

Fax : 0522 - 2465717
Telephone : 0522 - 2454070
e-mail: edse.rdso@gmail.com



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:03.04.2019

Dear Shri Ghanshyam Singh ji,

Sub: PCDO for the month of March, 2019.

1.0 HIGHLIGHTS

- 1.1 Final speed certificate for operation of WAG9C class of electric locomotive fitted with conventional brake system (Type IRAB) upto maximum speed of 100 km/h on IR track has been issued by RDSO. ECR is advised to carry out EBD trial of loco before regular use and CLW is requested to submit final test report towards the corrective action taken against testing and validation of the joint report carried out by CLW, RDSO and ELS/GMO vide RDSO letter no. EL/3.2.19/G/3 phase dated 26.03.19.
- 1.2 M/s Sequoia Safety Product Pvt. Ltd, Ghaziabad upgraded to "List of RDSO approved Vendors" for Elastic Ring for three phase electric locomotives as per RDSO's Specification No. RDSO/2007/EL/SPEC/0053 Rev. "0" with amendment No. 1 & drawing No. SKEL-4717, Alt.'3', vide this office letter No. EL/3.2.35/12 dated 04.03.2019. Now three sources of this item have been developed.
- 1.3 Installation & commissioning of regenerative braking system in WAG7 loco no. 24581 at Electric Loco Workshop, Charbagh by M/s Medha had been completed on 28.02.2019. Loco no. 24581, WAG7 of ELS/LDH provided with re-generative braking system had been flagged off by General Manager/Northern Railway on 11.03.2019. Loco is under field trial.

2.0 RELIABILITY IMPROVEMENT

- 2.1 MOM held at RDSO on 19.03.19 with BHEL and ELS/LGD regarding reliability issues of BHEL make propulsion had been issued, Vide letter no. EL/11.5.5/21 dated 29.03.19.
- 2.2 Technical Circular No. RDSO/2019/EL/TC/0150, Rev.'0' dated 14.03.2019 for proper connection of MU coupler in Microprocessor based Control & fault diagnostic System(MPCS) V3 locomotives to ensure proper working of Vigilance Control Device(VCD) had been prepared and issued to all concerned vide letter No. EL/4.2.15/Gen dated 14.03.2019.
- 2.3 A meeting was held at RDSO on 28.02.2019 with Electric Loco Sheds & firm's representatives to discuss the issues related to CBC/Drfat Gear/TSC in Electric Locomotives. During meeting firms were advised to prepare procedure for correction of pocket size in existing locomotives at shed. The MOM (minute of meeting) has been prepared and issued to firms and railways vide this office letter No. EL/3.2.119 (CBC) dated 12.03.2019.
- 2.4 A meeting was held at RDSO on 01.03.2019 with Electric Loco Sheds & firm's representatives to discuss the failures of TM Pinion in WAG9 Electric Locomotives. During meeting M/s KPC was advised to replace old design pinions by June'19 & M/s SAN was advised to investigate the root cause of breakage or crake in the teeth or chipping off. The MOM (minute of meeting) has been prepared and issued to firms and railways vide this office letter No. EL/3.1.35/20 dated 12.03.2019.
- 2.5 A meeting was held at RDSO on 05.03.2019 with Electric Loco Sheds & firm's representatives to discuss the failures of traction link for 3-phase Electric Locomotives. During meeting it was decided that possibility of getting fatigue test getting done from IIT Kharagpur will be explored. The MOM (minute of meeting) has been prepared and issued to firms and railways vide this office letter No. EL/3.1.35/12 dated 12.03.2019.
- 2.6 A meeting was held at RDSO on 05.03.2019 with Electric Loco Sheds to review the performance of reliability of brake gears of three phase electric locomotives. During meeting Railways were advised that replacement work of un-modified motor support on remaining bogies should be completed on high priority. The MOM (minute of meeting) has been prepared and issued to firms and railways vide this office letter No. EL/3.1.35/12(Bogie) dated 20.03.2019.

3.0 DEVELOPMENTAL ACTIVITIES

- 3.1 All the WAP-5 locomotives being turned out from CLW may be upgraded with upgraded software had been issued, vide letter no. EL/11.5.5/4 dated 13.03.19,
- 3.2 Regarding standardization of working of Auto Flasher Light in 3-phase, firms were asked to implement the software modification in two locos in a shed & submit the joint test reports had been issued, vide letter no. EL/4.2.17 dated 27.03.19.
- 3.3 The design & drawing /BOM were received from M/s. Siemens on fresh registration for 2 X 130 KVA SIV has been studied by this office and some of the points require clarification. Firm has been asked to submit revised design & drawing vide RDSO letter no. EL/1.2.9.1 dated 04.03.2019.
- 3.4 The capacity /capability assessment of M/s. Escorts Ltd, on fresh registration application for manufacturing and supply of computer/ Microprocessor found satisfactory. Firm has submitted the design & drawing /BOM documents which is under scrutiny.
- 3.5 Over height protection of pantograph scheme of WAG-12 locomotive was inspected jointly at MELPL Madhepura on 26.03.19 and 27.03.2019.
- 3.6 Dispatch clearance of two units of High reach Pantograph type LX3600 equipped with ADD and ORD system has been accorded to M/s. Faiveley Transport Technology and clearance for supply of balance 04 nos. of High reach Pantograph type LX3600 has also been accorded for supply to CLW against purchase order vide RDSO letter no. EL/2.2.1/high Reach dated 19.03.19.
- 3.7 Testing of M/s Siemens make 1200 KVA Traction Transformer for EMU / On board MEMU project witness 15/2/2019 to 17/2/2019 at their works, Kalwa Mumbai. Test reports of same have been evaluated and cleared vide note no: EL/ Indig.EMU/Medha dated 12/3/2019 .
- 3.8 Routine test reports of 29 (25+4) numbers of M/s SADTEM make LVT to be supplied against Railway Board PO and RCF PO have been cleared vide note no: EL/ Indig.EMU/BHEL dated 12/3/2019 .

