(45)

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No.2010/Safety(A&R)/19/13 New Delhi, dated 16.07.2010

Chief Operation Manager,
North Central Railway,
Allahabad

Sub : Crossing of trains at stations provided with one platform line.

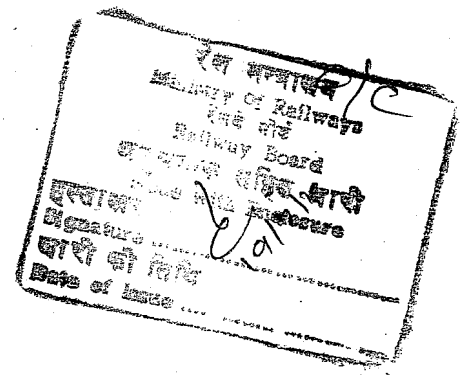
Ref : Your letter No.T/Gen./G&SR/Amend/05/05 dated 01.07.2010.

The letter under reference has been examined wherein it has been requested to issue guidelines regarding berthing of passenger trains during crossing of two trains at stations provided with one platform. It has been decided that it may not be appropriate to issue uniform guidelines applicable for all stations and all situations. As layout, platform heights, volume and type of traffic, etc. differ from station to station, it would be better if berthing of passenger trains be decided based on local conditions prevailing at the stations. Therefore, the berthing of passenger trains may be prescribed in the Station Working Rules of each station. The relevant SR may be modified to facilitate this.

It is also mentioned that in the draft of proposed General Rules submitted by GRRC, the procedure to be followed during crossing and/or precedence involving passenger trains has been proposed to be prescribed in the SWR of respective station keeping in view the number, length and height of platform(s) as well as other local conditions at the station.

Further, it is emphasised that the modification of the Subsidiary Rules is within the competence of the authorised officer of the Railway (COM) without reference to the Board, provided it does not contravene any of the provisions of the GR. The Railway may, if considered necessary and safe, adopt the system of crossing of two trains as proposed in para 3 of the letter under reference, at stations/locations where such an exception is warranted.

कृपया जारी करें
दीपक
19-7-10



(J.S. Bindra)
Joint Director/Safety
Railway Board

Kamlesh Gupta
Adviser (Safety)

सत्यमेव जयते

भारत सरकार
रेल मंत्रालय, (रेलवे बोर्ड)
नई दिल्ली-११० ००१
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)
NEW DELHI-110001

D.O. No. 98/Safety(A&R)/19/16/Loose

Dated 12.07.2010

Dear Shri Mittal,

Sub: Fog Vision Instrumentation Project under TMRS.

Ref: RDSO's letter No. R2/163/TMRS/Proj. dt. 30.09.09.

Board (MT, ML and CRB) had expressed concern over the inadequate visibility, during foggy conditions, of the colour light signals (MAUQ Signals) as also of the Tail Lamps. Dense fog have resulted in three collisions on Allahabad Division during January 2010, hence the concern of the Railway Board to bring in improvement in the above.

For improving visibility of colour light signals, a project had been undertaken recently by RDSO under Technology Mission for Railway Safety (TMRS). Unfortunately RDSO has recommended that the TMRS project to be closed despite no headway having been made in improving visibility of MAUQ Signals.

For improvement of visibility of the Tail Lamp, RDSO is already working on it. In this regard a letter dated 29.06 10 (copy enclosed) has already been addressed to you.

I am enclosing in Annexure, relevant extracts of the correspondence between RDSO and the E&R Directorate, Railway Board on the subject under reference (TMRS).

Your intervention is requested to expedite the above matters.

With best wishes,

Yours sincerely,

Kgupta

(Kamlesh Gupta)

Encl.: As above

Shri K.B. L. Mittal,
Director-General
RDSO, Lucknow -226011.

O/C

कृपया जारी करें
दीपचन्द
12-07-2010

रेल मंत्रालय
Ministry of Railways
रेलवे बोर्ड
Railway Board
संलग्नक सहित जारी
Issued with Enclosure
हस्ताक्षर
Signature ....
जारी की तिथि
Date of Issue ....

