in any work/line.

2.3.2 During the year 2015-16, 10 cases for condonation of infringements to Schedule of Dimensions were recommended by Commissioners for sanction by the Central Government.

2.3.3 19 cases, which were within powers of Commissioners of Railway Safety, were sanctioned by them.

2.4 MOVEMENT OF OVER-DIMENSIONED CONSIGNMENTS:

2.4.1 Sometimes, Railways have to transport oversized consignments. Movements of some of these consignments require sanction of Commissioners of Railway Safety.

2.4.2 In 2015-16, movements of 01 over-dimensioned consignment was sanctioned by Commissioners of Railway Safety.

2.5 NEW TYPES OF LOCOMOTIVES AND ROLLING STOCK:

2.5.1 Section 27 of Railways Act, 1989, prescribes that new rolling stock can be introduced only after prior sanction by the Central Government and before sanctioning, Central Government shall obtain a report from Commissioner of Railway Safety.

During the year, 07 new types of rolling stock were recommended by Commissioners for sanction by the Central Government.

2.5.2 As per Railway (Opening for public carriage of passengers) rules, 2000, Commissioners of Railway Safety can sanction movement of new rolling stock on sections of the railway, provided the previous sanction of the Central Government for their running on any other Railway line is available.

During the year, 113 such cases were sanctioned by Commissioners under these powers.

2.6 INSPECTIONS:

During the year, Commissioners carried out inspections of 14,126 kms. of Government Railways either on their own or in the company of General Managers. Significant defects and deficiencies noticed during inspections were discussed with Railway Officers during such inspections and inspection reports were sent to General Managers.

2.7 Activities of Commissioners in respect of inquiries into accidents are given in Chapter – III.

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CHAPTER – III

ACTIVITIES OF INVESTIGATION INTO ACCIDENTS

3.1 Commissioners of Railway Safety investigate Serious Railway accidents. Other train accidents are investigated by committee of Railway officers. Reports of these inquiries are sent by Railways for review by concerned Commissioner of Railway Safety.

3.2 RULES FOR INQUIRIES BY COMMISSIONERS :-

Rules for holding Inquiries into railway accidents are contained in 'Statutory Investigation into Railway Accidents Rules -1998' notified by the Ministry of Civil Aviation in the Gazette vide G.S.R.No. 257 dated 26.12.98 and G.S.R. No. 63, dated 06.03.99. Gist of some rules and procedures for statutory investigations by Commissioners are given below:-

(i) When should a Statutory Inquiry be held?

Inquiry by the Commissioner is obligatory in every accident to a passenger carrying train, which is attended with loss of human life, or with grievous hurt as defined in the Indian Penal Code, to a passenger or passengers in the train or with damage to railway property of the value exceeding Rs. 2 crores.

Inquiry shall be obligatory only in those cases, where passengers killed or grievously hurt, were travelling inside the train. If a person travelling on the foot-board or roof of a passenger train is killed or grievously hurt or if a person is run over at a level crossing or elsewhere on the railway track, inquiry is not obligatory. Workmen's trains and ballast trains carrying workmen are passenger trains for this purpose and in the event of a workman getting killed or grievously hurt as a result of an accident to such train, inquiry is obligatory.

Commissioner can inquire into any accident, which in the opinion of the Chief Commissioner or the Commissioner, requires the holding of an inquiry.

(ii) Procedure when a Commissioner is unable to hold an inquiry:-

When a Commissioner is unable to take up an inquiry, he is required to inform Chief Commissioner of Railway Safety of the reasons as to why the inquiry cannot be done by him. In such a case, Chief Commissioner can direct another Commissioner to inquire into the accident or the inquiry can be entrusted to the Railway itself, which will then appoint a Committee of Railway Officers to

inquire into the accident. The Committee's inquiry report is submitted to the Commissioner of Railway Safety, who scrutinizes it and in case he agrees with findings, forwards it to Chief Commissioner of Railway Safety along with his views on findings and recommendations made.

(iii) Procedure for conducting a Statutory Inquiry:-

When Commissioner of Railway Safety receives intimation of occurrence of a serious accident, he proceeds to the site and conducts inspection of the accident site. He notifies Chief Commissioner of Railway Safety, Railway Board and head of Railway administration concerned of his intention to hold an inquiry and at the same time, fixes and communicates the date, time and place of inquiry. Notice of inquiry is published in Newspapers to invite public to give evidence in the inquiry in person or to write to the Commissioner. Officers of the local Magistracy and police are also notified of the dates, time and place of the inquiry.

(iv) When shall the Commissioner stop or discontinue his inquiry?

Whenever the Central Government appoints a Commission of inquiry under the Commission of Inquiries Act, the Commissioner shall discontinue his inquiry.

(v) Scope: -

The Commissioner holds inquiries into accidents with a view to ascertain the causes. Investigations are also carried out into the question, whether prompt and adequate steps were taken by the railway administration for relief measures such as provision of first aid, medical treatment and refreshments to passengers, evacuation of injured passengers and other facilities like arrangements for transshipment, completion of their journey to destination, running of duplicate trains etc. As a result of his inquiry, the Commissioner may also make recommendations, which are designed to prevent the recurrence of similar accidents, and which may suggest laying down new rules or modifying existing rules of working, and improved standards of signaling, installation and maintenance of track, bridges, etc. He also comments on matters, observed by him during the course of his inquiry, which may not have any direct bearing on the cause of the accident under investigation, but which may, in some cases, affect the safe working of the railway and lead to accidents.

3.3 INQUIRIES OF SERIOUS TRAIN ACCIDENTS IN 2015-16

3.3.1 During the year 2015-16, 14 serious accidents were inquired by Commissioners. In these accidents, 9 accidents had resulted in passenger (or crew) fatalities and 5 accidents had resulted in grievous injuries to passengers.

Out of 14 accidents inquired by Commissioners, 1 was collision between trains, 7 were derailments, 1 was fire in train, 2 were dashing of trains with road vehicles at level crossing gates, and 3 were unusual occurrences.

3.3.2 Brief details of 14 accident inquiries are given in Appendix - I. recommendations were made by Commissioners in these inquiries.

3.3.3 Inquiry reports of 96 accidents of 2015-16 were sent by Railways to Commissioners and reports were reviewed by Commissioners.

3.3.4 Below mentioned 2 accidents attracted considerable attention either due to high number of fatalities and injuries to passengers and/or due to extraordinary nature of accident :-

a) **Para 5 of Appendix-I**: - Derailment of Train No. 11071 LTT-BSB Kamayani Express & 13201 RJPB-LTT Janata Express in Bhopal Division of West Central Railway on 04.08.2015.

As a result of the accident, 29 passengers were killed, 03 train passengers were grievously injured and 42 train passengers sustained simple injuries.

b) **Para 7 of Appendix-I**: - Dashing of road lorry with train no. 16594 Down Bangalore City-Hazur Sahib Nanded Express in Bangalore – Dharmavaram section of Bangalore Division of South Western Railway on 24.08.2015.

As a result of this accident, 05 persons were killed, 02 persons were grievously injured while 02 sustained simple injuries.

****

Derailment of Train No. 18101 Up Muri Express between Sirathu and Athsarai Stations on 25.05.15 in Allahabad Division of North Central Railway.

Derailed AC Coaches and Damaghed Track

Derailed Coache S4 and Track with Deficient Shoulder Ballast

CHAPTER – IV

ANALYSIS OF TRENDS OF ACCIDENTS

4.1 ACCIDENTS:

The term 'accident' means an accident for which a notice is required to be issued by Railway administration under section 113 of The Railways Act, 1989. Relevant part of section 113 is reproduced below:-

"(1) Where, in the course of working a railway,-

(a) any accident attended with loss of human life, or with grievous hurt, as defined in the Indian Penal code(45 of 1860), or with such serious injury to property as may be prescribed; or

(b) any collision between trains of which one is a train carrying passengers; or

(c) the derailment of any train carrying passengers, or any part of such train; or

(d) any accident of a description usually attended with loss of human life or with such grievous hurt as aforesaid or with serious injury to property; or

(e) any accident of any other description which the Central Government may notify in this behalf in the Official Gazette,

occurs, the station master of the station nearest to the place at which the accident occurs or where there is no station master, the railway servant in charge of the section of the railway on which the accident occurs, shall, without delay, give notice of the accident to the District Magistrate and Superintendent of Police, within whose jurisdiction the accident occurs, the officer in charge of the police station within the local limits of which the accident occurs and to such other Magistrate or police officer as may be appointed in this behalf by the Central Government.

(2) The railway administration within whose jurisdiction the accident occurs, as also the railway administration to whom the train involved in the accident belongs, shall without delay, give notice of the accident to the State Government and the Commissioner having jurisdiction over the place of the accident."

