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सत्यमेव जयते

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

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

Om Prakash Kesari
Principal Executive Director Standards Electrical

D.O.No.EL.8.5.10.1

Dt:03.12.2018

Dear Shri Ghanshyam Singh ji,

Sub: PCDO for the month of November, 2018.

- 1.0 **HIGHLIGHTS**
- 1.1 **Code of Procedure for Ultrasonic Testing (UST) of Rotor shaft of Traction motor type 6FXA-7059**
Code of Procedure for Ultrasonic Testing (UST) of Rotor shaft of Traction motor type 6FXA-7059(Code of Procedure No. MC-171 of October 2018 First Issue) had been issued to Zonal Railways/PUs vide RDSO's letter no. EL/3.2.66 dated 26.11.2018.
- 1.2 **Amendment no. 2 of Technical Circular no. RDSO/2012/ EL/ TC/119 Rev-1 dated 20.3.2013**
Amendment no. 2 of Technical Circular no. RDSO/2012/ EL/ TC/119 Rev-1 dated 20.3.2013 for Setting of number of pulse/revolution and wheel diameter with Microprocessor based Control & fault diagnostic System (MPCS) V3 for correct indication of speed had been issued vide letter No. EL/4.2.15/Gen dated 28.11.2018.
- 1.3 The revised modifications required for initialization of Slave locomotive from Master locomotive was issued to N.Railway & W.Railway for operation in Push-Pull mode vide letter no. EL/3.1.35/4 dated. 15.11.18.

2.0 RELIABILITY IMPROVEMENT

- 2.1 The Minutes of Meeting held at RDSO on 02.11.18 on Reliability issues of CGPISL make IGBT based propulsion system fitted in ELS/RPM based 3-Phase Electric Locomotives had been issued vide letter no. EL/11.5.5/21 dated 14.11.18.
- 2.2 The Minutes of Meeting held at RDSO on 16.11.18 on Reliability issues of CGPISL make IGBT based converters and TCN-VCU fitted in 3-Phase Electric Locomotives had been issued vide letter no. EL/11.5.5/21 dated 16.11.18.
- 2.3 The minutes of meeting held on 16.11.2018 at RDSO with M/s. KBIL to discuss various reliability and developmental related issues of CCB Brake system for 3 Phase locomotive has been released vide RDSO letter no. EL/3.2.19/3 phase (CCB) dated 26.11.2018.
- 2.4 The minutes of meeting held on 14.11.2018 at RDSO with M/s. FTRTIL to discuss various reliability and developmental related issues of E 70 brake system for 3 Phase locomotive has been released vide RDSO letter no. EL/3.2.19/3 phase (CCB) dated 26.11.2018.
- 2.5 The minutes of meeting on issues of failures of high reach pantograph and MRVC II pantograph with M/s. Schunk Metal & Carbon (India) Pvt Ltd. has been issued vide RDSO letter no. EL/2.2.1/High reach dated 27.11.2018.
- 2.6 A meeting held at RDSO on 27.11.2018 with representative of M/s BHC, Germany of Spheribloc. Deficiencies noticed at ELS/LGD during firm's visit were discussed. The minutes of meeting (MOM) has been issued vide this office letter No. EL/3.1.35/12(SB) dated 29.11.2018.
- 2.7 Review meeting for supply issues of bearings of conventional & 3-ph locomotives had been carried out on 16.11.2018. The meeting was attended by bearing manufacturers and representatives from CLW and Zonal Railways. Pending POs of all kind of bearings received from Railways were discussed with the firms. Supply targets for pending POs had been given by the firms. The minutes meeting had been issued vide letter no. EL/2.2.13 dated 28.11.2018.

3.0 PROTOTYPE TESTING/QUALITY AUDIT

- 3.1 Dispatch clearance of two units of high reach Pantograph type LX 3600 of M/s. Faiveley Transport Rail Technologies (India) Ltd. equipped with ADD and ORD system along with control unit and air feeding insulated pipe line is being accorded for supply to CLW against CLW P.O for fitment on locomotive vide RDSO letter no. EL/2.2.1/high Reach dated 26.11.2018. Firm is also advised to carry out the current collection test.
- 3.2 The wind tunnel test of High reach Pantograph type IR 05HR developed by M/s. Contransys has been carried out at NWTF/ IIT Kanpur has been witnessed by RDSO. The test report is awaited.