Kamlesh Gupta
Adviser Safety

सत्यमेव जयते

भारत सरकार
रेल मंत्रालय, (रेलवे बोर्ड)
नई दिल्ली-११० ००१
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)
NEW DELHI-110001

D.O. No. 85/Safety-I/24/2 New Delhi dated 29.6.10.

Dear Shri Mittal,

Sub: Improved visibility of Portable Battery operated Tail Lamp by use of Laser LEDs.
Ref: Your letter No. 2001/TR/281/HSTL/Part IV dt. 1.7.2009

The Portable Battery Operated LED based Tail Lamp does not have adequate visibility as required during Fog ; its visibility may be even less as compared to the earlier version as has been stated at certain levels. The issue came up on a reference first made by ML in the GM's Conference held in the beginning of the current year. It is of paramount importance that the visibility of the Flashing Red Aspect of the Tail Lamp is for as much a distance as possible. This is especially necessary during the months having foggy weather.

RDSO had been advised vide our letter dated 25.2.10, (copy enclosed) to review the specifications and take the following action:-

- *Change/improve the specification of Tail Lamps so as to do away with the Amber (Yellow) aspect Improve visibility by use of Laser Type LEDs and other changes in specification. Examine reduction in the weight and size of the Tail Lamp as a consequence of above.*
- *Proto type Inspection for Vendor development for Portable Tail Lamps may be considered after action is taken on item above.*

Views of some of the Railways on the Proto Type on the two types of tail lamps developed by RDSO have been received. The feed back of the zonal railways i.e. NCR ,SECR, SC Railway; S.Rly ,EC Railway and WCR is enclosed.

In view of the urgency of bringing improvement in the visibility of the Tail Lamp before the onset of the Foggy weather, I would request for early finalization of improved specs.

With best wishes,

Encl: As above.

कृपया जारी करें
दीपचन्द
30.6-10

Yours sincerely,

(Kamlesh Gupta)

रेल मंत्रालय
Ministry of Railways
रेलवे बोर्ड
Railway Board
अनुलग्नक सहित जारी
Issue with Enclosure
हस्ताक्षर
Signature 30/6
जारी की तिथि
Date of Issue

O/C

Shri K.B. L Mittal,
DG/RDSO
Lucknow.

Annex II

GOVERNMENT OF INDIA/BHARAT SARKAR
MINISTRY OF RAILWAYS/RAIL MANTRALAYA
(RAILWAY BOARD)

No.2003/E&R/3400/20/TMRS(Pt.V) New Delhi, dated 05.02.2010

The Director General,
RDSO, Manak Nagar,
Lucknow.

(Kind Attn: ED/Research/RDSO)

Sub: Fog Vision Instrumentation project under Technology Mission on Railway Safety.

RDSO vide letter No.R2/163/TMRS Project dated 30.09.2009 had advised that the TMRS Mission has been completed though no solution has been found on Fog-Vision Instrumentation. Fog has resulted in 3 major accidents on IR and it is thus imperative that this work can not be closed without finding a solution, as it is very critical for Railways. In this regard Board has observed as under:-

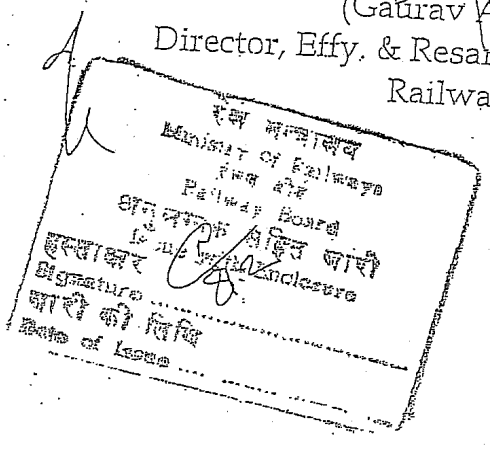
"There is an urgent need to make our colour light/MAUQ signals effective during foggy conditions. Alongwith this we may redesign the tail lamps – fixed ones of SLR or those with the Guards, so that they are effective during fog."

Further, Ministry of Earth Sciences (MoES) and Indian Meterological Deptt. (IMD) are involved in fog dispersal experiments for improving the visibility. RDSO may co-ordinate with them and an effective solution be found of this important Technology Mission Project. In this connection copy of a note from Adv./Safety is enclosed alongwith relevant annexures.