Train Accidents, under section 113 of the Act, and as per Explanation in Rule (3) of Railway(Notices of and Inquiries into Accidents)Rules,1998, include those railway accidents, which occur in the course of working of a Railway and usually attended with loss of human life (such as accidents to passenger trains involving collisions, derailments, train wrecking, or attempted train wrecking, cases of running over obstructions placed on line, of passengers falling out of trains or of fires in trains), or grievous hurt as defined in the Indian Penal Code or serious injury to Railway property of the value exceeding two crore rupees which have not actually occurred but which by the nature of the accident might reasonably have been expected to occur; and also cases of land slides or of breach by rain or flood which cause the interruption of any important through line of communication for at least 24 hours.

4.2 SERIOUS TRAIN ACCIDENTS

Accidents, referred to in Section 114 of the Railways Act 1989, are investigated by Commissioner of Railway Safety. This section is reproduced below:

"(1) On the receipt of a notice under Section 113 of the occurrence of an accident to a train carrying passengers resulting in loss of human life or grievous hurt causing total or partial disablement of permanent nature to a passenger or serious damage to railway property, the Commissioner shall, as soon as may be, notify the railway administration in whose jurisdiction the accident occurred of his intention to hold an inquiry into the causes that led to the accident and shall at the same time fix and communicate the date, time and place of inquiry :

Provided that it shall be open to the Commissioner to hold an inquiry into any other accident which, in his opinion, requires the holding of such an inquiry.

(2) If for any reason, the Commissioner is not able to hold any inquiry as soon as may be after the occurrence of the accident, he shall notify the railway administration accordingly."

Rule 2(2) of 'Statutory Investigation into Railway Accidents Rules-1998', defines serious train accidents. It states that:-

every accident to a train carrying passenger which is attended with loss of life of a passenger or passengers in the train or with grievous hurt, as defined in the Indian Penal Code (herein after referred to as the grievously hurt) to a passenger or passengers in the train or with serious damage to railway property

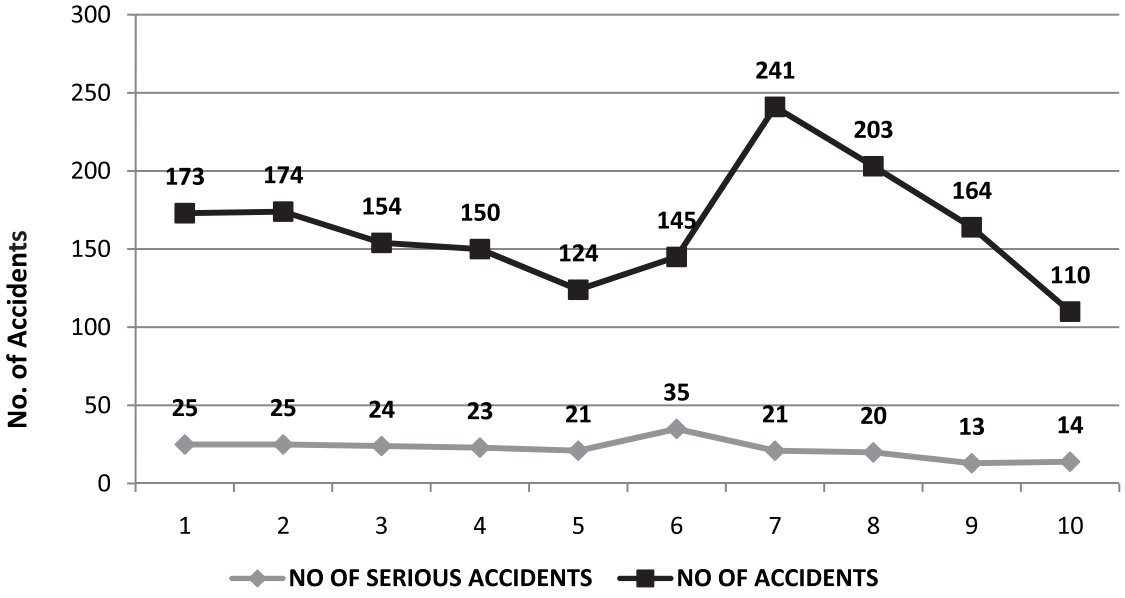
of a value exceeding rupees two crore rupees and any other accident which in the opinion of Chief Commissioner of Railway safety or the Commissioner of Railway safety requires the holding of an inquiry shall be deemed to be an accident of such a serious nature as to require the holding of an inquiry.

These accidents shall be termed as 'Serious train accidents'.

4.3 TREND OF TRAIN ACCIDENTS

4.3.1 Nos. of train accidents and serious train accidents in last ten years is shown in Figure-1.

Figure-1
Nos. of Accidents



Number of train accidents had reduced in the year 2015-16 to 110 as against 164 during the year 2014-15. The number of serious train accidents have marginally increased to 14 against 13 during the year 2014-15.

4.3.2 Statistics of accidents for the year 2015-16, as compiled by the Commission of Railway Safety, were sent to Railway Board for reconciliation of the figures vide Commissioner's letter no. S.13011/1/2015-RS dated 16.11.2016 and reminder of even no. dated 20.12.2016. Further to this there was a coordination meeting at Railway Board on 05.01.2017 & 06.01.2017 to reconcile all the statistics of Accidents.

The clarification of Ministry of Railways regarding variation in figures of Section 113 accidents was considered. However, the figures of accidents

compiled by the Commission on the basis of data available with Commissioners, has been taken as final and the same has been analyzed for the purpose of this Chapter.

4.3.3 Breakup of passenger and goods train accidents in 2014-15 and 2015-16 is shown in Table 1.

TABLE 1

SN	Description	**2014-15**	**2015-16**
1.	No. of Train Accidents	164	110
2.	No. of Passenger train Accidents	144	94
3.	No. of Goods Train Accidents	20	16
4.	No. of accidents Per million train-Kilometers (Million train-Kilometers as per Ministry of Railways Annual Statistical report for 2015-16) **	0.11	0.01

** (Data is Provisional)

4.4 RAILWAY-WISE TREND OF ACCIDENTS

4.4.1 Number of accidents, which occurred in each zonal railway in the years 2014-15 and 2015-16, are shown in Table 2 below:

TABLE 2

SN	**Railway**	**No. of train accidents**	
		2014-15	**2015-16**
1.	Central	13	05
2.	Eastern	05	05
3.	East Central	19	14
4.	East Coast	07	02
5.	Northern	42	19
6.	North Central	10	04
7.	North Eastern	7	09
8.	Northeast Frontier	6	04
9.	North Western	17	10

10.	Southern	6	08
11.	South Central	16	04
12.	South East Central	4	03
13.	South Eastern	10	04
14.	South Western	16	08
15.	Western	16	08
16.	West Central	5	02
17.	Kolkata Metro	-	0
18.	Konkan Rly.	3	01
19.	Delhi Metro	-	0
Total=		**164**	**110**

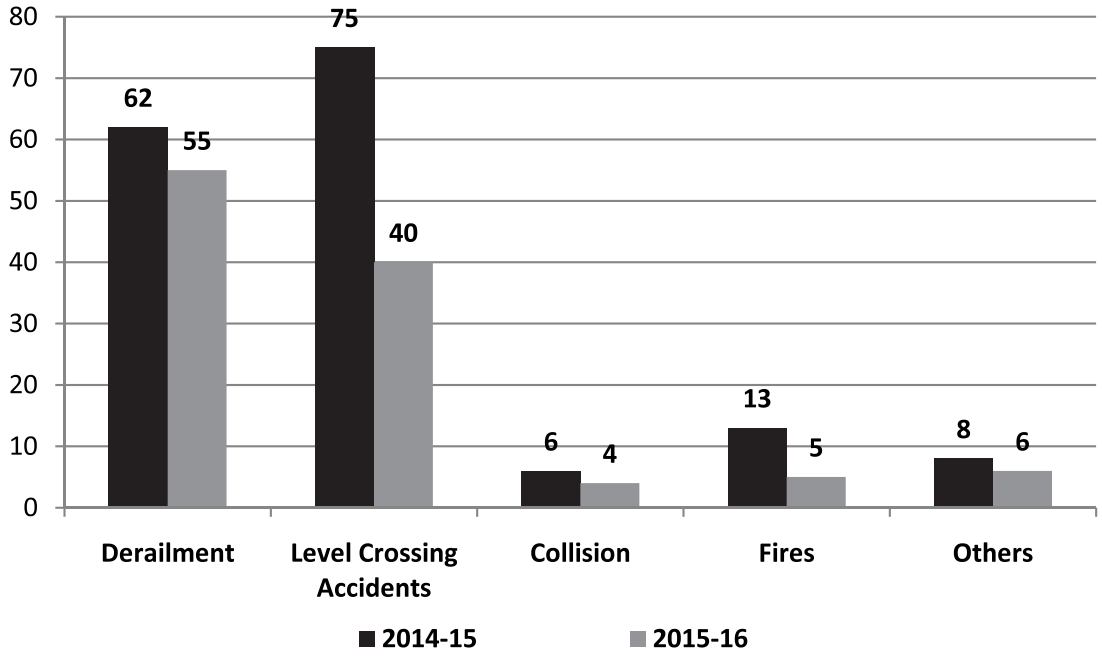
Number of accidents reduced on Central, East Coast, Northern, North Central, Northeast Frontier, North Western, South Central, South East Central, South Western, Western, West Central, Konkan & South Eastern Railways.

