



भारत सरकार - रेल मंत्रालय
असुविधान अधिकार और मानक संगठन

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No. EL/3.2.119 (CBC)

Dated: 30.01.2018

1. M/s Faiveley Transport Technologies India Limited, P.B. No. 39, Harita, Hosur Tamil Nadu-635 109.
2. M/s Frontier Alloy Steels Ltd, KM 25/5 & 6, Kalpi Road, Rania, Kanpur Dehat Kanpur-209304
3. Hindusthan Engineering & Industries Ltd., Delhi Road, Bamunari P.O. - Bamunari, Distt-Hooghly (W.B.) -712250
4. Raneka Industries Ltd., Plot No.15,16,17, Sector-3 (Sagore), Pithampur, Distt. - Dhar (MP) Pin-454775
5. Texmaco Rail & Engineering Limited (Steel Foundry), Belgharia, 24- Parganas, Kolkata-700 056
6. Titagarh Wagons Ltd. (Unit: Titagarh Steels), 1, A.Q. Road, PO-Titagarh, Distt- 24 Parganas Kolkata-700119

Sub: Minutes of meeting held at RDSO on 11/01/2018 regarding failure of CBC/Draft gear/TSC in electric locomotives.

Enclosed please find minutes of meeting held at RDSO on 11/01/2018 regarding failure of CBC/Draft gear/TSC in electric locomotives for your information and necessary action please.

(Pratibha Gupta)

For Director General/Electrical

Copy to:

- (a) The Secretary (Elect.), Railway Board, New Delhi-110 001- for kind information please.
- (b) Chief Electrical Engineer, Chittaranjan Locomotive Works, Chittaranjan-713331- for kind information and attention to para 5 for necessary corrective action.
- (c) Chief Electrical Engineer, South Eastern Railway, Garden Reach, Kolkata -700 043.- for kind information please.

Minutes of the meeting held at RDSO on 11.01.2018 regarding failure of CBC in Electric Locomotives

Members Present:

RDSO(Smt/Shri)	Firm(Smt/Shri)-
O. P. Kesari PEDSE	Rajendra Raghuvanshi Sr. Mgr. Escorts Ltd.
Pratibha Gupta JDSE/C&S	A. Prasun Mishra Managr/Inspection, Frontier Alloy Steel Ltd.
Girraj Kishore ADE/C&S	A. N. Mehta Consultant, Texmaco rail & Engg. Ltd.
Santosh Kumar, SSE/Elect	Sudipto Kali Assistant Mgr, Faiveley transport

A meeting was held at RDSO on 19.01.2018 to discuss the failure of CBC in Electric Locomotives. During the meeting following points were discussed:-

- Recent failure of CBC yoke of ELS/BNDM was discussed. It was observed that metallurgical investigation of failed CBC yoke was not done. It was decided that metallurgical investigation of failed sample in any certified lab or RDSO M&C lab should also be done for better analysis of failure.
- Performance reports received from other Railways were also discussed. It was found that most of the failures were of the nature:-
 - Knuckle eye hole crack.
 - Clevis eye hole crack.
- Performance report was received for 3-phase locos only. It was decided to ask performance of both E-type and H-type couplers for conventional and 3-phase electric locomotives.
- However, whatever reports received from railways shows that the performance of M/s Frontier Alloy Steel, M/s Reneka Industries, M/s AD Electrosteel, M/s Besco Ltd and M/s Siena Engg. were not up to the mark.
- M/s Frontier alloy steel has raised some issue regarding mismatch in dimension of pocket size in Motive Power and CLW drawing with reference to actual pocket being made in locos. The details of mismatch and corrective action required is given below:-
 - As per RDSO drawing no. SKDL-3430 Alt-8 the draft gear pocket should be of 625.5(+0/-1.6) mm whereas same dimension as per CLW drawing no. IB021-00310 is 625.5(+1.5/-1.5) mm. However M/s Frontier pointed out that in some shells this dimensions was found up to 628-631 mm. More length of pocket size in the shell leads to slack fitment of yoke and it gets pushed behind during service leading to jamming of yoke pin.

Corrective action:- Pocket dimensions need to be revised in CLW drawing no. IB021-00310 from 625.5(+1.5/-1.5) mm to 625.5(=0/-1.5) mm as per RDSO drawing no. SKDL-3430 Alt-8.

(ii)

M/s Frontier also pointed out that length of front stop to head stock was found up to 385 mm which should be 381.5 mm as per RDSO drawing no. SKDL-3430. This causes the yoke pin to jam in CBC shank hole and restricts the lateral movement of the CBC.

Corrective action:- CLW to ensure that length of front stop to head stock is as per RDSO drawing no. SKDL-3430 Alt-8.

(iii)

As per drawing no. SKDL-3430 height of draft gear pocket should 308 mm whereas per CLW drawing IB021-00310 the draft gear pocket size is 337 mm. A plate of 28 mm thickness is being provided above the yoke pin support plate. However a gap exists between the roof of under sill and yoke support plate. At the time of impact the draft gear along with the yoke is pushed towards this gap. This also restricts the lateral movement of the CBC.

Corrective action:- height of draft gear pocket size needs to be revised in CLW drawing no. IB021-00310 from 337 mm to 308 mm as per RDSO drawing no. SKDL-3430 Alt-8.

Or

M/s Frontier suggested that one more sim of 28 mm thickness can be provided between the roof of under sill and yoke support plate.