(Gaurav Agarwal)
Director, Effy. & Resarch (ME)
Railway Board

Encl:As above.

pl. issue forth



GOVERNMENT OF INDIA\BHARAT SARKAR
MINISTRY OF RAILWAYS/RAIL MANTRALAYA
(RAILWAY BOARD)

No.2003/E&R/3400/20/TMRS

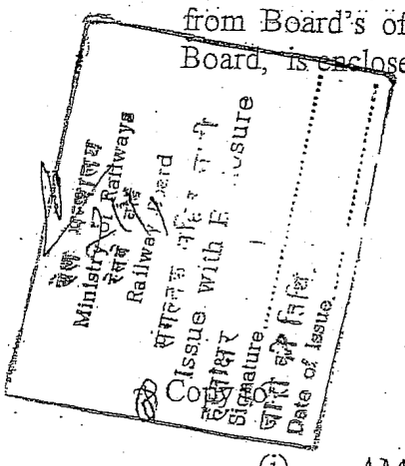
New Delhi, dated 20.1.2004.

The Director General,
RDSO, Manak Nagar,
Lucknow.

Sub: Technology Mission on Railway Safety.

Ref: DG/RDSO's D.O. letter NoR2/145/MAEC/CSP dated 9.12.2003.

Please refer to your D.O. letter mentioned above. A list of nodal officers from Board's office, project-wise for the above Mission, as approved by the Board, is enclosed for information please.



(R.K. Tandon)
Executive Director, Effy. & Resarch
Railway Board

(i) AM/ME, AM/CE, AM/Sig.
(ii) EDME/Chg., EDME/Tr., EDME/Fr., EDEE/RS, EDCE/P, ED/Track, ED/Sig.,

NODAL OFFICERS LIST FOR PROJECT APRROVED BY BOARD UNDER TECHNOLOGY MISSION ON RAILWAY SAFETY

S.No.	Project Description	Nodal Officer (ED Level) for each project at Board's Office	Nodal AM for each Mission Programme at Board's office
	Mission Program 1 - Traction and Rolling Stock		
1.	Track Side Bogie Monitoring System	EDME/Chg.	AM/ME
2.	Derailment Detection Devices	EDME/Tr.	
3	Sensors for Detecting Hotboxes, Hot Wheels	EDME/Fr.	
4	On Board Diagnostics	EDEE/RS.	
5	Wheels and Axles of Improved Metallurgy	EDME/Fr.	
6	Measuring Wheel Technology	EDME/Fr.	
	Mission Program 2 - Tracks And Bridges		AM/CE
7.	Corrosion Prevention Of Rails	EDCE/P	
8.	Improved Rail Fastening	ED/Track	
9.	Rail Flaw Detection Instrumentation	ED/Track	
10.	Environmental Friendly Coach Toilet Discharge System	EDME/Chg.	
	Mission Program 3 - Signals And Communications		
11.	Solid State Interlocking	ED/Sig.	AM/Sig.
12.	Satellite Imaging for Rail Navigation (SIMRAN) (i) GPS based Rail Network Mapping and Train Tracking (ii) Wireless connectivity	ED/Sig.	
13.	Computer Aided Remote Controlled Signaling and Train Describer System with Display Panels	ED/Sig.	
14.	Mission Program 4 Fog-Vision Instrumentation	ED/Sig.	AM/Sig.

टेलीफोन/Tele : 2451200 (PBX)
2450115 (DID)
फैक्स/Fax : 91-0522-2458500

सत्यमेव जयते

भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011
Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011

AN ISO 9001 CERTIFIED ORGANISATION

No. R2/163/TMRS Projects Vol.IV

Dt. 26.10.2009

The Executive Director/E&R
Railway Board,
New Delhi

Sub: Technology Mission on Railway Safety Report.

Ref: Director/E&R/Railway Board's letter no. 2003/E&R/3400 /20/TMRS (Pt.) dated 13.03.2008.

In reference to Board's letter quoted above, TMRS Progress report for the quarter ending July-September 2009 is being sent herewith.

DA: As above.