Number of accidents increased on North Eastern & Southern Railways.

4.5 ANALYSIS OF TRAIN ACCIDENTS

Figure 2 shows break-up of accidents in 2014-15 and 2015-16 into various types of accidents.

Figure-2



Derailment accidents were biggest chunk of train accidents, accounting for 50% in the year 2015-16 against 37.80% during the year 2014-15.

Level Crossing accidents were the second highest in number of train accidents, constituting 36.36% in the year 2015-16 and being 45.73% in the year 2014-15.

Collisions, Fire in trains & other accidents (Miscellaneous Accidents) were 3.63%, 4.54% and 5.45% in the year 2015-16, against 3.65%, 7.92% and 4.87% respectively in the year 2014-15.

4.6. CAUSE-WISE ANALYSIS OF VARIOUS TYPES OF TRAIN ACCIDENTS

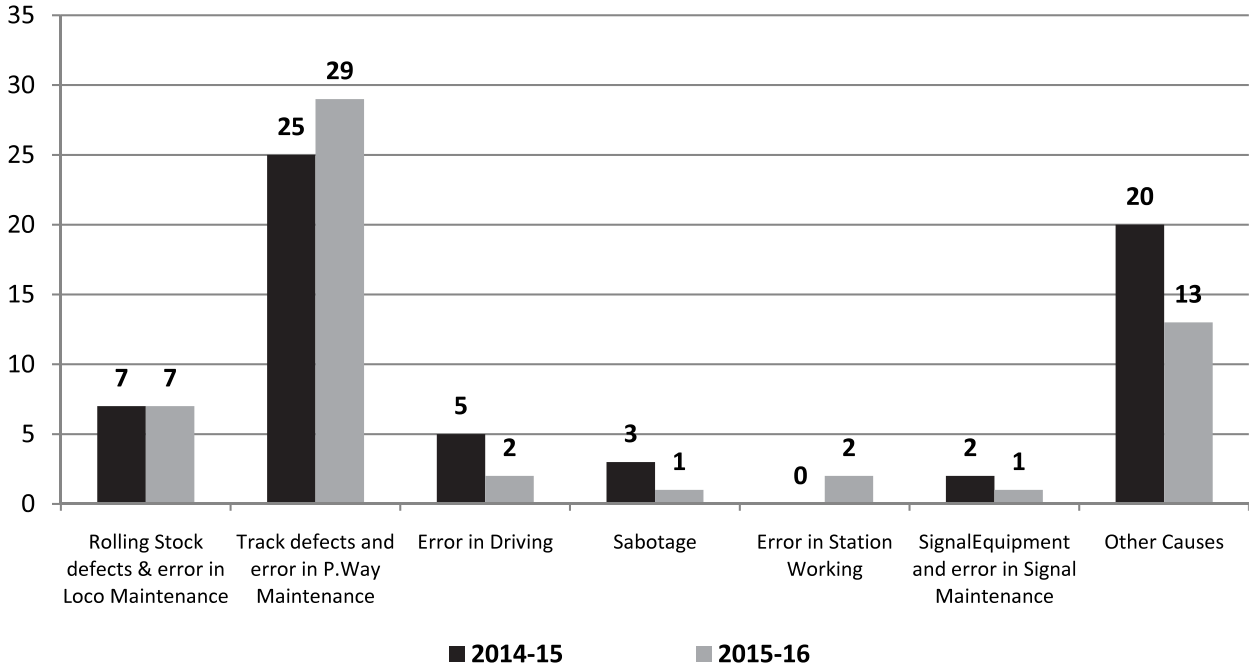
4.6.1 DERAILMENTS

Numbers of derailments were as follows:-

2014-2015	62
2015-2016	55

Cause-wise analysis of derailments in the years 2014-15 and 2015-16 is shown in Fig.3

Figure-3



There were total 55 derailments, in notified train accidents. The cause wise analysis/breakup of derailment is as follows:

- 29 derailments occurred due to P. Way defects.
- 7 derailments occurred due to rolling stock defects.
- 2 derailments were due to error in driving.
- 1 derailment was caused by Sabotage.
- 1 derailment occurred due to Signal Equipment and error in Signal maintenance.
- 2 Error by station staff
- 13 derailments occurred due to combination of errors in working of more than one department and other causes.

4.6.2 COLLISIONS

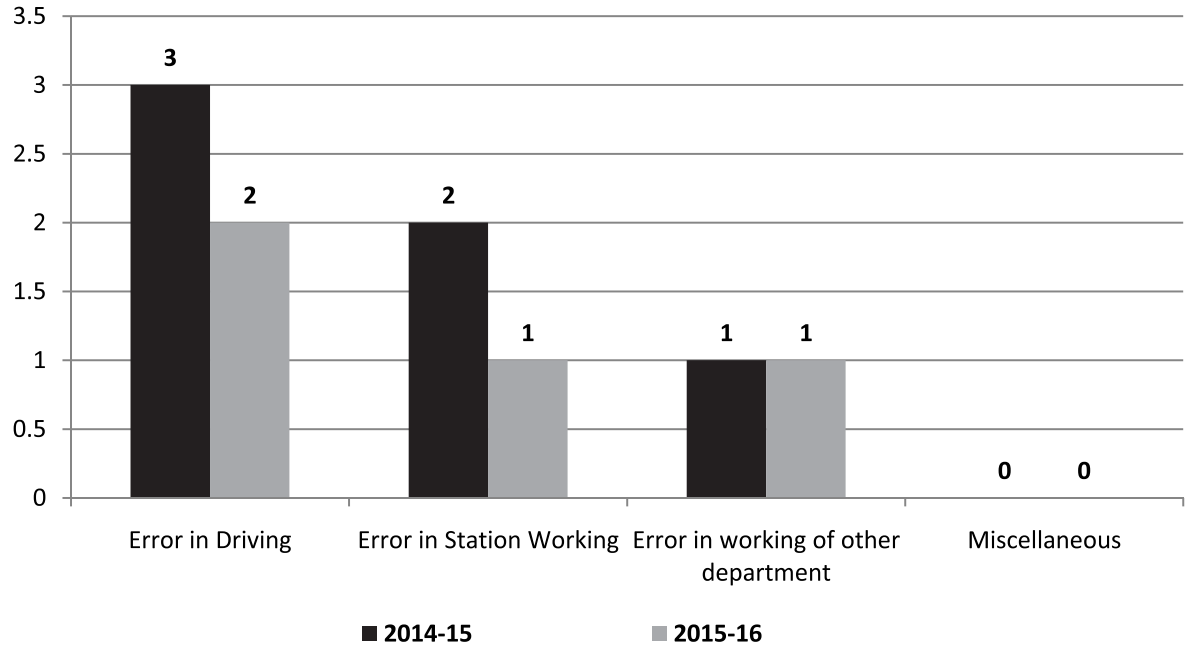
Numbers of collisions was as follows:-

2014-2015 - 6

2015-2016 - 4

Figure 4 shows cause-wise analysis of collisions during 2014-15 and 2015-16.

Figure-4



There were 4 collision accidents during the year. The details are as under:-

- In two cases of collision occurred due to error by Driver.
- One case of collision occurred due to failure of station staff.
- One case of collision occurred due to failure of other staff (C&W).

