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भारत सरकार-रेल मंत्रालय अनुसंधान अभिकल्प और मानक संगठन लखनऊ-226011

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

No. EL/3.2.21

Dt. 26.04.2019

मैसर्स सेफ सिस्टम इण्डिया प्रा० लिमि०,	मैसर्स इलास्टीमोल्ड इण्डिया प्रा० लिमि०,
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मैसर्स रेकेम आरपीजी (प्रा0) लिमि.,	मैसर्स टीई कनेक्टिविटी इंडिया प्रा0 लिमिटेड,
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नियर हलोल जीआईडीसी,	इंडस्टियल एरिया, वाइटफील्ड रोड,
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Sub: Minutes of Meeting on reliability improvements of CHT & HV bushing held at RDSO, Lucknow on 26.04.2019.

A meeting was conducted with representatives of CHT & HV bushing manufacturers and Zonal Railways at RDSO, Lucknow on 26.04.2019 on subject matter. In this regard, minutes of meeting is enclosed herewith for information and implementation by all concerned.

संलग्नकः उपरोक्त प्रतिलिपिः

कृते महानिदेशक / विद्युत

- मुख्य विद्युत इंजीनियर for kind information.
 - उत्तर रेलवे, बड़ोदा हाउस, नयी दिल्ली 110001.
 - मध्य रेलवे, मुम्बई सी.एस.टी 400001.
 - उत्तर मध्य रेलवे, सुबेदार गंज, इलाहाबाद 211033.
 - पूर्व रेलवे, फेयरली प्लेस, कोलकाता 700001.
 - पूर्व मध्य रेलवे, हाजीपुर, बिहार -844101.
 - पूर्व तटीय रेलवे, भुवनेभवर 751016.
 - दक्षिण रेलवे, पार्क टाउन, चेन्नई 600003.
 - दक्षिण मध्य रेलवे, रेल निलायम, सिकन्द्राबाद 500371.
 - दक्षिण पूर्व रेलवे, गार्डनरीच, कोलकाता 700043.
 - पश्चिम रेलवे, चर्चगेट, मुम्बई 400020.
 - पश्चिम मध्य रेलवे, जबलपुर 482001.
 - दक्षिण पूर्व मध्य रेलवे, बिलासपुर 495004.
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संलग्नकः उपरोक्त

(सुधार रजन) कृते महानिदेशक / विद्युत Minutes of meeting for Performance Review Meeting of Cable Head Termination (CHT) & HV Bushing at RDSO on 26.04.2019 with OEMs & Railways

Members Present

RDSO

(S/Shri)

- 1. Om Prakash Kesari, PEDSE
- 2. Sudhir Ranjan, EDSE(System)
- 3. Arvind Pandey, DDSE(System)
- 4. Yogesh Kumar, JE(System)

Railways

- (S/Shri)
- 1. Abhishek Singh, DEE/ELS/JHS/NCR
- 2. Avinash Kumar Patel, SSE/ELS/JHS/NCR
- 3. Arup Kumar Sen, SSE/CLW
- 4. Kaushal Yadav, SSE/ELS/CNB/NCR

FIRMS (S/Shri)

- 1. Abhishek Patel, M/s Elastimold (EIPL)
- 2. B.K.Maurya, M/s Safe System
- 3. Y V Sahi, M/s TE connectivity
- 4. Farrookh Kidwai, M/s Raychem RPG

In line with MOM dated 05.09.2018, a meeting was convened at RDSO on 26.04.2019 to discuss the performance of CHT/HV Bushing & compliance of decisions taken in earlier meeting on 05.09.2018, and reliability issues of HV Bushings of M/s EIPL as reported by SR & SER.

The summary of discussions is as under:-

At the outset, EDSE (System) welcomed all the members for attending the meeting. EDSE (System) requested OEMs to furnish compliance of each item, discussed during the meeting on 05.09.2018 besides action plan to arrest the failures.

- 1. Failures of 13 nos of M/s EIPL make HV Bushings were reported during 2018-19 wherein flashing of bushings took place mostly during rainy season. It is observed that the designs of cyclo-epoxy petticoat disc of bushing are improper, leading to accumulation of dust & water over it which is finally causing flashing of bushings. M/s EIPL stated that they are in process of modifying the existing design of bushings & will offer the modified design within 2 months. The prototype of new designed bushings will be tested by CLW jointly with RDSO. However, as a short term measure, till the design is finalised, firm proposed to provide insulating sleeve on base & cap on top in existing M/s EIPL make HV bushings to avoid flashing of bushings. All the HV bushings shall be modified as proposed by M/s EIPL in progressive manner & shall be completed before onset of monsoon season. All loco sheds are advised to keep close liaison with firm to complete the modification task.
- 2. There had been failures of HV bushings due to flashing from C-clamp. It was decided to remove the C-clamp & make direct connection with insulated cable of suitable rating. However, before removal of C-clamp from all existing bushings, M/s EIPL will provide the Bushing without C-clamp in one loco each at ELS/CNB, ELS/BRC,ELS/RPM & ELS/HWH within a week time. Based on the performance feedback from aforesaid sheds, decision will be taken on further removal of C-clamp. In case, the short term measures are not successful, M/s EIPL will replace existing roof top bushings with new designs.

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- 3. In order to take decision regarding HV cable with plug for substance of its rubber item i.e. 775 BLR, detailed failure report from Railways shall be collected by RDSO alongwith recommendation for periodicity of its replacement.
- 4. M/s Safe System shall furnish the failure investigation report for epoxy bushing crack at ELS/LGD/SCR within fortnight.
- 5. Railways requested for submission of spare parts list of CHT & HV bushings. OEMs were advised to furnish the aforesaid spare parts list to sheds within a week time. This item was also discussed during last MOM dated 11.09.2018 but not complied by OEMs.
- 6. M/s TE was advised to furnish the investigation report for the failure of CHT flashing leading to OCR tripping at ELS/LGD. M/s TE stated that the study on material used in CHT is completed and details will be submitted by 05.05.2019 including investigation report.

RDSO 76:04.19 CLW

M/s EIP

M/s Safe System

M/s Raychem

M/s TE Connectivity