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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:04.02.2019

Dear Shri Ghanashyam Singh ji,

Sub: PCDO for the month of January, 2019.

1.0 HIGHLIGHTS:

- 1.1 A meeting was conducted to discuss comments on draft FRS No. RDSO/2018/EoTT, Rev 'Final Draft', and reasoned document, on 11.01.2019 at RDSO Lucknow. Based on the discussion, the Final draft FRS has been modified. The finalized modified **FRS No. RDSO/2018/EoTT, Rev 'Final'**, along with reasoned document, has been sent to Railway Board for approval, vide RDSO letter No. EL/4.2.15/EoTT dated 22.01.2019.
- 1.2 Coupler force, jerk, controllability and COCR trial of **WAP-7**, one locomotive at front and one at the rear of the rake (**push pull**), was conducted between IGP-KSRA & NZM-LAR, from 16th to 25th of Jan'19.
- 1.3 Modification Sheet NO. RDSO/2019/EL/MS/ 0476 (Rev. '0') dated 22.01.2019 for modification in mounting arrangement of Leather Bellows of Traction motor type 6FRA-6068 has been prepared and issued to all concerned vide letter No. EL/3.2.85 dated 22.01.2019. It is expected that implementation of this modification will improve reliability of Leather Bellows of Traction motors of Electric locomotives.
- 1.4 Specification no. RDSO/2017/EL/SPEC/0134 (Rev.-0) for twin beam LED head light for electric locomotives has been revised as RDSO/2017/EL/SPEC/0134 (Rev.-1)

and draft copy of the same has been uploaded on RDSO website on 31.01.2019 for comments & suggestions, as per the ISO guidelines.

2.0 DEVELOPMENTAL WORKS:

- 2.1 Vide letter no. EL/3.1.35/4 dated 28.01.19, scheme for modification in loco as well as carriage, for operation of WAP7/WAP5 locomotive in push pull mode has been issued.
- 2.2 The deficiencies on fresh registration application for 2X130 kVA SIV was forwarded to firm vide RDSO letter no. EL/1.2.9.1 dated 08.01.2019, and after clearances of deficiencies this office advised firm to conduct capacity /capability assessment at their premises, vide RDSO letter no. EL/1.2.9.1 dated 28.01.2019.
- 2.3 RDSO has carried out the brake test of loco no 32146 provided with conventional brake system (type IRAB) jointly with CLW and ELS/GMO.
- 2.4 A proposal for speed certificate of WAG9C, provided with IRAB type brake system, has been prepared and forwarded to Motive Power directorate for finalization.
- 2.5 Drawing no. SKEL-5033 titled as 'loco outline drawings for 25kv ac locomotive WAP7HS' was approved on 17.01.2019.
- 2.6 Comments offered vide note EL/8.1.25.1/Kol.Metro/Dalian dated 31.01.2019 on the documents for 750V DC metro rolling stock with 3-Phase Electric propulsion system submitted vide PS&EMU note EL/MRS/3-Phase/GP-217/DLRC dated 30.11.2018 & 27.12.2018.
- 2.7 M/s AAL make AC earthing switch for VCB for 25 kV 3-phase MEMUs bearing doc. No. TBSG/ACMEMU/01/AC Earthing switch, Rev. 0 against RCF PO no. 029160577.T1720523 dated 15.01.2018 has been cleared vide note no. EL/Indig. EMU/ BHEL dated 02.01.2019.
- 2.8 MOM held on 04.01.2019 at RDSO, Lucknow, on WAG11 locomotive transformer of M/s CGPISL make, for improvement in proposed transformer, was issued vide letter no. EL/3.2.1/3-phase dated 04.01.2019.
- 2.9 Design document of M/s AAL make VCB type VCBA 25.10.Tr for 25 kV 3-phase MEMUs has been cleared vide note no. EL/Indig. EMU/ BHEL dated 02.01.2019.