4.6.3 ACCIDENTS AT LEVEL CROSSINGS

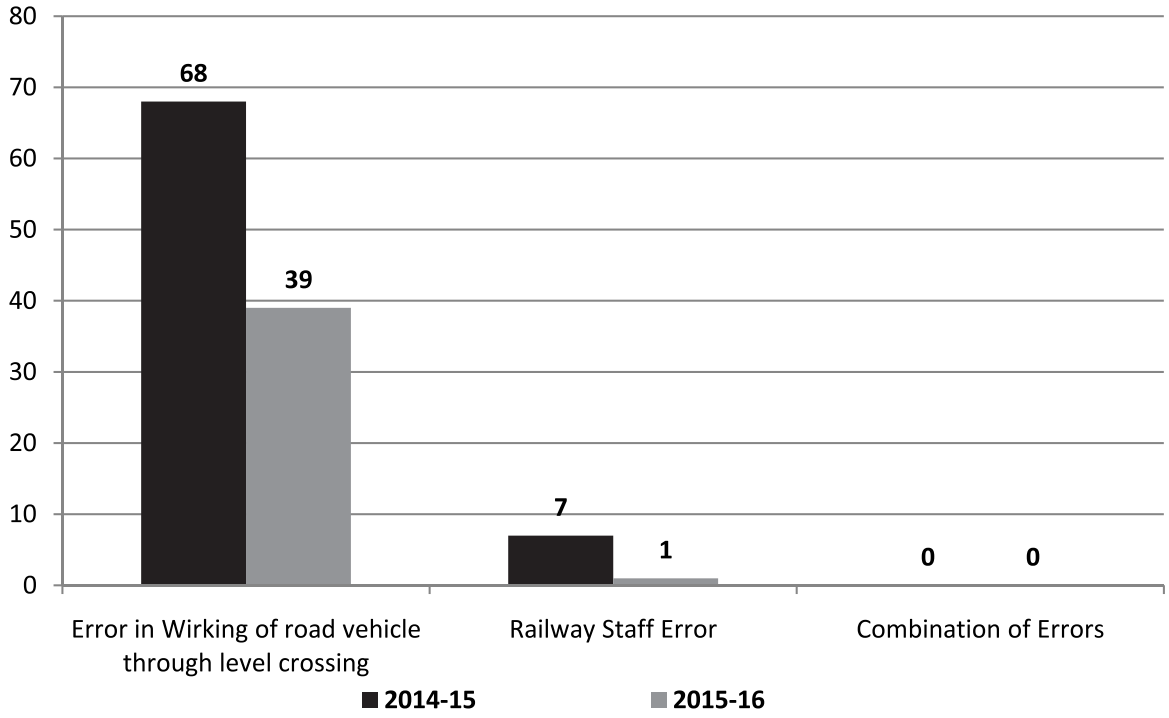
Numbers of level crossing accidents were as follows:-

2014-2015 - 75

2015-2016 - 40

Cause-wise analysis of train accidents at level crossings in the years 2014-15 and 2015-16 is shown below.

Figure 5



40 level crossing accidents were notified during the year. Out of these **36** were on unmanned LCs, where right of way conflict has to be resolved by road vehicle driver and trains have first right of way. It was error in working of road vehicles, due to which these accidents occurred.

Such accidents can be reduced by either providing gates or guard or by providing grade crossings in lieu of level crossing.

These can also be reduced if road user is warned by some active device about approaching train. Work in this direction is not being done now.

In 39 cases accident occurred due to Road User's failure while in 01 case accident occurred due to failure of Railway staff.

4.6.4 FIRES IN TRAINS

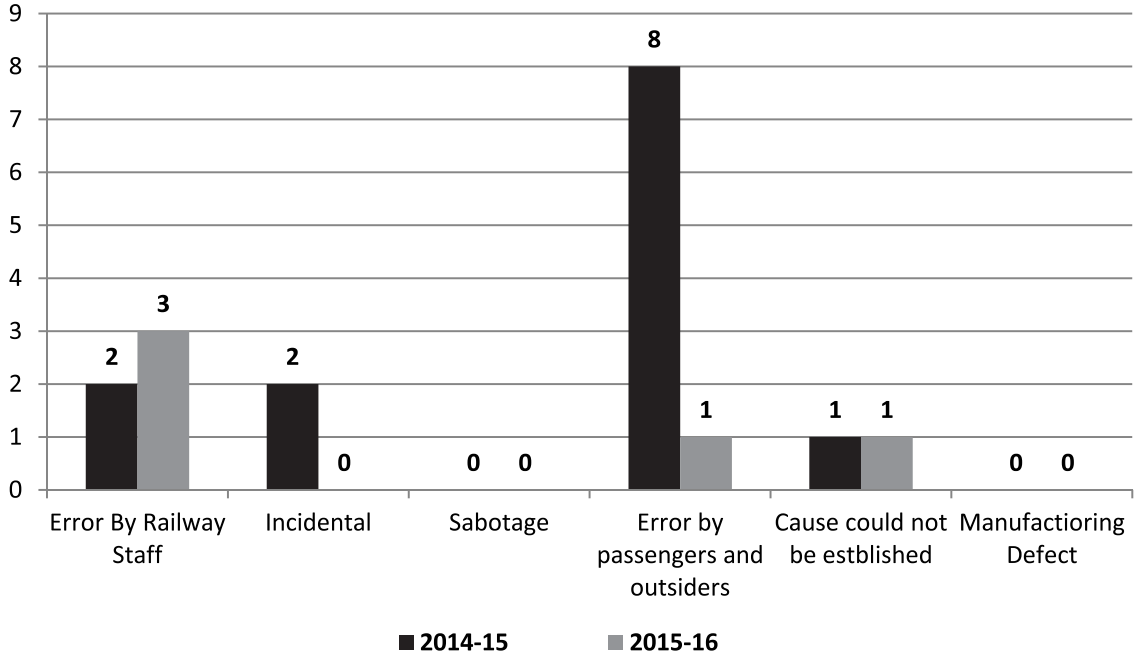
Numbers of Fire cases are as follows:-

2014-2015 - 13

2015-2016 - 05

Figure 6 shows cause-wise analysis of fire accidents in trains during 2014-15 and 2015-16.

Figure 6



There were 05 accidents of fire in trains during the year 2015-16.The details are as under:-

In three cases error by Railway staff was found to be the cause of fire.

In one case, error by passengers or outsider negligence was found to be the cause of fire.

In one case cause of fire could not be established.

However, none of the cases of fire were caused by sabotage.

4.7 TRAIN ACCIDENTS DUE TO HUMAN ERROR

4.7.1 No. of train accidents and contribution of human error (by Railway staff as well as other than Railway Staff) during the year 2014-15 and 2015-16 is shown in Table 4:-

TABLE – 4

SN	Item	2014-15	2015-16
1.	No. of train accidents	164	110
2.	No. of train accidents due to error in working of Railway Staff.	53	45
3.	No. of train accidents due to error in working by persons other than Railway Staff.	76	39
4.	No. of train accidents due to error in working by persons (2+3)	129	84
5.	% of train accidents due to error in working of Railway Staff (2÷1)	32.31	40.09
6.	% of train accidents due to human error (Both Railway and other than Railway Staff) (4÷1)	78.65	76.36

4.7.2 Percentage of train accidents, attributable to error in working by Railway Staff is 40.09% in the year 2015-16 against 32.31% during the year 2014-15. The error by human, comprising both Railway Staff as well as other than Railway Staff such as road users, passengers, miscreants etc. was responsible for 76.36% of train accidents in the year 2015-16 against 78.65% during the year 2014-15.

4.8 TREND OF SERIOUS TRAIN ACCIDENTS.

4.8.1 Total number of train accidents, serious train accidents including train accidents resulting in fatalities to passengers (including Railway Staff), travelling in trains (as distinct from other fatalities, such as, those occurring among trespassers, Level Crossing Road users etc) for last 5 years are compared in Table 5 below:

TABLE 5

SN	Year	No. of accidents	No. of serious accidents	No. of accidents resulting in passenger fatalities	No. of Passenger fatalities including railway crew
1.	2011-12	145	35	17	127
2.	2012-13	241	21	09	65
3.	2013-14	203	20	12	52
4.	2014-15	164	13	08	123
5.	2015-16	110	14	08	44
Average for 5 years		172	20	11	82

4.8.2 Number of accidents resulting in passenger fatalities has remained more or less the same in this period of five years. Though in comparison to 2014-15, the number of passenger fatalities has come down considerably in 2015-16.

4.8.3 Numbers of serious train accidents were 14 in 2015-16 as compared to 13 in 2014-15. Numbers of train accidents resulting in passenger fatalities were 08 in 2015-16 as against 08 in 2014-15. In 2015-16, number of passenger fatalities decreased to 44 from 123 in 2014-15.

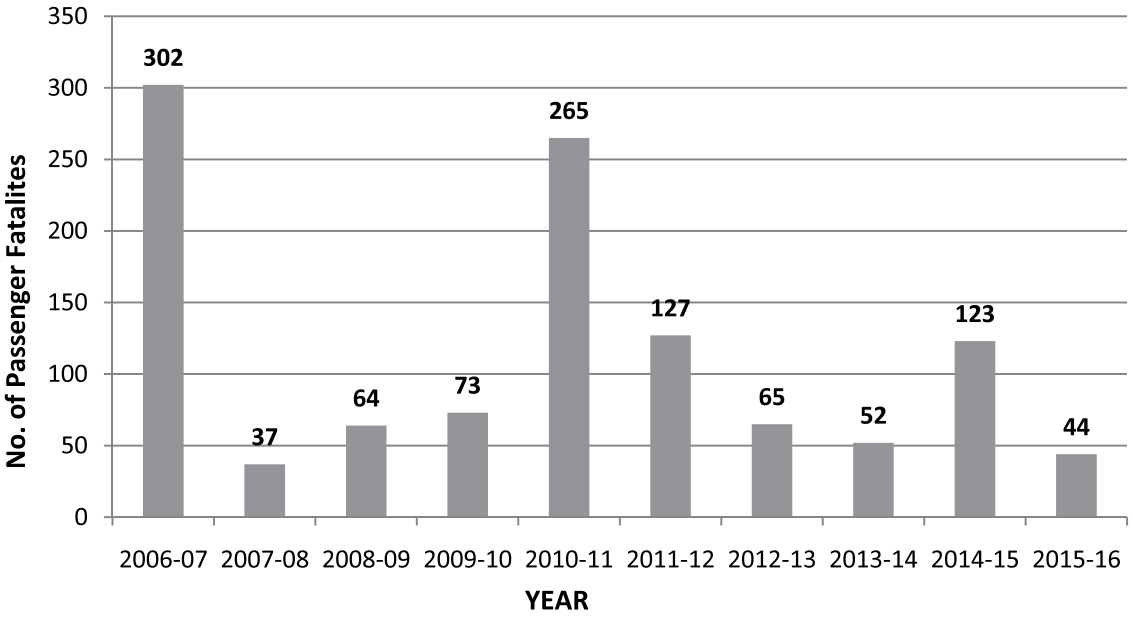
4.8.4 Number of accidents has decreased to 110 in the year 2015-16 as against 164 during the year 2014-15. Number of serious train accidents has remained same i.e. 08 during the year as against 08 during the last year.

