GOVERNMENT OF INDIA MINISTRY OF RAILWAYS

LOK SABHA STARRED QUESTION NO. 86 TO BE ANSWERED ON 26.07.2023

COLLISON OF TRAINS AT BALASORE

*86. SHRI V.K. SREEKANDAN : SHRI THOMAS CHAZHIKADAN :

Will the Minister of RAILWAYS be pleased to state:

- (a) whether it is a fact that there was a major train accident, involving three trains (two passenger trains and one goods train) in Balasore District, Odisha on 2nd June 2023;
- (b) if so, the total number of persons died, seriously injured and persons with minor injuries in this accident;
- (c) the amount of compensation paid to the next of kin and also to the injured;
- (d) whether any probe has been ordered by the Government into the incident;
- (e) if so, whether the Commission of Railway Safety has since submitted a report in this regard and if so, the details thereof;
- (f) whether the said report has suggested many measures to prevent such incidents in the future; and
- (g) if so, the details thereof and the steps taken by the Railways in this regard along with the action taken/proposed to be taken against those found responsible for such accident?

ANSWER

MINISTER OF RAILWAYS, COMMUNICATIONS AND ELECTRONICS & INFORMATION TECHNOLOGY (SHRI ASHWINI VAISHNAW)

(a) to (g): A Statement is laid on the Table of the House.

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STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (g) OF STARRED QUESTION NO.86 BY SHRI V.K. SREEKANDAN AND SHRI THOMAS CHAZHIKADAN TO BE ANSWERED IN LOK SABHA ON 26.07.2023 REGARDING COLLISON OF TRAINS AT BALASORE.

(a) to (g): The details are as under:

(1) In the unfortunate Balasore train accident on 02.06.2023, 295 passengers lost their lives, 176 sustained grievous injuries, 451 suffered simple injuries and 180 received First Aid Treatment and left. (figures as on 14.07.2023)

(2) A payment of enhanced ex-gratia @ Rs.10 lakh each to the next of kin of the deceased, @ Rs.2 lakh each to the grievously injured and @ Rs.50000 each to the passenger with simple injury has been made. Till 20.07.2023, an amount of Rs. 30.22 Crores has been paid as ex-gratia.

In addition to this, Railways pays compensation as per decree passed by Railway Claims Tribunal (RCT) on the compensation claims application filed by the victims or their dependents. Railway Claims Tribunal, Principal Bench, Delhi has taken suo-moto cognizance of the unfortunate rail accident. It has passed judicial order dated 15.06.2023 to respective benches to settle the claim cases expeditiously. As on 13.07.2023, 258 claim cases have been received in various benches of the Railway Claims Tribunal, out of which 51 claims cases have been disposed off.

(3) The incident has been inquired by the statutory body, Commissioner of Railway Safety. Further, Government has notified for probe by the Central Bureau of Investigation, which is proceeding as per law.

(4) The CRS has submitted the final inquiry report. The Cause of the accident has been established by CRS as under:

The rear-collision was due to the lapses in the signalling- circuit-alteration carried out at the North Signal Goomty (of the station) in the past, and during the execution of the signalling work related to replacement of Electric Lifting Barrier for level crossing gate no. 94 at the Station. These lapses resulted in wrong signalling to the Train No. 12841 wherein the UP Home Signal indicated Green aspect for run-through movement on the UP main line of the station, but the crossover connecting the UP main line to the UP loop line (crossover 17 A/B) was set to the UP loop line; the wrong signalling resulted in the Train No. 12841 traversing on the UP loop line, and eventual rear-collision with the Goods train (No. N/DDIP) standing there.

(5) CRS has suggested measures/recommendations to prevent such incidents in the future. The recommendations of CRS are being implemented.

