SN- 62

भारत सरकार GOVERNMENT OF INDIA
रेल मंत्रालय MINISTRY OF RAILWAYS
रेलवे बोर्ड RAILWAY BOARD

No.2012/M(N)/960/1 **New Delhi, dated 14.10.13**

The Chief Mechanical Engineers
All Indian Railways

Sub: **Failure of wheels of M/s. SMR Bals, Romania in BLC wagons in NCR**

Ref: (i) RDSO's letter Nos.MW/WA/Genl. dt. 1.7.09, 12.5.09, 3.2.09
(ii) RDSO's letter No.MW/Contr/ISO/BG Flat dt. 22/24.11.05
(iii) ED/M&C/RDSO's letter No.M&C/MIT/I&T/6 dt. 23/24.9.13 (copy enclosed)

There have been three cases of failures of wheel discs of M/s. SMR Bals, Romania make on NCR during the year 2013.

Vide RDSO's letters referred to at (i) and (ii) above, issues related to performance of wheel discs of M/s. SMR Bals, Romania make were addressed.

In addition to the above, it has now been decided in consultation with the M&C Dte. of RDSO that the condemning limit of wheels of M/s. SMR Bals, Romania make may be increased from 780 to 800 mm in BLC wagons. In this connection, ED/M&C's letter referred to at (iii) above is enclosed with this letter.

Necessary action may be taken by the Zonal Railways accordingly.

(Archana Mittal)
Dir. Mech. Engg. (Frt.)

Encl: As above

Copy to: ED/M&C/RDSO, EDS(W)/RDSO

EPBX (0522) 245
Fax (0522) 245050

DID (0522) 2450115
DID (0522) 2465310

No .M&C/MIT/I&T/6

Date: 23.9.2013

To,

EDME (Freight)
Railway Board, rail Bahavan
New, Delhi- 110001.

Sub: Failure of Romanian wheel of BLC wagon in N.C.Rly.

Ref: 1.CRSE/ALD/N.C. Rlys, letter no. Mech./813/13/Frt., dt:05.08.13
2. CRSE/ALD/N.C. Rlys, letter no. Mech./813/13/Frt., dt: 29.08.13

This refers to the discussions had with you on 06.9.2013 in connection with service failures of Romanian wheels in the chamber of AMPU. In this regard AMPU desired that based on finding revealed during failure investigation of Romanian wheels, ED /M&C may prepare a consolidated report advising corrective action to be taken at railway board level. Accordingly, the subject matter of Romanian wheel failures was examined and comments of M&C Dte. are as under

1. Two cases of failure of Romanian wheel of BLCB wagons were reported by N.C. Railway/ Agra. In both the cases failure of wheel is due to breakage of metal piece from tread. Metallurgical investigation in M&C Directorate of both the cases was done and it has been found that in one of the wheel condemning groove was about 5 mm below the tread surface. The wheel dia was 790 mm which is nearing to condemning limit of 780 mm, the dia of new wheel is 840 mm. Wheel dia of other wheel was not informed by NC. Railway.

2. Another case of failure of Romanian wheel of BLC wagon has been reported by CRSE/ NE Railway, Allahabad. Failed wheel is not yet sent to M&C Dte. for investigation. However, from the information sent, it appears that the wheel dia is 785 mm whereas the condemning limit is 780 mm. It shows that condemning groove would by about 2.5 mm below the tread surface.

3. One more case of failure of Romanian wheel of milk tank was reported by Sr. DME/SE Railway, Chakradharpur. The broken wheel was metallurgical investigated in M&C Directorate. It has been found that in the wheel condemning groove was about 11.5 mm below the tread surface. Wheel dia was 836 mm and condemning limit is 813 mm. The original wheel dia is 916 mm.

From above it is observed that in all the failed Romanian wheels, the tread surface is nearing to condemning limit. The Romanian wheels are prone to failure when the rim portion is worn nearing to the condemning limit.

Since the stress concentration on wheels increases with the decrease of rim thickness and such type of failure of Romanian wheels are common when the wheel tread is nearing to the condemning limit. It is proposed that for Romanian wheels the condemning limit may be raised from 780 to 800 mm for BLC wagons.

23.9.13

(Radhey Shyam)
Executive Director/M&C