4.9 PASSENGER FATALITIES IN TRAIN ACCIDENTS

Nos. of passenger fatalities in train accidents in last ten years are shown in figure-7.

Figure – 7

Passenger fatalities, including Railway Crew in Serious Train Accidents



In 2015-16, the number of passenger fatalities in train accidents was almost 60% less than the passenger fatalities during the year 2014-15.

Accidents resulting in high passenger fatalities were:

(i) Derailment of train no. 11071 Dn. Kamayani Express and train no. 13201 Up Rajendra Nagar – LTT Janta Express between KHIRKIYA and BHIRINGI stations of Bhopal Division of West Central Railway on 04.08.2015.

As a result of the accident, 29 passengers were killed, 45 train passengers were injured one of them was grievously injured.

(ii) Dashing of Road lorry with train no. 16594 Dn. Bangalore City-Hazur Sahib Nanded Express (resulting in derailment) at Special Class Interlocked Manned Level Crossing No. 77 between RANGEPALLI and PENUKONDA Jn. Stations of Bangalore Division of South Western Railway on 24.08.2015.

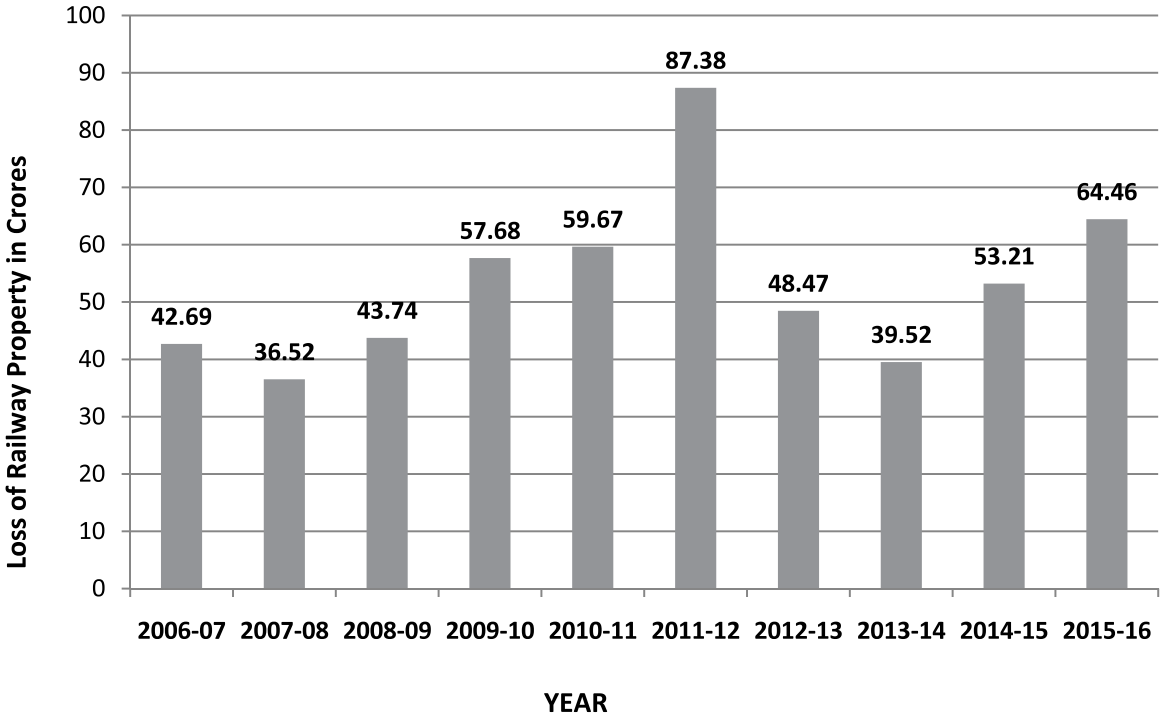
As result of this accident, 4 passengers and 01 Bus Driver was killed, 04 passengers were injured 02 of them were grievously injured.

4.8 LOSS OF RAILWAY PROPERTY IN ACCIDENTS

Estimated cost of damages to Railway property resulting from train accidents during last ten years are given in Figure-8.

Figure – 8

Loss of Railway Property in train accidents during last 10 years



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CHAPTER – V

RAILWAY RESPONSE ON ACCIDENT INQUIRY REPORTS

5.1 In the year 2015-16, Railway conveyed their response on CCRS note on 3 accident inquiry reports. These reports pertain to 1 accident of 2012-13 and 2 accidents of 2013-14.

Comments of Ministry of Railways

Efforts were being made to furnish action taken comments on CCRS note on accident inquiry reports as soon as possible. As a result of these efforts, in the year 2015-16, action taken comments were furnished to the Commission of Railway Safety, Ministry of Civil Aviation on CCRS Note on 03 accident inquiry reports pertaining to accidents of the year 2012-13 to 2013-14. These reports pertain to 1 accident of 2012-13 and 2 accidents of 2013-14. In these reports Total 12 recommendations were made.

Commission's further View

Noted

5.2 Action taken/position explained by concerned Railway administrations in 2015-16 on all the twelve recommendations was satisfactory. These recommendations were generally related to ensuring compliance of extant instructions or some local action.

Comments of Ministry of Railways.

Action taken by the Railway Administration on all the 12 recommendations was found to be satisfactory and no comments are offered.

Commission's further View

Noted

5.3 At the end of 2015-16, response from Railway was awaited on 26 accident inquiry reports submitted up to 2014-15. These reports pertain to 1 accident of 2010-11 and 1 accident of the 2011-12, 2 accidents of 2012-13, 18 accidents of 2013-14 and 4 accidents of 2014-15. Total 187 recommendations were made in these inquiry reports which are under consideration by Ministry of Railways.

There has been a positive response from the Ministry of Railways due to intense follow up action by the Commission at the highest level and as a result, by the

first week of January 2017, a lot of arrear in receipt of ATRs has been cleared. Total 38 ATRs have been received from June 2016 to first week of January 2017.

5.4 During the year 2015-16, total of fourteen (14) accident enquiries were entrusted to the Commissioners. A total of fifteen (15) accident inquiry reports were finalized by the Commissioners during 2015-16, out of which eight (8) reports were pertaining to accidents of 2015-16 and rest seven (7) were of previous years. These reports were finalized as per the Revised Procedure Circular No.5 issued by the commission on 27.12.2012, for compilation and submission of Railway accident inquiry reports. Total 64 recommendations were made in these 15 inquiry reports. Railway Board was advised to communicate Action Taken Report on all the 15 inquiry reports. Till the end of this financial year (2015-16) no ATR was furnished by the Railway Board on these reports.

Comments of Ministry of Railways

Recommendations made by the Commission of Railway Safety relate to the whole spectrum of rail operation and maintenance. While majority of the recommendations have been accepted and implemented, some of them need thorough and detailed examination from various angles i.e. technical suitability, operational feasibility, evaluation of extent of enhancement of safety, assimilation in the prevailing field environment and financial viability etc. Some of them also require design and development of technology, import, trials and experiments etc. involving considerable time, period and funds.

Efforts are being made to clear the pending cases soon.

Commission's further View

Noted

5.5 There is always some backlog in receipt of 'Action Taken Report' from the Ministry of Railways. The issue of non reporting of ATR/status of the recommendations to the commission has been raised many times in the past. Ministry of Railways has mentioned that administration/implementation of the provisions connected with the Safety of train operations requires deliberation at various levels, hence the delay.

As a result of follow up by the Commission, the response from the Ministry of Railways has been positive and a lot of arrear has been cleared. All the ATRs till

the financial year 2012-13 have been received till the first week of January 2017, leaving NIL arrear till then. Now the pendency of ATRs is pertaining to years 2013-14 and onwards.