Indian Railways has taken the following measures over the years to improve safety of train operations:

- Rashtriya Rail Sanraksha Kosh (RRSK) has been introduced in 2017-18 for replacement/renewal/upgradation of critical safety assets, with a corpus of ₹1 lakh crore for five years. From 2017-18 till 2021-22, a Gross expenditure of Rs. 1.08 lakh crore was incurred on RRSK works.
- Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been provided at 6427 stations upto 31.05.2023 to eliminate accident due to human failure.
- Interlocking of Level Crossing (LC) Gates has been provided at 11093 level Crossing Gates up to 31.05.2023 for enhancing safety at LC gates.
- Complete Track Circuiting of stations to enhance safety for verification of track occupancy by electrical means has been provided at 6377 stations upto 31.05.2023.
- 5. Detailed instructions on issues related with safety of Signalling e.g. mandatory correspondence check, alteration work protocol, preparation of completion drawing, etc. have been issued.

- 6. System of disconnection and reconnection for S&T equipment as per protocol has been re-emphasized.
- 7. All locomotives are equipped with Vigilance Control Devices (VCD) to ensure alertness of Loco Pilots.
- 8. Retro-reflective sigma boards are provided on the mast which is located two OHE masts prior to the signals in electrified territories to warn the crew about the signal ahead when visibility is low due to foggy weather.
- 9. A GPS based Fog Safety Device (FSD) is provided to loco pilots in fog affected areas which enables loco pilots to know the distance of the approaching landmarks like signals, level crossing gates etc.
- 10. Modern track structure consisting of 60kg, 90 Ultimate Tensile Strength (UTS) rails, Prestressed Concrete Sleeper (PSC) Normal/Wide base sleepers with elastic fastening, fanshaped layout turnout on PSC sleepers, Steel Channel/H-beam Sleepers on girder bridges is used while carrying out primary track renewals.
- 11. Mechanisation of track laying activity through use of track machines like PQRS, TRT, T-28 etc to reduce human errors.
- 12. Maximizing supply of 130m/260m long rail panels for increasing progress of rail renewal and avoiding welding of joints, thereby ensuring safety.
- 13. Laying of longer rails, minimizing the use of Alumino Thermic Welding and adoption of better welding technology for rails i.e. Flash Butt Welding.
- 14. Monitoring of track geometry by OMS (Oscillation Monitoring System) and TRC (Track Recording Cars).
- **15. Patrolling of railway tracks to look out for weld/rail fractures.**
- 16. The use of Thick Web Switches and Weldable CMS Crossing in turnout renewal works.

- 17. Inspections at regular intervals are carried out to monitor and educate staff for observance of safe practices.
- 18. Web based online monitoring system of track assets viz. Track database and decision support system has been adopted to decide rationalized maintenance requirement and optimize inputs.
- 19. Detailed instructions on issues related with safety of Track e.g. integrated block, corridor block, worksite safety, monsoon precautions etc. have been issued.
- 20. Preventive maintenance of railway assets (Coaches & Wagons) is undertaken to ensure safe train operations and to keep a check on Rail Accidents across the country.
- 21. Replacement of conventional ICF design coaches with LHB design coaches is being done.
- 22. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.
- 23. Safety of Railway Bridges is ensured through regular inspection of Bridges. The requirement of repair/rehabilitation of Bridges is taken up based upon the conditions assessed during these inspections.
- 24. Indian Railways has displayed Statutory "Fire Notices" for widespread passenger information in all coaches. Fire posters are provided in every coach so as to inform and alert passengers regarding various Do's and Don'ts to prevent fire. These include messages regarding not carrying any inflammable material, explosives, prohibition of smoking inside the coaches, penalties etc.
- 25. Production Units are providing Fire detection and suppression system in newly manufactured Power Cars and Pantry Cars, Fire and Smoke detection system in newly manufactured coaches. Progressive fitment of the same in existing coaches is also underway by Zonal Railways in a phased manner.
- 26. Regular counselling and training of staff is undertaken.

In recent times, there has been an increasing focus on works related to

safety, as summarised below:

SN	ltem	Unit	During FY 2	During FY 2014-15 to			Compar	
			2013-14		2022-23			ison of
			Cumulativ	Average	Cumulati	ive	Average	the
			e for 10	Per Year	for 9 yea	ars	Per Year	period
			vears					2014-
			J = ====					23 with
								the
								noriod
								2004-
	_							14
А.	Irack							
	Maintenance							
1.	Expenditure on	Rs.	47,018	4,702	91,809		10,201	2.2
	Track Renewal	In Cr.						Times
2.	Rail Renewal	ТКМ	32,260	3,226	37,284		4,143	1.3
	Primary							Times
3.	Use of high	KM	57,450	5,745	1,23,717		13,746	2.4
	quality rails							Times
	(60 Kg)							
4.	Longer Rail	KM	9,917	992	68,233		7,581	7.7
	Panels (260m)							Times
5.	USFD (Ultra	ткм	20.19.630	2.01.963	26.52.29	1	2-94-699	1.5
	Sonic Flaw		20,10,000	2,01,000	20,02,20	•	2,04,000	Times
	detection)							Times
	Testing of							
	Testing of							
			70.42.040	7.04.204	4 72 00 0	140	40.00.004	0.4
6.	OSFD (Ultra	NOS.	79,43,940	7,94,394	1,73,06,0	140	19,22,894	2.4 T:
	Sonic Flaw							Times
	detection)							
	lesting of							
	Welds							
7.	Track KM	ткм	14,985	1,499	25,871		2,875	1.9
	added							Times
8.	Weld failures	Nos.	In 2013-14: 3699		In 2022-2	23: 7	724	80%
							Reducti	
								on
9.	Rail fractures	Nos.	In 2013-14 : 2548		In 2022-23: 531		79%	
								Reducti
								on
10	Thick Web	Nos.	Nil	Nil	15,146	1,6	83	
	Switches					•		
11	Track	Nos.	As on 31.03.14 = 748		As on 31.03.23 = 1548			2.1
	Machines		AS UN 31.03.14 = /40				Times	
B.	Level Crossing							
	Gata							
	Elimination							
		Nee	A	2044-	Ac == 24	02 1	0002- NII	4000/
1.	Elimination of	NO5.	AS ON 31.03	.2014:	AS ON 31	.03.4	LUZJ: MII	100%