- 3.9 PS&EMU Directorate vide note no. EL/1.3.16.6/BEML/MEMU_OB Dated: 19.02.2019 has submitted M/s. BT design document and test report of control cable as per RDSO specification no ELRS/SPEC/ELC/0019 Rev-3 have been found generally in order and same has been communicated to PS &EMU Dte. vide note no: EL/8.1.25.1/ MEMU_OB/BEML date: 12.03.2019.
- 3.10 A technical meeting was conducted on 15.03.2019 at RDSO to explore possibility to develop four quadrant converter for WAG7 locomotives so that same converter can supply the power to traction motor during motoring mode and regenerate power during regenerative braking mode. This development will remove the need for tap changer, rectifier and existing BA panel. The Meeting was attended by M/s Medha, BHEL, ABB, BTIPL& CG Power. Minutes of meeting is under preparation and will be issued by 15th Apr, 2019.
- 3.11 Comments of traction motor related documents for WAG12 had been issued, vide letter no. EL/3.1.35/24 dated 12.03.19. Design comments on functional type test procedure of multiple unit operation Rev.'0' as per Procurement cum Maintenance of Electric Locomotive Factory at Madhepura had been issued, vide letter no. EL/3.1.35/24 dated 12.03.19.
- 3.12 Comments on revised oscillation test procedure of WAG12 locomotive had been issued, vide letter no. EL/3.1.35/24 dated 15.03.19.
- 3.13 MoM held at RDSO on 20.03.19 regarding WAG12 electric locomotive oscillation & EBD trials had been issued, vide letter no. EL/3.1.35/24 dated 20.03.19. The MU functional type tests and panto over height protection through TCMS have been conducted at M/s MELPL, Madhepura on date 26.03.19 & 27.03.19 and a joint note prepared and had been issued, vide letter no. EL/3.1.35/24 dated 29.03.19.
- 3.14 Comments on test program for thermal endurance of insulation system 1800V and design review of remote monitoring for WAG12 locomotive had been issued, vide letter no. EL/3.1.35/24 dated 29.03.19,
- 3.15 Capability cum capacity assessment of M/s. Electro Plast, 1/34, South Side G.T. Road Ind. Area, Ghaziabad (UP)-201001 for vendor registration for manufacturing and supply of Elastic Ring for three phase electric locomotives has been carried out on 08.03.2019. Firm has advised to submit BOM, internal test report and offer for

prototype for type tests vide this office letter No. EL/3.2.35/12 (Electroplast) dated 22.03.2019.

4.0 PROTOTYPE TESTING/QUALITY AUDIT

- 4.1 On successful completion of type test and field trial the dispatch clearance of oil lubricated compressor model RR 20100 OF (M) was accorded by this office and firm has been advised to supply compressor against pending orders vide RDSO letter no EL/3.2.15/(oil free) dated 26.03.2019.
- 4.2 After type test two high reach pantograph type LX 3600 of M/s. Faiveley has been provided in loco no. 32313 of ELS/ GMO and Loco no. 32387 of ELS/LDH. After commissioning the current collection was successfully conducted on loco no 32313 in Rewari – Shrimadhapur section.
- 4.3 Prototype testing of BHEL make traction motor type IM3302AZ for 3-Ph AC EMU had been carried out at the works of M/s BHEL, Bhopal from 11.03.2019 to 18.03.2019 and witnessed by RDSO representative. Type test results are under scrutiny.
- 4.4 Type testing of TM bearings (NU2236 & NH320) for traction motor type 6FRA 6068 manufactured by M/s NEI, Jaipur had been carried out from 19.03.2019 to 24.03.2019 at M/s NEI, Jaipur's premises. Prototype test results had been examined & found to be in order. Prototype clearance of TM bearings (NU2236 & NH320) for traction motor type 6FRA 6068 had been given to CLW for fitment & field trial vide RDSO's letter no. EL/2.2.13/NEI/NU2236 dated 29.03.2019.