Comments of Ministry of Railways

Efforts are being made to furnish action taken comments on CCRS Note on accident inquiry reports as soon as possible. Recommendations pertain to various Directorates of Ministry of Railways and are under examination by them. Some of the recommendations have far reaching implications. The concerned Directorates are being impressed upon to expedite their action taken comments. Only after firm action is taken by them, Office Memorandum containing Ministry of Railways' action taken comments can be issued to the Ministry of Civil Aviation(Commission of Railway Safety)

Commission's Further View

Noted.

5.6 Most of the recommendations made in the accident inquiries are for ensuring compliance of rules and provisions for working and maintenance. Action is taken by the Railways on such recommendations.

Comments of Ministry of Railways.

This is a matter of fact and no comments are offered.

5.7 In the ATRs received during the year 2014-15 some of the important recommendations received positive response and were implemented by the Ministry of Railways.

Some of such recommendations are given below:-

(i) Recommendation in the derailment of Train no. 15228 in Chennai Division on 10.04.2013 of time bound programme to remove AT weld to be maintained in a register and on the weld joint as per provisions of "Manual of Fusion Welding for Rails by Alumino – Thermic Process".

The Railways has responded with the action plan regarding the progress of work in this area. During 2013-14 & 2014-15 over Southern Railway, total 399 number of DFW(R) have been removed from the track. All DFW (R) are secured with joggled fish plate with far end bolts. Speed

restriction of 100 kmph has been imposed in Southern Railway in locations where DFW(R) exists & are more than 3 months old.

(ii) The recommendations, in the dashing of train no. 12346 Saraighat Express with road vehicle at UMLC in Rangiya Division on 04.05.2013 regarding expeditious construction of LHS/RUB to eliminate UMLC and ensure progressive elimination of all UMLC as planned.

Railway informed that Low Height Subway in replacement of Level Crossing Gate involved in the accident was constructed and commissioned on 20.12.2013. North east Frontier Railway is making continuous effort for elimination of UMLC by different modes and in the last three years total of 261 number of UMLCs have been eliminated.

The overall progress in elimination of UMLCs over the Indian Railways has also been encouraging as is evident from the details available in Chapter VI of this report.

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CHAPTER – VI

SOME ISSUES CONCERNING SAFETY ON INDIAN RAILWAY

6.1 Derailments:-

During the year 2015-16, there were 55 accidents due to derailment, out of the total 110 cases reported under Section 113. This constitutes almost 50% of the total number of accident cases.

The Commission had enquired into a number of cases and had made recommendations for prevention of such incidences in future.

Some of these were as follows:-

A) Special Track maintenance drive to detect cracks in rails in corrosion prone areas.

B) Deep screening and TFR work in the 'Point zone' and vicinity should be done at increased frequency to ensure correct track parameters and geometry.

C) Replacement of '52 kg D Marked' rails.

D) USFD Testing of rails and weld.

E) Liquidating arrears in Track Renewal programme.

Comments Of Ministry Of Railways:-

The track forms the backbone of railway transportation system and therefore needs to be maintained in a safe and fit condition. To this end, it is essential to carry out not only the track maintenance operations, but also to renew the track as and when it becomes due for renewal. The track renewal/replacement is carried out under Depreciation Reserve Fund.

I) Track structure is upgraded at the time of renewals. Sleepers are being upgraded from wooden, steel and CST-9 to PSC sleepers. Heavier section and high tensile strength rails are being used during renewals. Presently 52 kg/60kg 90 UTS rails are being used in place of 90R/52Kg. 72UTS rails. Similarly, long rail panels or welded rails are predominantly used in place of fish plated joints.

As on 31.3.2016 following track structure exist on BG (Main line):

- **Long Welded Rails are laid in about 89.12% length.**
- **PSC sleepers are laid in about 98.96% length.**
- **52 kg/60 kg rails are laid in about 99.42% length.**

II) For improving maintenance and better asset reliability, Railways are consistently eliminating fish plated joints on tracks by welding the joints to convert all single rails into long welded rails to the extent possible. During relaying/construction of new lines/gauge conversion also, long welded rails are laid on concrete sleepers to the extent possible. Mobile Flash Butt Welding is being done in construction projects and for Through Weld Renewals works to the extent feasible. Turnouts are also being improved systematically. Now Thick Web Swithces are being used to improve asset reliability and to cope with higher axle load and increased volume of traffic. Weldable Cast Manganese Steel Crossings have been planned to be provided on important routes in a phased manner to improve asset reliability.

III) Other measures taken in this direction include use of modern diagnostic aids like Digital Ultrasonic Rail Flaw Detectors (USFD), track recording cars, use of on-track machines for maintenance of track to higher standards, controlling/ reducing rail and weld failures and ensuring quality of rails during manufacture. Digital type machines have the facility of freezing scan and storing data during rail and weld testing. Vehicle Borne USFD Testing of Rails/Welds is also planned to test about 30400 Track Km length on Rajdhani route which is capable of on line recording of data and run over analysis, by which defect growth rate can be monitored and timely action taken to remove such defects before it actually fails. The trial of ultrasonic broken rail detention system has also been envisaged on NR & NCR.

IV) <u>Track Recording Cars</u>:

In order to achieve high quality electronic and objective assessment of track geometry and to establish a regime of predictive maintenance to improve reliability, IR is constantly up-grading technology of Track Recording. Two numbers high speed contact-less sensor based HSTRC have been commissioned in July, 2014. Augmentation and regular runs of TRCs are further required.

V) Rail Grinding:

In order to improve reliability, Indian Railways have procured 2 Nos. high output state of art Rail Grinding Machines for preventive maintenance practice. Rail grinding results in reduction of rail-wheel contact stresses, rolling contact fatigue, gauge face wear, corrugations and rail fractures/rail surface defects thereby leading to improvement in the life of rail, ride quality, fuel efficiency and safety. These Rail Grinding Machines have been deployed on certain high density routes of 9 Zones of Indian Railways i.e. ER, ECR, ECOR, NR, NCR, SR, SER, SCR & SWR. Coverage of rail grinding on entire BG track on Indian Railways will be expanded on a programmed basis.

Comments of Commission:

Noted.

However there is a greater need for liquidation of all arrears of track renewal works on top priority.

6.2 Level Crossing Accidents:-

Out of total 110 accidents reported under section 113 during the year 2015-16, there were 40 accidents at Level Crossing gates, while some of these accidents were at Manned LC gates, majority of accidents were at UMLCs. In most cases the road user is either killed or injured. The total number of accidents at LC gates during the year has been 40 as against 75 in the previous year. Though there has been a reduction in such accidents, the number remains very high & the death/injury of road users holds a particular grief in public memory. Society holds it as an unpardonable safety infringement by the Railways despite majority of such accidents being due to failure of road users in observance of safety precautions & warning while negotiating the level crossings.

The ongoing expansion & strengthening of road network across the length & breadth of the country, mostly in rural areas, have created enhanced pressure on the use of manned & unmanned level crossing which in turn has increased the potential for accident. There is therefore urgent need for addressing this issue & ensure drastic reduction in number of accidents at LC gates.

Various safety issues related to level crossings have been raised by the Commission from time to time. These are basically concerned with manning/interlocking of LCs and elimination of rail-road surface crossings by means of grade separation through construction of Road Over Bridge (ROB), Limited Height Subway (LHS), Road Under Bridge (RUB) etc.

The following issues require urgent attention in this regard:-

a) Elimination of unmanned level crossings in a programmed manner either by manning of crossings or by closing some unmanned crossing where traffic is very less and providing grade separators or limited height subways in place of other crossings.

b) The pace of manning should not be at the cost of maintenance of the Railway assets. The proper creation of gatemen's posts, their requirements and training are pre-conditions for effective manning of LCs. The detailed policy guidelines in this regard also need to be issued by Railway Board to replace ad-hoc manning by withdrawing manpower from existing staff strength.

c) In previous communication railway has intimated that Train activated Warning device(TAWD) for giving audio-visual warning to road users about an approaching train was undertaken in the past by the railways and was not found workable and unsuitable due to various reasons such as law and order, theft and inaccessibility of site etc. Further, Railway has communicated that RDSO conducted trials of an Advanced Train Warning System at unmanned level crossing gates as an off shoot of Satellite Imaging of Rail Navigation (SIMRAN). But SIMRAN was discontinued and it has now been proposed to implement Real-time train Information System (RTIS) using satellite communication and adding controlling Office Application Component for automatic train control charting. Provision of Train Actuated Warning System at unmanned level Crossings is still under trial stage.

d) Considering the limitation of new technologies for warning the road users at UMLCs, the Railways have decided to engage 'Gate Mitra' at UMLCs to warn the road users. There has been large scale deployment of 'Gate-Mitras' on the entire Railway system. This deployment is certainly helping in reducing the number of accidents at UMLCs.

e) Replacement of all unmanned level crossings by ROB/RUB or conversion into manned level crossings will definitely take many years thus providing the total elimination of unmanned LCs. Warning to road users about approaching train can improve safety level at unmanned level crossings. Commission has been raising this issue for quite some time but the progress achieved until now is limited. Statistics of accidents reveals that UMLC accidents have shown an upward trend over a period of time. Warning to road users about approaching train can help in minimizing accidents and improve safety level at the

unmanned level crossing. Audio Visual indicators are one of the requirements for enhancing the road user safety and also for minimizing accidents on level crossings. Provision of the above may be considered as an interim measure till all the UMLCs are eliminated.

f) The Railways have adopted an ambitious plan for the elimination of all the UMLCs by the year 2018-19. The present progress of works in this regard is very encouraging in most of the Railway systems. The Railways need to keep very close focus on the progress of these works so that complete elimination of UMLCs becomes a reality thus reducing one of the major causes of accidents on the Railway system.

