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Government of India
Ministry of Railways
Research, Designs &
Standards Organization,
LUCKNOW - 226011



EL/2.2.1/High Reach

Date: 29.01.2020.

To,

M/s. Faiveley Transport Rail Technologies India Ltd.,

P.Box -39, Harita.

Hosur-635 109.

Sub: Minutes of Meeting on Performance of High Reach Pantograph Type LX 3600 on 24.01.2020 at RDSO.

In reference to above subject, Minutes of Meeting are being issued for your necessary action.

U 29/01/2020
(Aseem Kumar)

Encl: As above:

for Director General/Elect.

Copy to:

1. Secretary (Electrical), Railway Board, Rail Bhavan, New Delhi-110 001.
(Kind Attn: Sh. Kishore Vaibhav, DEE/RS/RB) .--- For kind information
2. Principal Chief Electrical Engineer, Northern Railway, Baroda House, New Delhi-110 001.--- For kind information and necessary action please
3. Principal Chief Electrical Engineer, Western Railway, Churchgate, Mumbai-400 020. - - - For kind information and necessary action please.
4. Principal Chief Electrical Engineer, North Central Railway, Subedarganj, ALLahabad-211 001--- For kind information and necessary action please
5. Principal Chief Electrical Engineer Chittaranjan Locomotives Works, Chittaranjan-713331 --- For kind information and necessary action please

U 29/01/2020
(Aseem Kumar)

Encl: As above:

for Director General/Elect.

Minutes of Meeting on Performance of High Reach Pantograph

Type LX 3600 on 24.01.2020 at RDSO

Member Present:

SN	Name (S/Shri)	Designation
RDSO		
1	Sanjiv Swarup	PEDSE
2	Aseem Kumar	DSE/Pn.
3	V. K. Yadav	SSE/D/Elect.
Railways		
1	Harikesh Meena	SrDEE/TRS/BRC
2	M. K. Gupta	ADEE/TRS/GZB
3	S. Swain	SSE/TRS/BRC

SN	Name (S/Shri)	Designation
M/s. Faiveley		
1	Sridhar P.V.	SrGM/Marketing
2	Seetharam K.	Manager Product Engg.
3	Milind Basle	DGM/Marketing
4	Ranmal Singh	Service Engineer

A meeting was held at RDSO in continuation to the meeting held at Railway Board on 14.1.2020 for reviewing the performance of High Reach Pantograph of M/s. Faiveley type LX 3600 for electric locomotives. Following were discussed during the meeting:

1. Current Collection with High Reach Pantograph of M/s. Faiveley was carried out by NR in presence of representatives of M/s. Faiveley. Sparking at a number of locations was observed during current collection specially at higher speeds as decided in meeting at Railway Board further trials were done and the firm submitted the joint notes between firm's representative and CLI's of NR done on 16.01.2020 to 22.01.2020. NR is requested to involve TRS and TRD staff and current collection report should be made through OLIVER-G. NR reported that OLIVER-G is in process of procurement.
2. NR reported that braided rubber air pipe had burnt due to sparking which was replaced by firm. As a remedial measure, firm will change braided rubber air pipe to Teflon tube or Poly amide in all units supplied by them.
3. WR and NR will conduct further measurements on the High Reach Pantograph in high speed section of High Rise as well as conventional OHE to observe the behavior of High Reach Pantograph. Checking should be jointly done along with TRD staff having OLIVER-G measurement facility in WAP-5/WAP-7 loco. Measurements in Gatiman express may also be carried out by NR and NCR providing High Reach Pantograph in 160kmph fit WAP-5 locomotive. These measurements should be done in both knee leading and knee trailing positions of the pantograph involving the firm and results to be informed to RDSO.

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4. Two High Reach Pantographs supplied by M/s. Faiveley have been taken by ELS/BRC and ELS/GZB from CLW. Current collection in high rise OHE is to be carried out in High Rise OHE section of WR after fitment of both High Reach Pantograph in one WAP-5/WAP-7 loco. M/s. Faiveley is advised to associate during fitment of pantograph and during current collection trials from 29.01.2020 onwards as discussed in the meeting.
5. Instrumentation as discussed in the meeting on 14.01.2020 at Railway Board to measure contact force, contact wire height, contact point displacement in vertical direction during run and current collection as per BS EN 50317: 2012, is to be carried out by firm. Firm apprised that they will contact their centre of competence and try to arrange the same.
6. Wind tunnel test up to 3.8m height of pantograph should be planned to be carried out by the firm and if the facilities are not available, then simulation of the same should be expedited and report regarding the same should be submitted. It was informed that many other agencies are doing simulation by making their smaller models of Missiles, Aircraft, wagons etc at IIT Kanpur Wind tunnel facility, which may be made use of by the firm.
7. Firm apprised that they are at final stage of design of High Reach Pantograph as per Revision "3" of the RDSO specification and will submit their design shortly.