4.0 SPECIFICATION/STR:

- 4.1 RDSO specification no. RDSO/2018/EL/SPEC/0141, Rev'0' title "Specification for broad gauge 5000Hp,tap changer controlled 25KV 50HZ AC electric locomotive with regenerative breaking (WAG7)" was issued on 28.11.2018.

5.0 DEVELOPMENTAL ACTIVITIES

- 5.1 The MoM has been issued regarding provision for complete function of TCMS in existing TCN VCU for feedback by the firms vide letter no. EL/4.2.17 dated 02.11.18.
- 5.2 The revised equipment layout for WAG11 loco with under slung transformer has been scrutinized and found generally in order vide letter no. EL/11.5.5/20 dated 08.11.18.
- 5.4 Limited approval was accorded to download modified software release package 418W01BT in five WAG9/9H locomotives at ELS/VSKP, five WAP7 locomotives at ELS/HWH and 2 WAG9H locomotives at ELS/KYN in BTIPL makes propulsion system only to fix problems reported from sheds vide letter no. EL/11.5.5/1/IGBT/BT dated 14.11.18,.

- 5.5 The MoM held at ELS/TKD on 30.10.18 on performance review of 3-Phase electric locomotives had been issued vide letter no. EL/11.5.5/21 dated 14.11.18.
- 5.6 Approval was accorded to CRIS for placement position of RMT (Rail MSS Terminal) on Electric locomotive roof vide letter no. EL/3.1.28, dated 01/11/2018.
- 5.7 Test protocol for Routine test of 1578 kVA IGBT based 3-phase drive air condition AC EMU transformer approved vide note no: Note No. EL/Indig. EMU/BHEL dated: 23.11.2018
- 5.8 Test protocol for Routine & type test of 1276 kVA IGBT based MEMU transformer approved vide note no: Note No. EL/Indig. EMU/BHEL dated: 23.11.2018.
- 5.9 Design documents of Line Voltage Transformer (LVT) for 25 KV BG AC EMU/MEMU of M/s SADTEM make approved vide note no: EL/Indig.EMU/BHEL dated: 23.11.2018.
- 5.10 Capability cum capacity assessment of M/s. Matsushi Power Technologies, Dehradun has been carried out on 17.11.2018 for development of LED based twin beam head light as per RDSO's Specification No. RDSO/2017/EL/SPEC/0134, Rev.0.
- 5.11 The observations of delivery sheet-customer control sheet and remote monitoring of WAG12 submitted by M/s MELPL had been issued vide letter no. EL/3.1.35/24 dated 06.11.18,.
- 5.12 The observations of the EMC field test procedure submitted by M/s MELPL had been issued vide letter no. EL/3.1.35/24 dated 14.11.18.
- 5.13 Oscillation trial of single unit of WAG11 was conducted between SRE-MB section from 14.11.18 to 19.11.18 by Northern Railways in presence of RDSO representatives.

6.0 OTHER ITEMS

- 6.1 A performance review meeting on 180 KVA SIV and Microprocessor based control and fault diagnostic system is to be held on 21.12.2018. Concerned letter no. EL/1.2.9.1 dated 15.11.2018 has been issued to railways.
- 6.2 A meeting on DPWCS, Brake System etc for 3 phase Electric locomotive is to be held on 19.12.2018. Concerned letter no. EL/3.2.19/ 3 phase dated 27.11.2018 has been issued to suppliers.
- 6.3 This office advised Railways to re-commission and provide EP- Assist brake system in WAP-5/WAP-7 type of locomotive homed at ELS/GZB from the earlier supplied 04 units which are non- functional vide letter no. EL/3.2.19/EP- Assist dated 28.11.2018.
- 6.4 Motive Power dte was advised for addendum & corrigendum to amendment no.1 to final speed certificate for operation of train WAGC3 loco converted from WDG3A. Further, Amendment no.2 has been issued vide MP dte letter no. SD.WAGC3.11 dated 19.11.2018.
- 6.5 Simulation studies were carried out for push pull operation with 1 WAP5 in lead & 1 in rear from CSTM to NZM and result were advised to RB.
- 6.6 EDSE/System along with ADE/System visited DLW on 14/11/2018 to attend CRS inspection of WAGC3 loco.
- 6.7 Railway Board was Informed vide this office letter EL/3.2.176/2 dated 08.11.2018 regarding last five year performance of Oil Cooling Unit for Three phase Electric Locomotive sought vide Railway Board letter no: 2007/Elect(TRS)/441/1 dated 05.10.2018.
- 6.8 Design Document No. TEC-KME-RDMT-S001-05, Version 5 (total 261 pages) including 13 attachments of M/s Zhuzhou CRRC TEC for 3-ph IGBT based electrics for Kolkata Metro as per RDSO specification No. RDSO/PE/SPEC/EMU/0182, Rev.1 submitted through DSE/Metro's note numbers EL/MRS/3-phase/Zhuzhou CRRC-Tec dated 24.08.2018 & 26.11.2018 had been examined and comments communicated vide Electrical Directorate's note no. EL/3.2.182/K. Metro/Zhuzhou dated 29.11.2018.