Comments Of Ministry Of Railways :-

Level crossing gates are meant to facilitate the smooth running of traffic in regulated manner governed by specific rules but keeping in mind the safety concerns, the Railways have decided to progressively eliminate all the LC gates.

I. Closure –

During the year 2015-16, total 1253 number of UMLCs have been eliminated. During the same period, total number of 390 manned level crossings have been eliminated.

II. Road Over/Under Bridge -

To avoid heavy detention to road traffic, busy level crossing gates having more than one lakh Train vehicle Unit (TVU) are being replaced by construction of Road Over/Under Bridges in phased manner on cost sharing basis with the State Governments. During the year 2015-16, total 194 ROBs and 830 RUBs/Subways have been constructed over Indian Railways.

III. Interlocking Of Level Crossing Gates –

Interlocking of gates is being done on the volume of road-cum-rail traffic to enhance safety. The Interlocking of 10776 level crossing gates has been completed up to 31.3.2016.

Instructions have already been issued to Zonal Railways to create posts wherever manning is being done from the vacancy bank of Zonal Railway.

IV. Train Actuated Warning Device :

Design and development of Train Warning Device (TAWD) for giving warning to road users about an approaching train was undertaken in the past on Indian Railways. TAWD was found unworkable and unsuitable due to various reasons such as law and order, theft, inaccessibility of site, poor power supply and public vandalism resulting in non availability of system. In September '05 Board (ML & MT) has decided that no further work of TAWD will be taken up.

A Project of development of GPS based Unmanned Level Crossing Gate Warning System integrated with SIMRAN has been taken up by Telecom Directorate of RDSO jointly with IIT Kanpur. Prototype has been developed and Trial of SIMRAN/RTIS based Level Crossing Gate Warning System is at an initial stages.

High Level Safety Review Committee has recommended for total closing of all manned and unmanned gates.

In view of all the facts, it has been decided that provision of Train Actuated Warning System at Unmanned Level Crossings shall be implemented after an effective and theft proof system is developed by RDSO.

Commission's further View

Noted

6.3 Provision of TCAS/TPWS to Prevent Collision:

There were five cases of collision out of the total 110 cases reported under Section 113 during the year 2015-16. Collision is considered as one of the worst type of rail accidents which needs to be completely eliminated.

The Commission had enquired into – cases of collision and made several recommendations. Following are some of the important recommendations:-

A) Loco pilot/Gateman reporting fog in the section must be taken into consideration for declaration of fog and introduction of MATS system. Suitable clarification in VTO circular should be issued.

B) EMU locomotives run with single motorman should be equipped with Automatic Train Protection System and till then, one Asst.Loco Pilot should be provided in EMU during foggy weather.

Comments Of Ministry Of Railway :-

Train Protection Warning System (TPWS):

Train Protection and Warning System (TPWS) based on European technology ETCS L-1 is a proven ATP System to avoid train accidents/ collisions on account of human error of Signal Passing At Danger (SPAD) or over-speeding. As a pilot project, TPWS has been provided on Chennai-Gummidipundi Suburban Section of Southern Railway (50 RKms). In another pilot project on Hazrat Nizamuddin – Agra Section of Northern/North Central Railway (200 RKms), commercial trials with 35 locomotives in nominated trains have been completed. Gatiman Express running at 160 Kmph on Delhi-Agra section has been equipped with TPWS. TPWS has also been provided on Dum Dum-Kavi Subhash section of Kolkata Metro (25 RKMs) and introduced in commercial service on all the EMU rakes.

Work for provision of track side equipments of TPWS on Basin Bridge-Arakonam Section (67 RKms) of Southern Railway is under progress and targated for commissioning in current financial year.

Based on experience gained, TPWS has been approved for 3330 Route Kilometers (RKMs) covering Automatic Signalling Sections of Indian Railways (IR). In first phase the implementation of TPWS works has been taken up on 1244 RKms, automatic Signalling sections on Zonal Railways where EMU services ply with onboard equipments on EMUs rakes only. Further Railways have been advised for implementation of the balance sanctioned work of TPWS on 2086 Rkms on HDN-1/HDN-2/HDN-3 Routes.

Train Collision Avoidance System (TCAS):

TCAS has dual capability of preventing train accidents caused due to Signal Passing at Danger (SPAD) or non observance of speed restrictions by train drivers as well as preventing train collisions. Development of TCAS is being carried out as an indigenous, multi-vendor, interoperable cost-effective system by RDSO. Subsequent to Proof of concept, field trials of the prototype TCAS equipment developed by RDSO in association with an Indian Vendor is in progress. Extended field trials with multi-vendor, interoperability features are in progress by RDSO on Lingamapalli-Vikarabad-Wadi-Bidar section, SCR (250 km). Initial round of extended field trials were conducted by RDSO during 2013-14 in

sub section of the above identified section wherein Anti-Collision & Automatic Train Protection features of TCAS were successfully demonstrated.

After completion of field works in the pilot section (250)Rkm), extended field trials on 2 pair of trains have commenced on 15.02.2016. System's performance under field conditions is being monitored and corrective action being taken based on regular analysis of trial results by RDSO.

Operational deployment of TCAS on Railways on absolute Block Signalling sections will be considered after conclusion of extended field trials success fully safety validation of system to Safety Integrity Level – 4 (SIL-4) by an Independent Safety Assessor (ISA).

Further to this, the progress made in respect of provision of important safety aids to prevent such incidences is as under:

I. Track Circuits(No. of Locations) –31737 as on 31.3.2016

II. LED Signals(No. of Stations) – 5732 as on 31.3.2016

Commission's further View

Noted

6.4 Introduction of New Technology:-

The Railways are under pressure to carry additional passenger and freight traffic without commensurate increase in infrastructure. Therefore there is urgent need for the introduction of new technology to enhance throughput and accelerate maintenance work.

The Commission had urged the Railways for adoption of new technology to achieve the twin objective of enhancing throughput and ensuring safety. The Railways have adopted a number of new technologies in the areas of coach and locomotive design to enhance safety of passengers in case of accidents and to provide crew friendly design to reduce stress of the crew. Some of these initiatives as communicated by the Railways are given below.

Comments of Ministry of Railways:-

I) Proliferation of LHB coaches for improving Safety:

LHB type coaches have interior crashworthy and anti climbing features. There is plan for complete switchover to production of LHB type coaches in

future. Hitherto these coaches were inducted into premier services such as Rajdhani, Shatabdi and Duranto but now these are also being inducted into Mail & Express trains as well .Thus proliferation of LHB coaches and development of new variant coaches on LHB design platform would enhance safety in train operation in the long run.

II) Fitment of Tight Lock CBC for Enhancing Safety:

Progressive fitment of tight lock Center Buffer Couplers (CBC) in lieu of screw coupling on new manufacturing of ICF design coaches has been carried out with a view to prevent the coaches from climbing over each other in unfortunate event of an accident. So far, 4350 LHB coaches, 425 Hybrid Stainless Steel Coaches& 1340 conventional ICF design coaches have been manufactured with CBC. Design of CBC has been upgraded to mitigate problem of jerks during acceleration/ deceleration of trains.

III) Remote Monitoring of Loco and Train (REMMLOT):

This device enables remote monitoring of Diesel Locomotives. It specifically enables analysis of lapses on part of the loco pilot, when he is reported to have passed a signal at danger. This will enable focused counseling and training of such crew, who are prone to unsafe working. REMMLOT also monitors condition of locomotive and makes preventive maintenance of locomotives. REMMLOT monitors shutting down of locomotives when idle for a long time and generates management information to ensure this. The above system is already running on about 2582 locomotives.

IV) Crashworthy Coach Design:

To improve upon the standards of safety, a "crashworthy" ICF coach design, in conjunction with a Centre Buffer Coupler (CBC), was evolved. Such a design enables absorption of significant amount of energy during the impact/collision. About 530 such crashworthy ICF design coaches have been manufactured so far. On similar lines, principal design for a crash worthy LHB coach shell has been manufactured and crash test for design validation on this coach has been completed at RDSO.

V) Air Conditioning (AC) of locomotive cabs:

Loco Pilot are working in extreme weather conditions of heat, humidity and dust prevalent across the country. The need for making locomotive cab

crew friendly to ensure long hours of fatigue free driving has been recognized world over. Improvement in the working conditions of loco crew is a priority area for IR. Provision of AC in loco cab will reduce fatigue level on run and will make working environment of crew better and improve their efficiency. Better working condition will also improve the alertness level of the loco pilots and thereby improving safety and efficiency. So, far ACs have been fitted in 359 Diesel Locomotives.

