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भारत सरकार – रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ – 226 011
Government of India – Ministry of railways
Research, Designs & Standards Organization,
Lucknow – 226 011

2216

No. EL/3.2.13/6

Date: 27 08 2018

- (i) Chief Electrical Engineer, Southern Railway, Park Town, Chennai-600 003
- (ii) Chief Electrical Engineer, South Central Railway Secunderabad-500 071
- (iii) Chief Electrical Engineer, Chittaranjan, Locomotives, Works, Chittaranjan-
713 331

Sub: Minutes of the meeting held at RDSO on failure of fabricated bolster of WAP-4 electric locomotives.

The minutes of the meeting on failure of fabricated bolster of WAP-4 electric locomotives held at RDSO on 27.08.2018 is enclosed herewith for kind information please.

(Pratibha Gupta)
for Director General/ Electrical

Encl: Minutes of meeting.

Copy to:- M/s Anup Malleables Ltd. GT Road, Kandra, PO Bhitia Govindpur
Dhanbad- 828 109 – for kind information and necessary action please.

Minutes of the meeting held at RDSO on 27.08.2018 regarding failure of Fabricated Bolster in WAP-4 electric locomotives

Member Present:

RDSO(Shri/ Smt)	Railway(S/Shri)	Firm (S/Shri)
O. P. Kesari, PED	Manu Augustine SSE/ELS/ED	Amit Agarwal, GM, M/s Anup Malleables
Pratibha Gupta, JDSE/Mech.	Mukesh Kumar Tech Gr. III/ ELS/ED	Ranjan Mitra, Dy. Chief Engineer, M/s Anup Malleables
Girraj Kishore, ADE/Mech.		
Santosh Kumar, SSE/D/Elect.		
Rajiv Kumar JE/D/Elect.		

Premature failure of fabricated bolster of M/s Anup Malleables was reported by ELS/ED in loco no. 22248 (WAP-4) after service of only 2 years.

A meeting was held at RDSO on 27.08.2018 to discuss the failures of fabricated bolster in WAP-4 electric locomotive. During the meeting following points were discussed:

1. Representative of ELS/ED presented the failure details of fabricated bolster at ELS/ED, which is as under:

SN	Firm	Population	Failure	FRPCPY
1.	Anup	23	03	12.5 %
2.	Simplex	14	Nil	Nil

2. Performance received from other Railways were also discussed during the meeting.

(i) South Central Railway

SN	Make	2015-16			2016-17			2017-18			2018-Upto Jun-18		
		Pop	No. of Fail ure	FR PC PY	Pop	No of Fail ure	FR PC PY	Pop	No. of Fail ure	FR PC PY	Pop	No. of Fail ure	FR PC PY
1	Simplex	38	Nil	0	37	5	13.5	57	1	1.8	60	Nil	0
2	Anup	14	Nil	0	29	2	6.9	34	3	8.8	34	Nil	0
3	BEC	4	Nil	0	4	Nil	0	4	1	25	4	Nil	0

In West Central Railway also 8 no. fabricated bolster of M/s Anup Malleables make failed during 2016-17 and 2 nos. failed in 2017-18 (up to June).

3. It was noticed that in ELS/BZA, 2 nos. fabricated bolster cracked just after 2 month of service in March-2018. Firm was advised to visit ELS/BZA and analyse the root cause of failure. Firm asked to submit the joint note and detailed investigation report within 15 days.
4. Representative of ELS/ED showed the picture of the failures. In view of ELS/ED failure are due to
- i. It is strongly suspected that the cause of crack is due to poor strengthening of the box section on account of poor welding of the stiffener rib (inter section stiffener plate) at the location.
 - ii. As per drawing No. SK-VL 207 many plates are required to be welded inside both laterally and longitudinally to improve the strength of bolster.
 - iii. It is suspected that the inside welding is not done properly or discontinuous.
5. Performance of the fabricated bolster of M/s Anup Malleables is very poor. Firm's representative has not come with any detailed failure report. Firm was advised submit corrective action plan to prevent repetition of the failure along with the relevant test reports from approved labs.



(Pratibha Gupta)
For Director General/Electrical