5.0 SPECIFICATION/STR:

- 5.1 A review meeting on the revised specification of High reach pantograph was held on 14.03.2019, at RDSO. Major discussion on the comments received on revised on draft specification. The minutes of meeting has been issued vide RDSO letter no. EL/2.2.1/ High Reach dated 15. 03-.2019. Final draft of specification along with reasoned document has been uploaded on website for 15 days vide RDSO letter no. EL/2.2.1/High Reach dated 20.03.19.
- 5.2 The draft of revised STR no. RDSO/2011/EL/STR/0076 Rev '01' dated March 19 for manufacture and supply of computer/micro processor controlled brake system has been issued and uploaded on RDSO website for comments and suggestions from ZRs, Pus and vendors for a period of one month vide RDSO letter no EL/3.2.19/3-phase dated 01.03.2019.

- 5.3 Draft STR for manufacturing of pantograph for electric locomotive no RDSO/2008/EL/STR/0049 Rev 01 has been revised and uploaded on RDSO website for comments and suggestions from ZRs, Pus and vendors for a period of one month vide RDSO letter no EL/2.2.1/high reach dated 11.03.2019.
- 5.4 Comments received from industries on draft Specification No. RDSO/2017/EL/SPEC/0134(Rev.0) of twin beam LED head light for Electric Locomotives has been discussed with representative of firms at RDSO on 15.03.2019. Reasoned documents and Final Draft Revised specification has been uploaded on website on 27.03.2019.
- 5.5 Meeting held on 12.03.2019 at RDSO along with OEMs of DPWCS, OEMs of Radio equipment and SC Regarding discussion on specification for interoperable DPWCS for AC electric locomotives& MOM was issued.

6.0 OTHER ITEMS

- 6.1 Design document no. TME/TECH/2018/1001 Rev.04 of traction motor type IM3302AZ submitted by M/s BHEL vide their letter no. TME/IM3302/RDSO/2018-19/293 dated 28.01.2019 and letter no. TME/IM3302/RDSO/2018-19/308 dated 20.02.19 through PS & EMU Directorate had been examined. Comments had been given vide Electrical Dte.'s note no. EL/3.2.182/OTM/163/BHEL dated 11.03.2019.
- 6.2 M/s Alstom's motorette test protocol Document No.TRO/DPT/NT2017.023, Index-E, for TM type 6FRA4567 had been approved, for carrying out insulation test vide this office note No.EL/3.2.182(Madhepura) dated 15.03.2019 and communicated to concerned group.
- 6.3 Comment on document for remote monitoring system, document No.NRD0000514320,Rev 2 submitted by M/s Alstom for WAG12 locomotive had been examined and cleared vide this office note No.EL/3.2.182(Madhepura) dated 20.03.2019.
- 6.4 M/s NSK, Japan had applied online application (ID: ID: 523) of TM bearings (NU2236 & NH320) for 6FRA6068. Application had been examined and shortcomings were communicated to NSK vide RDSO's letter no. EL/2.2.13/NSK/NU2236 dated 19.03.2019 and simultaneously requested Counselor (Railway Advisor), Tokyo for capability assessment of NSK, Japan vide RDSO letter no. EL/2.2.13/NSK dated 19.03.2019.

- 6.5 Revised envelop size(s) of different equipment was provided vide this office letter no. EL/3.2.1(ZDM3), dated 15.03.2019 for developing 3D model in compliance to Motive Power directorate note no. SD.ZDM3.Conversion, dated 26.02.2019.

7.0 Fresh Vendor Registration application during March, 2019

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
DSE/TM	01	01	-	-

with regards,

Yours sincerely,

ओम प्रकाश 03.4.19
(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.

ओम प्रकाश 03.4.19
(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	116 bogies have been modified by M/s Ashika commercial pvt ltd Kolkata. 132 bogies yet to be modified.	Dec'19
		3	16	226	242	For TM 3 position not being changed.	
ECR	GMO	1&2	0	198	198	Tender awarded to M/s. Ved, Kanpur. Work started in Jan.2018. 127 bogies have been modified.	Dec'19
		3	0	49	49	All bogies have been modified	
NR	GZB	ALL	143	0	143	50 bogies modified M/s. Ved, Kanpur. M/s Ved have started modification again for ten bogies.	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	221 bogies have been modified by M/s. Ved, Kanpur.	June'19
		3	84	206	290	Balance 242 bogies. Modification work to be done during POH. But not being done by POH shops.	
SCR	KZJ	3	0	9	9	9 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 negotiation.	Dec.'19
WCR	TKD	1, 2 & 3	39	77	116	61 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, 12 bogies modified.	April 19

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, BIA

Annexure-II

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

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Balance to be modified	PDC
CR	AQ	1,2	16	226	242	126	Dec'19
		3	16	226	242	242	
ECR	GMO	1&2	0	198	198	71	Dec'19
		3	0	49	49	0	
NR	GZB	ALL	143	0	143	93	Dec'19
SR	RPM	1 & 2	52	0	52	3	June'19
		3	86	0	86	20	
SCR	LGD	1&2	68	164	232	11	June'19
		3	84	206	290	242	
SCR	KZJ	3	0	8	8	9	April 19
SER	TATA	3	0	70	70	49	Dec.'19
WCR	TKD	1, 2 & 3	39	77	116	55	Oct'19
		3	8	12	20	8	April 19

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, BIA

Annexure- III

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