Commission's further View

Noted

Introduction of identified modern technologies should be done in a time bound manner and its progress should be closely monitored.

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APPENDIX - I
Ref. Para 3.3.2

DETAILS OF SERIOUS RAILWAY ACCIDENTS/INCIDENCE INQUIRED INTO BY COMMISSIONERS OF RAILWAY SAFETY DURING THE YEAR 2015-16

1. Unusual accident of injury among passengers in Train No. 16723 Down Chennai Egmore-Thiruvananthapuram Ananthapuri Express at km. 533/000-100 between Kalligudi and Virudunagar stations in Madurai Jn.-Virudunagar Jn BG electrified single line section of Madurai Division of Southern Railway on 09.05.2015

A) CAUSE : Due to W/L board on right hand side coming in contact with running train after the same was earlier tampered with by unknown persons

B) CASUALTIES

KILLED	:	NIL
GRIEVOUS INJURY	:	02
SIMPLE INJURY	:	NIL

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 5,500/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 02

2. Derailment of 18101 UP Muri Express between Sirathu and Athasarai stations in Allahabad-Kanpur Section of Allahabad Division on 25.05.2015.

A) CAUSE : "Failure of equipment Permanent Way

B) CASUALTIES

KILLED	:	03
GRIEVOUS INJURY	:	01
SIMPLE INJURY	:	06

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 174.16 lakhs

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 04

3. Fire in lavatory of coach no. SR WGSCN 95289 of Train No. 22637 Chennai Central-Mangalore Central Down West Coast Express at Platform no. 1 of Katpadi jn. station on Arakkonam-Katpadi Jn. BG electrified double line section of Chennai Division Southern Railway on 30.06.2015.

A)	CAUSE	:	Due to inflammable liquid having been ignited by a match stick advertently or inadvertently by an unidentified person who died in the lavatory.
B)	CASUALTIES		
	KILLED	:	01 (Passenger)
	GRIEVOUS INJURY	:	NIL
	SIMPLE INJURY	:	NI
C)	COST OF DAMAGES TO RAILWAY PROPERTY	:	₹ 50,030/-
D)	NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER	:	01

4. Hitting with ladder of signal no. S-38 of 31621 Up Sealdah-Ranaghat EMU Local train at Titagarh Station at Km. 20/19-22 on 14.07.2015.

A) CAUSE : Due to Equipment failure.

B) CASUALTIES

KILLED	:	NIL
GRIEVOUS INJURY	:	02
SIMPLE INJURY	:	08

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 1,500/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 04

5. Derailment of train no. 11071 Kamayani Exprss & train no. 13201 Janatha Express at Km. 647/26-648/12 on DN line & at Km. 647/25-648/11 on UP line between Khirkiya and Bhiringi stations of Itarsi-Khandwa BG electrified double line section of Bhopal Division on 04.08.2015.

A) CAUSE : Failure of embankment on the approaches of Railway Bridge No. 647/4 due to washout of approaches of a road bridge on Sirali-Masangaon District Road caused by very heavy rain fall in catchment area of Machak river.

B) CASUALTIES

KILLED	:	29
GRIEVOUS INJURY	:	03
SIMPLE INJURY	:	42

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 9,07,84,320/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 08

6. Dashing of 05306 UP Kanpur Anwarganj-Farrukhabad Express train with Tata Magic No. UP 32 CN 8205 at Jasoda Yard in Kanpur-Farrukhabad section of Izzatnagar Division on 23.08.2015.

A) CAUSE : Error by road vehicle driver.

B) CASUALTIES

KILLED	:	01 (Passenger)
GRIEVOUS INJURY	:	09 (Passenger)
SIMPLE INJURY	:	13 (Passenger)

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 33,900/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 03

7. Dashing of Road lorry with train no. 16594 Down Bangalore City-Hazur Sahib Nanded Express (resulting in Derailment) at Special Class Interlocked manned level crossing no. 77 at Km. 132/200-300 between Rangepalli and Penukonda Jn. Stations in Bangalore-Dharmavaram BG single line non-electrified section of Bangalore Division of South Western Railway on 24.08.2015.

A)	CAUSE	:	Due to overload roa lorry no. AP 16 TT 9885, carrying a heavy stone, entering the LC which was closed for road traffic and hitting the running train.
B)	CASUALTIES		
	KILLED	:	05 (03 Train Passenger, 01 Railway Staff & 01 other)
	GRIEVOUS INJURY	:	02 (01 Passenger, 01 contractor)
	SIMPLE INJURY	:	02 (01 Passenger, 01 Railway Staff)
C)	COST OF DAMAGES TO RAILWAY PROPERTY	:	₹ 3,38,14,260/-
D)	NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER	:	01

8. Derailment of train no. 16859 Down Chennai Egmore-Mangalore Central Express at km. 211/100-600 between Puvanpur and Vridhachalam Jn. stations in Villupuram Jn.-Tiruchchirappalli Jn. BG electrified single line (Chord line) section of Tiruchchirappalli Division on 04.09.2015.

A) CAUSE : Due to Rail Fracture.

B) CASUALTIES

KILLED : NIL

GRIEVOUS INJURY : 02 Passenger

SIMPLE INJURY : 03 Passenger

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 3,12,26,000/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 04

9. Derailment of Up Charter Special Train between Kalka and Taksal Railway Stations at km 3/14-16 on Kalka-Shimla Narrow Gauge Section of Amabala Division on 12.09.2015.

A) CAUSE : Over speeding by the Loco Pilot of the subject train.

B) CASUALTIES

KILLED	:	02
GRIEVOUS INJURY	:	03
SIMPLE INJURY	:	08

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 1,10,000/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 03

10. Derailment of 12220 UP SC-LTT Duranto Express at Km 584/7-2 at Martur station on Wadi-Solapur non-electrified double line section of Solapur Division on 12.09.2015.

A)	CAUSE	:	Fracture of left hand lead rail of UP main line of Point No. 109 B at Km 584.652 under the passage of the train.
B)	CASUALTIES		
	KILLED	:	02
	GRIEVOUS INJURY	:	04
	SIMPLE INJURY	:	05
C)	COST OF DAMAGES TO RAILWAY PROPERTY	:	₹ 7,70,00,488/-
D)	NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER	:	03

11. Derailment of Train No.90402 Up EMU Local Train (AC EMU 12-Car Rake No. 4001-4002) at Km. 20.883 to Km. 20.567 between Andheri and Vile-Parle stations on Up through line on Virar-Bandra Multiple lines BG electrified section of Mumbai Central Division of Western Railway on 15.09.2015.

A) CAUSE : "Failure of equipment-Rolling Stock.

B) CASUALTIES

KILLED	:	NIL
GRIEVOUS INJURY	:	03
SIMPLE INJURY	:	02

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 57.31 lakhs

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 12

12. Collision of 64055 Palwal-Ghaziabad EMU train at the rear end of 12171 Lokmanya Tilik Terminus-Haridwar Express train at Km 1486/16-18 between Palwan and Asaoti stations of Palwal-Nizamuddin section, Broad Guage, Multiple Line, electrified section of Delhi Division of Northern Railway on 08.12.2015.

A) CAUSE : Due to driver becoming incapacitated while running train No. 64055 EMU.

B) CASUALTIES

KILLED	:	01
GRIEVOUS INJURY	:	01
SIMPLE INJURY	:	02

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 55,10,000/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 07

13. Derailment of 11006 Puducheri-Dadar Express at Km. 472/100-200 between Hubballi and Unkal Stations on 'D Special' route of Hubballi-Londa Single Non electrified BG Main Line section of Hubballi Division on 21.12.2015.

A) CAUSE : Due to Defects in the P. Way.

B) CASUALTIES

KILLED	:	None
GRIEVOUS INJURY	:	02 (Passenger)
SIMPLE INJURY	:	05 (Passenger)
Trivial Injury	:	04 (Passenger)

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 35,62,127/-

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 05

14. Dashing of Truck No. MP-09-HF-2754 loaded with LPG Cylinders with Train No. 19575 Down Okha-Nathdwara Express at 00.50 on 14.02.2016 at Unmanned Level Crossing No. 167 at Km. 321/13-14 between Dhodhar and Kachnara Road Railway stations of Ratlam-Nimach BG single line non-electrified section of Ratlam Division of Western Railway on 14.02.2016.

A) CAUSE : Due to negligent driving and not following the approved route by the Driver of the Truck.

B) CASUALTIES

KILLED	:	NIL
GRIEVOUS INJURY	:	01
SIMPLE INJURY	:	01

C) COST OF DAMAGES TO RAILWAY PROPERTY : ₹ 13,74,515/

D) NO. OF RECOMMENDATIONS MADE BY THE COMMISSIONER : 05