- 2.10 GTP (Guaranteed Technical Particulars), OGA(Outline General Arrangement) drawing no. CGT3-OGA-15763F, Rev. 01 and routine & type test procedure no. CGT3-ACR-15834E, Rev.01 of modified WDG4(WAG11) locomotive transformer has been cleared vide letter no. EL/3.2.1/3-phase dated 31.01.2019.
- 2.11 Tender document of WAG-9 Locomotive on M/s BHEL scrutinized and send to Railway Board vide letter no: EL/31.22/4 dated 21/01/2019.
- 2.12 Online application No. 466 dated 21.12.2018 submitted by M/s. Ensave Devices Pvt. Ltd., District-Palghar, Vasai-401208(Maharashtra) for vendor registration of LED based twin beam head light has been scrutinized.
- 2.13 Capability cum capacity assessment of M/s. Power Technologies Corporation; Dehradun (Uttarakhand) has been carried out on 25.01.2019 for development of LED based twin beam head light as per RDSO's Specification No. RDSO/2017/EL/SPEC/0134, Rev.0.
- 2.14 M/s Hindustan Petroleum Corporation Limited proposed their equivalent grade oil for gear case of electric locomotives (WAP-5 and WAP-7/WAG-9). A meeting was held at RDSO on 08.01.2019 with firm in this regard. During meeting it was decided that a trial of M/s HPCL oil will be done in 2 WAP-5, and one each in WAP-7 & WAG-9 locomotive. Trial scheme for the same issued to WR and WCR and firm vide this office letter No. EL/3.2.108 (Lube) dated 31.01.2019.
- 2.15 Vide letter no. EL/3.1.35/24 dated 07.01.19, design review/comments on validation details for pantograph documents as per procurement cum maintenance of electric locomotive factory at Madhepura had been issued.
- 2.16 Vide letter no. EL/3.1.35/24 dated 21.01.19, comments of traction motor related documents for WAG12 locomotive had been issued.
- 2.17 Vide letter no. EL/3.1.35/24 dated 24.01.19, design comments on Driver Training Manual Rev.2 as per Procurement cum Maintenance of Electric Locomotive Factory at Madhepura had been issued.
- 2.18 Vide letter no. EL/3.1.35/24 dated 28.01.19, comments/review of mechanical, HVAC & lighting and on battery maintenance manual of WAG12 locomotive had been issued.
- 2.19 Vide letter no. EL/3.1.35/24 dated 30.01.19, comments of traction motor documents for WAG12 Locomotive had been issued.

3.0 RELIABILITY IMPROVEMENT:

- 3.1 Performance review meeting for Microprocessor based Control & fault diagnostic System (MPCS) had been carried out on 21.12.2018. The meeting was attended by M/s Medha and representatives from Zonal Railways. The minutes of performance review meeting on Microprocessor based control and fault diagnostic system (MPCS) had been issued vide letter no. EL/4.2.15/Gen. dated 14.01.2019.
- 3.2 Vide letter no. EL/11.5.5/21 dated 23.01.19, MoM on reliability of M/s Medha make propulsion equipments held at RDSO on 08.01.19 had been issued.
- 3.3 Vide letter no. EL/11.5.5/21 dated 31.01.19, MoM on reliability of M/s CGPISL make propulsion equipments held at RDSO on 15.01.19 had been issued.
- 3.4 The reliability meeting on failures of pressure gauges of 3 Phase locomotive held at RDSO on 16.01.2019 with the suppliers and ELS/BRC. The minutes of meeting has been released vide RDSO letter no. EL/3.2.19/3 phase dated 25.01.2019.
- 3.5 A review meeting on High reach pantograph was held on 24.01.2019, at ELS/TKD with M/s. FTRTIL, M/s. SCHUNK, Railways & CLW.
- 3.6 The cycle timing of Vigilance control device in 3 phase locomotive equipped with E 70 brake system has been Standardized in their proposal by M/s. FTRTIL. However, VCD acknowledgement by independent brake valve (SA-9) is not followed in E 70 brake system. Firm has been advised to made need ful action towards standardization vide RDSO letter no. EL/3.2.19/ 3 phase dated 17.01.2019.
- 3.7 Meeting with OEMs of ESMON & Railways was held on 09.01.19 at RDSO to discuss performance of ESMON and Minutes of meeting (MOM) was circulated vide letter no. EL/2.2.9/10, dated 14.01.2019.

4.0 SPECIFICATION/STR:

- 4.1 A draft SMI no. RDSO/2018/EL/SMI/xxxx Rev "0" has been prepared on checking and setting procedure of various pressure switches being used in E 70 and CCB brake system. The draft SMI is being kept in RDSO website vide RDSO letter no 3.2.19/3 phase dated 04.12.2018. Awaiting for comments/suggestions from OEMs and ZRs.

5.0 PROTOTYPE TESTING/QUALITY AUDIT

- 5.1 Prototype testing of six sets of assembly components (Stator Chamber, End Frames, Labyrinths etc.) of traction motor type 6FRA-6068 manufactured by M/s Narmada Equipments Pvt. Ltd., Bhopal had been conducted jointly by RDSO & CLW from 27.12.2019 to 02.01.2019. Prototype had been rejected due to dimensional deviation. CLW and firm were informed about the rejection of type test vide RDSO's letter no. EL/3.2.182/NEP/Part dated 22.01.2019.