7.0 Fresh Vendor Registration application during Nov, 2018 for JDSE/Mech Group

| Group | No. of Online Application received | No. of Application registered after fee verification in Nov. 2018 | No. of application where query raised | of application rejected due to deficiencies |
|------------|------------------------------------|---|---------------------------------------|---|
| JDSE(Mech) | 1 | 1 | 0 | 0 |

with regards,

Yours sincerely,

(Om Prakash Kesari)

**Shri Ghanshyam Singh,
Member Traction,
Railway Board, Rail Bhavan,
New Delhi-110 001**



Copy for kind information to-

Additional Member (Electrical), Railway Board, Rail Bhawan, New Delhi.

(Om Prakash Kesari)
For Director General/Electrical

Annexure-I

Status of un-modified motor support (TM-1 & 2 locations) in WAP7 & WAG9/9H three phase locomotives

| Rly | Shed | TM location | WA | WAG9/9H | Total | Action plan | PDC |
|-----|------|-------------|-----|---------|-------|---|--------|
| CR | AQ | 1,2&3 | 16 | 226 | 242 | 84 bogies have been modified by M/s Ashika commercial pvt ltd Kolkata. 158 bogies yet to be modified. For TM 3 position not being changed. | Mar'19 |
| | | 3 | | | 71 | | |
| CR | KYN | ALL | 0 | 21 | 21 | All modified | NA |
| ER | HWH | ALL | 0 | 0 | 0 | All modified | NA |
| ECR | GMO | 1&2 | 0 | 198 | 198 | Tender awarded to M/s. Ved, Kanpur. Work started in Jan.2018. 79 bogies have been modified. | Mar'19 |
| | | 3 | 0 | 49 | 49 | 47 bogies have been modified | |
| ECo | WAT | 1&2 | 0 | 12 | 12 | All bogies modified by M/s Ved. | NA |
| | | 3 | 0 | 12 | 12 | For 4 bogies purchase order given to M/s. Ved, Kanpur. | Dec'18 |
| NR | GZB | ALL | 143 | 0 | 143 | 32 bogies modified M/s. Ved, Kanpur. | Jan'19 |
| NR | LDH | ALL | 0 | 0 | 0 | All modified | NA |
| NCR | CNB | ALL | 0 | 0 | 0 | All modified | NA |
| SR | RPM | 1 & 2 | 52 | 0 | 52 | 49 bogies modified by M/s Ved Kanpur. | Jan'19 |
| | | 3 | 85 | 0 | 85 | 66 bogies modified. | |
| SCR | LGD | 1&2 | 68 | 164 | 232 | 163 bogies have been modified by M/s. Ved, Kanpur. | Mar'19 |
| | | 3 | 84 | 206 | 290 | Modification work to be done during POH. But not being done by POH shops. | |
| SER | TATA | 1,2&3 | 0 | 40 | 40 | All bogies have been modified by M/s. Anup Malleables, Jharkhand. | NA |
| | | 3 | 0 | 70 | 70 | 21 no. bogies have been modified by M/s Ved, Kanpur. For 49 bogies tender opened on 26.09.2018 but no one participated in tender. Retendering under progress. | |
| SEC | BIA | 1,2&3 | 16 | 57 | 73 | 57 nos. modified by M/s. Anup Malleables, Jharkhand. | Jan'19 |
| WR | BRC | ALL | 0 | 0 | 0 | All modified | NA |
| WC | TKD | 1, 2 & 3 | 39 | 77 | 116 | 41 bogies have been modified by M/s M/s. Anup Malleables, Jharkhand. 75 bogies yet to be modified. For TM 3 position, 20 bogies yet to be modified. | Mar'19 |
| | | 3 | 9 | 11 | 20 | | |