Data Table for IR Safety Performance

	Unmanned		8948		(All elimin	Reducti	
	Level Crossing				31.01.19)		on
	Gates						
2.	Elimination of	Nos.	1,137	114	6,291	699	6.2
	Manned Level						Times
	Crossing Gates						
3.	Construction	Nos.	4.148	415	10.867	1.207	2.9
	of Road over			_	- ,	, -	Times
	Bridges (i.e.						
	Flyovers)/						
	Road under						
	Bridges (i.e.						
	Undernasses)						
4	Expenditure on	Rs	5.726	573	30,602	3.400	5.9
	LC Elimination	In Cr	0,120	5/5	30,002	3,400	Times
C	Bridge						111165
С.	Behabilitation						
		De	2.040	202	6 3 8 0	700	4.0
1.	Expenditure on	KS.	3,919	392	6,380	709	1.8
	Bridge	in Cr.					Times
	Rehabilitation						
D.	Signalling						
	Works	-					
1.	Electronic	Stati	837	84	2,521	280	3.3
	Interlocking	ons					Times
2.	Automatic	Km	1,486	148.6	1,915	212.8	1.4
	Block						Times
	Signaling						
	eignanng						
3.	Fog Pass	Nos.	As on 31.03.1	4:90	As on 31.	03.23 : 19,742	219
3.	Fog Pass Safety	Nos.	As on 31.03.1	4:90	As on 31.0	03.23 : 19,742	219 Times
3.	Fog Pass Safety Devices	Nos.	As on 31.03.1	4:90	As on 31.0	03.23 : 19,742	219 Times
3. E	Fog Pass Safety Devices Rolling Stock	Nos.	As on 31.03.1	4:90	As on 31.0	03.23 : 19,742	219 Times
3. E 1.	Fog Pass Safety Devices Rolling Stock Manufacture of	Nos.	As on 31.03.1 2,337	4:90 234	As on 31.0 31,956	03.23 : 19,742 3,551	219 Times 15.2
3. E 1.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches	Nos.	As on 31.03.1 2,337	4:90 234	As on 31.0 31,956	03.23 : 19,742 3,551	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of	Nos. No. Nos.	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711	03.23 : 19,742 3,551 1,412	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and	Nos. No. Nos. of	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711	03.23 : 19,742 3,551 1,412	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke	Nos. No. Nos. of Coac	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711	03.23 : 19,742 3,551 1,412	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection	Nos. No. Nos. of Coac hes	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711	03.23 : 19,742 3,551 1,412	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in	Nos. No. Nos. of Coac hes	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711	03.23 : 19,742 3,551 1,412	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches	Nos. No. Nos. of Coac hes	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711	03.23 : 19,742 3,551 1,412	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of	Nos. No. Nos. of Coac hes Nos.	As on 31.03.1 2,337 0	4:90 234 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection	Nos. No. Nos. of Coac hes Nos. of	As on 31.03.1 2,337 0	4: 90 234 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and	Nos. No. Nos. of Coac hes Nos. of Coac	As on 31.03.1 2,337 0	4: 90 234 0 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0	4: 90 234 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0	4: 90 234 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0	4: 90 234 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Care	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0	4: 90 234 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0 0	4: 90 234 0 0	As on 31.0 31,956 12,711 2,635	03.23 : 19,742 3,551 1,412 293	219 Times 15.2 Times
3. E 1. 2. 3. 4.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of Fire	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0 0	4: 90 234 0 0	As on 31.0 31,956 12,711 2,635 39,819	03.23 : 19,742 3,551 1,412 293 4,424	219 Times 15.2 Times
3. E 1. 2. 3. 4.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of Fire	Nos. No. Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0 0	4:90 234 0 0	As on 31.0 31,956 12,711 2,635 39,819	03.23 : 19,742 3,551 1,412 293 4,424	219 Times 15.2 Times
3. E 1. 2. 3. 4.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of Fire Extinguishers in Non AC	Nos. Nos. of Coac hes Nos. of Coac hes Nos. of Coac	As on 31.03.1 2,337 0 0 0	4: 90 234 0 0	As on 31.0 31,956 12,711 2,635 39,819	03.23 : 19,742 3,551 1,412 293 4,424	219 Times 15.2 Times
3. E 1. 2. 3. 4.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of Fire Extinguishers in Non -AC coaches	Nos. No. Nos. of Coac hes Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0 0 0	4: 90 234 0 0	As on 31.0 31,956 12,711 2,635 39,819	03.23 : 19,742 3,551 1,412 293 4,424	219 Times 15.2 Times
3. E 1. 2. 3. 4.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of Fire Extinguishers in Non -AC coaches	Nos. Nos. of Coac hes Nos. of Coac hes Nos. of Coac hes	As on 31.03.1 2,337 0 0 0	4: 90 234 0 0	As on 31.0 31,956 12,711 2,635 39,819	03.23 : 19,742 3,551 1,412 293 4,424	219 Times 15.2 Times
3. E 1. 2. 3. 4. F.	Fog Pass Safety Devices Rolling Stock Manufacture of LHB Coaches Provision of Fire and Smoke Detection System in coaches Provision of Fire Detection and Suppression System in Pantry and Power Cars Provision of Fire Extinguishers in Non -AC coaches Gross	Nos. Nos. of Coac hes Nos. of Coac hes Nos. of Coac hes Rs.	As on 31.03.1 2,337 0 0 0 0 1,56,739	4: 90 234 0 0 0 15,674	As on 31.0 31,956 12,711 2,635 39,819 8,25,967 (Incl. of	03.23 : 19,742 3,551 1,412 293 4,424 4,424 82,597	219 Times 15.2 Times 5.3 Times

	Support for				BE 23-		
	Railway				24)		
	Investment						
	(GBS FY 23-24						
	: Rs 2.4 Lakhs						
	Cr.)						
G.	Expenditure on	Rs.	70,273	7,027	1,78,012	17,801	2.5
	safety related	In Cr.			(Incl. of		Times
	works				BE 23-		
					24)		

Owing to these steps, there has been a significant improvement in the safety performance of Indian Railways over the years, as shown below:

The trend of consequential train accidents from 2000-01 to 2022-23:



It may be noted from the graph above, that there is a steep decline in the number of consequential train accidents from 473 in 2000-01 to 48 in 2022-23.

The average number of consequential train accidents during the period, 2004-14 was 171 per annum, while the average number of consequential train accidents during the period, 2014-23 has declined to 71 per annum.

(6) Seven (07) Railway officials have been suspended and major penalty departmental proceedings have been initiated against them.

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