6.0 OTHER ITEMS:

- 6.1 FEA report, drawings, other documents related to DE & NDE ventilator fans for BHEL make traction motor type IM3601AZ for 25 KV AC EMU application submitted by BHEL through PS & EMU Directorate's note no. EL/1.3.16.7/Indigenous EMU/BHEL dated 13.07.2018 had been examined. Acceptance of FEA reports and other comments had been communicated vide Electrical Directorate's notes no. EL/3.2.182 (BHEL) dated 03.01.2019.
- 6.2 Design document No. GR/TD-4217 of traction motor for 3 Phase MEMU coaches with IGBT based propulsion system for BEML project (equivalent to TM type MJC280-1 for MRVC phase II) submitted by M/s BEML through PS & EMU Dte. note no. 1.3.16/6/BEML/MEMU_OB dated 03.12.2018 had been examined. Comments had been communicated to PS & EMU Dte vide note no. EL/3.2.182 (BEML) dated 07.01.2019.
- 6.3 Design Document No. TEC-KME-RDMT-S001-06 of traction motor submitted by M/s Zhuzhou CRRC Times Electric Co. Ltd, had been examined. Type Test Schedule Document No. TEC-KME-RDMT-S001-05 Attachment 3 as well as Test Protocol for Diagnostic cycles for motorette test Doc. No. TEC-KME-RDMT-S001-06 Attachment 4 submitted by M/s Zhuzhou CRRC Times Electric Co. Ltd for traction motor for Kolkata Metro was provisionally approved vide Electrical Directorate's note no. EL/3.2.182/K.Metro/Zhuzhou dated 14.01.2019.
- 6.4 Motorette test specification, NRD0000572133, Rev '0' & document no.TRO/DPT/NT2017.023 and request of M/s Alstom for revise percentage of motors for temperature rise test during routine test for traction motor of WAG12 locomotive had been examined. Comments had been communicated to concerned group vide notes No.EL/3.2.182(Madhepura) dated 25.01.2019 & 29.01.2019.

- 6.5 Comments on the Type test reports of traction motor type SEA-445 for Metro Railway, Kolkata submitted by M/s CRRC Dalian/Toshiba through PS & EMU Directorate's note no. EL/MRS/3-Phase/GP-217/DLRC dated 13.12.2018 had been communicated vide Electrical Directorate's notes no. EL/3.2.182/KM/30(Dalian) dated 29.01.2019.
- 6.6 Detailed information required for Kalka-Shimla Railway Narrow Gauge (NG) was provided to TI directorate vide note no. EL/3.2.1(ZDM3), dated 14.01.2019.

with regards,


Yours sincerely,

 04.2.19
(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.

 04.2.19
(Om Prakash Kesari)
For Director General/Electrical

Annexure-I

Status of un-modified motor support in WAP7 & WAG9/9H three phase locomotives

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Action plan	PDC
CR	AQ	1,2	16	226	242	110 bogies have been modified by M/s Ashika commercial pvt ltd Kolkata. 132 bogies yet to be modified. For TM 3 position not being changed.	Dec'19
		3	16	226	242		
ECR	GMO	1&2	0	198	198	Tender awarded to M/s. Ved, Kanpur. Work started in Jan.2018. 104 bogies have been modified.	Dec'19
		3	0	49	49		
NR	GZB	ALL	143	0	143	50 bogies modified M/s. Ved, Kanpur.	Dec'19
SR	RPM	1 & 2	52	0	52	49 bogies modified by M/s Ved Kanpur.	June'19
		3	86	0	86	66 bogies modified.	
SCR	LGD	1&2	68	164	232	208 bogies have been modified by M/s. Ved, Kanpur.	June'19
		3	84	206	290	Modification work to be done during POH. But not being done by POH shops.	
SCR	KZJ	3	0	8	8	8 bogies Yet to be modified	April 19
SER	TATA	3	0	70	70	21 no. bogies have been modified by M/s Ved, Kanpur. For 49 bogies, retendering under progress. Tender opened under TC.	Dec.'19
SEC R	BIA	1,2&3	16	57	73	69 nos. modified by M/s. Anup Malleables, Jharkhand.	Mar'19
WCR	TKD	1, 2 & 3	39	77	116	53 bogies have been modified by M/s M/s. Anup Malleables, Jharkhand. 75 bogies yet to be modified.	Oct'19
		3	8	12	20	For TM 3 position, 8 bogies modified.	

Note: As informed by Sr. DEEs all modified bogies in the following sheds:

KYN, HWH, WAT, LDH, CNB, BRC, BSL, ED, BNDM, SRC, ET, NKJ

Annexure- II

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

SN	Shed	No. of WAG-9/9H locos	Modified with TBU/PBU	Un-Modified with TBU/PBU	Converted to conventional rigging
1	BSL	16	15	01	0
2	AQ	158	46	112	0
3	KYN	69	16	53	0
4	GMO	177	0	177	0
5	WAT	140	13.5	125.5	1
6	LDH	51	22	0	29
7	CNB	42	9	3	30
8	LGD	112	20	92	0
9	KZJ +GY(D)	38	26	3	9
10	TATA	152	1	151	0
11	BIA	102	31	69	2
12	TKD	103	78	3	22
13	NKJ	29	11	14	4
14	BNDM	41	18	19	4
Total		1230	306.5	822.5	101