(M K Agrawal)
Exe. Director Research

[redacted]

रेल मंत्रालय (रेलवे बोर्ड)
(Railway Board)
04 NOV 2009
R. No.
Section Diary No.
Classification

No	Name of the Project	Date of commencement / Date of completion	Activities completed till previous quarter	Work done during the quarter	Work planned for next quarter		Adequacy of the work done so far to adher to the given PDC	Remarks
			RTTIS(Based upon SIMRAN) covering Loco Equipment, Station Equipment, Coach Display Equipment, Integrated PA System and Central Server has been prepared and issued under RDSO/SPN/TC/77/2008. • As desired by Railway Board Field Trial of Onboard Passenger Information Display System integrated with SIMRAN System have been successfully completed in Gomati Express and reported to Railway Board. • As desired by Railway Board, Field Trial of Station Passenger Information Display System integrated with SIMRAN System has been successfully conducted at Patna Junction Railway Station and reported to Railway Board.					
4.	Fog Vision Instrumentation	Mar 2005 - Sep 2009	Field trial with BEL's thermal imager completed. Result not positive. • Full fledged fog chamber made & fully operational. • Systematic study of fog attenuation for 1.55 μm wavelength shows negligible advantage over visible He-Ne (0.63 μm). • All tunable laser measurements have been competed however it does not indicate that 1.55 microns would be usable for FOG vision. • Two approaches have been theoretically arrived at for usage of longer wavelengths (CO2). • For pilot measurements in the fog chamber a 10W CO2 laser has been procured. • A scanning system suitable for usage alongwith the fog chamber, has now been fabricated for the CO2 laser. • The normal glass windows fitted at both ends of the fog chamber were replaced with high transmitty ZN-Se window suitable for 10.6 μm • Micro-bolometer based uncooled IR detector made of Ti was procured & used in experiments. • Vacuum housing was made for detector. • The fog attenuation is 1/45th of that of visible He-NE laser • Scattering from Rail track objects such as stone rail,	• Payment made to firm in august itself but detector not yet arrived. Expected to arrive NOV 09. • Lens received and mounted in Sep 09. • Images of objects placed in fog environment created inside fog chamber has been obtained and demonstrated during last MICC on 6t Aug 09.these images were obtained in visibility of <10cm for an object distance of 1.2 m this corresponds to > 250m distance vision for an object of a couple of feet in dimensions under an atmospheric fog visibility of 50m. • Software developed to display the image on line directly from the acquired data however its implementation is delayed. Since iit does not still have the license for lab view "image series" Of NI request has been placed to NI for the same. • The lens has been mounted in front of IR laser and a field during a field experiment in IIT, spot could be focussed to an 8 inch diameter at a distance of 120m. The requirement is that this spot size should be 1cm*1cm at 400m. The spot size measurement at larger distances has	NIL- since TMRS project closed.	Not adequate with respect to original PDC as initial trails with thermal imager had failed. Also the experiments with 1.55 micron laser have not succeeded	Due to reasons mentioned in previous column and also in absences of any other known technique available to achieve original objectives. It has decided in MICC meeting on 3rd DEC.08 to demonstrate the proof of concept by displaying image in the fog chamber and outside the fog chamber instead of an onboard implementation. Though the proof of concept has been demonstrated in the lab in fog chamber the making of working prototype for demonstration in field requires further research development and time. An order for the detector has been placed which is yet to arrive. The lens improving image can be tried only after detector has been received.	

S No	Name of the Project	Date of commencement / Date of completion	Activities completed till previous quarter	Work done during the quarter	Work planned for next quarter		Adequacy of the work done so far to adhere to the given PDC
			and fasteners surface have been measured from one angle. • The required peak laser at 10.6 μm for a distance of 400m for a visibility condition of 50m is around 5.3W whereas the power required at 1.55 μm is in the range of 100MW, which is very high. At 5.3W of 10.6 μm wavelength the exposer time should not be greater than 1ms for human safety and so pulsed CO2 laser is the solution. • The detector has been procured from US firm. • For 2D scanner(x-y) has been procured	become difficult as the power becomes comparable to the sensitivity of the detector which at present time is not in safe operational condition.			Meanwhile TMRS project as a whole has been closed including this project.

14th MICC meeting held at IIT Kanpur on 06.08.2009 during the quarter.