Annexure- II

Status of modified/unmodified brake lever of WAG-9/9H locomotive as per MS 455 issued on Dec'16

| S.N. | Shed | No. of WAG-9 / 9H locos | Modified with TBU/PBU | Un-Modified with TBU/PBU | Converted to conventional rigging |
|--------------|------|-------------------------|-----------------------|--------------------------|-----------------------------------|
| 1 | BSL | 15 | 13 | 02 | 0 |
| 2 | AQ | 156 | 64 | 92 | 0 |
| 3 | KYN | 67 | 0 | 67 | 0 |
| 4 | GMO | 179 | 0 | 179 | 0 |
| 5 | WAT | 139 | 14 | 125 | 0 |
| 6 | LDH | 21 | 21 | 0 | 0 |
| 7 | CNB | 13 | 9 | 4 | 0 |
| 8 | LGD | 112 | 20 | 92 | 0 |
| 9 | KZJ | 31 | 28 | 3 | 0 |
| 10 | TATA | 152 | 1 | 151 | 0 |
| 11 | BIA | 95 | 31 | 64 | 0 |
| 12 | TKD | 80 | 52 | 27 | 1 |
| 13 | NKJ | 29 | 11 | 14 | 4 |
| 14 | BNDM | 34 | 15 | 19 | 0 |
| Total | | 1123 | 279 | 839 | 5 |

Progress of RAP implementation in 3-phase loco (Position upto Nov. '18)

| Railway | Shed | Replacement of EPRM after 6 years of service | | Create low pressure zone by providing Baffle plates | | Blocking leak holes in the Machine Room | | Reed relay modification | | Cab redundancy modification | |
|--------------|------------|--|-----------------------|---|-----------------------|---|-----------------------|-------------------------|-----------------------|-----------------------------|-----------------------|
| | | No. of Locos to be done | Cumulative up to date | No. of Locos to be done | Cumulative up to date | No. of Locos to be done | Cumulative up to date | No. of Locos to be done | Cumulative up to date | No. of Locos to be done | Cumulative up to date |
| CR | AQ | 100 | 53 | 175 | 175 | 175 | 175 | 169 | 169 | 169 | 118 |
| CR | KYN | 0 | 0 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| ECOR | WAT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ECR | GMO | 82 | 47 | 195 | 195 | 195 | 195 | 162 | 162 | 163 | 130 |
| ER | HWH | 3 | 3 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| NCR | CNB | 0 | 0 | 28 | 28 | 28 | 28 | 0 | 0 | 28 | 14 |
| NR | GZB | 99 | 65 | 87 | 87 | 187 | 187 | 148 | 148 | 87 | 87 |
| NR | LDH | 0 | 0 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |
| SCR | LGD | 103 | 62 | 207 | 207 | 207 | 207 | 164 | 164 | 164 | 106 |
| SECR | BIA | 14 | 14 | 114 | 113 | 114 | 114 | 102 | 102 | 114 | 101 |
| SER | TAT A | 4 | 0 | 152 | 152 | 152 | 152 | 152 | 152 | 152 | 64 |
| SR | RPM | 0 | 0 | 82 | 82 | 82 | 82 | 63 | 63 | 82 | 71 |
| WCR | TKD | 39 | 39 | 153 | 153 | 153 | 153 | 153 | 153 | 119 | 60 |
| WR | BRC | 9 | 4 | 90 | 90 | 90 | 90 | 83 | 83 | 90 | 90 |
| Grand | TTL | 453 | 287 | 1410 | 1409 | 1510 | 1510 | 1323 | 1323 | 1295 | 968 |