

Fax : 0522 - 2450374  
Telephone : 0522 - 2465714  
e-mail: edse.rdso@gmail.com



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**  
**Executive Director Standards Electrical/Co-ord**

D.O.No.EL.8.5.10.1

Date:08.09.2017

**Subject: PCDO for the month of August, 2017**

## **1.0 HIGHLIGHTS**

- 1.1 Specification for Microprocessor based Electronic Speed Cum Energy Monitoring System for Electric Locomotives bearing No. ELRS/SPEC/SPM/0002(Rev. '3') issued on 23.08.2017 & uploaded on RDSO website. This specification ensures better accuracy of Real Time Clock (RTC).
- 1.2 Amendment no.1 to speed certificate for conducting detailed oscillation trials of WAG5P class of locomotives upto a maximum speed of 120KMPH on track maintained to C&M-I ,Vol-I standard was issued & communicated to SECR/SER for expediting the CRS sanction vide letter no.SD.WAG5.11 dated 23.08.2017.
- 1.3 A comprehensive Technical Audit Report for Repair and Rehabilitation of Electronic cards for 3-phase locomotive (RDSO/2017/EL/TAR/0013, Rev.'0') has been prepared and issued .This technical Audit Report prescribes the action plan to eliminate failures of cards after repair/rehab.
- 1.4 A modification sheet No. RDSO/2017/EL/MS/0461, Rev. '0' for providing dummy plate in cab roof in place of air conditioning unit to prevent water leakage/ingress in loco cab from roof in locomotives has been prepared & issued to all zonal Railways on 23.08.2017 vide this office letter No.EL/3.1.10/2.

- 1.5 RDSO/2017/EL/SMI/0313 Rev 0 dated 30.08.2017 on procedure of pneumatic tube connection to electro-pneumatic contactor of harmonic filter / hotel load converter in 3 phase loco has been issued vide RDSO letter no EL/3.2.19/ 3 phase dated 30.08.2017 & same has been uploaded in website also
- 1.6 Special Maintenance Instruction No. RDSO/2017/EL/SMI/0311 (Rev '0') dated 25.08.2017 for Magnet Particle testing (MPT) of Traction motor(TM) nose stay in conventional locomotives/EMUs/MEMUs/Metro Railway, TM suspension holder support and motor support in WAG9/WAP7 locomotives and traction motor support arm in WAP5 locomotives has been issued vide letter no. EL/3.2.172/1 dated 25.08.2017.
- 1.7 Amendment no. 1 of Technical Circular No. RDSO/2012/ EL/ TC/119, Rev- '1' dated 20.3.2013 for implementing bilingual display of fault messages in Microprocessor based Control & fault diagnostic System (MPCS) for ease of troubleshooting by the crew has been issued vide letter no. EL/4.2.15/Gen dated 25.08.2017.

## **2.0 DEVELOPMENTAL WORKS**

- 2.1 Design review/comments on Traction Block, Battery Charger & Battery Rev.'2', Validation Details for Pantograph Revision '0' and Traction Motor Rev. 1 Documents as per Procurement cum Maintenance of Electric Locomotive Factory at Madhepura issued vide letter no. EL/3.1.35/24 dtd. 07.08.17 , 08.08.17, 16.08.17and 30.08.17 respectively.
- 2.2 Vide letter no. EL/3.1.35/24 dtd. 17.08.2017, Minutes of Design review Meeting held at RDSO on 16.08.17 relating to Madhepura Electric Locomotive Factory Pvt. Ltd. was issued.
- 2.3 Vide letter no. EL/3.1.35/24 dtd. 17.08.17, MELPL letter regarding two sets of Duly Licensed Simulation software was sent to concerned expert group and the comments issued .
- 2.4 A meeting was held at DFCCIL, New Delhi with Railway Board, RDSO and DFCCIL officials regarding specifications and standards for 1676 mm Gauge 7000 kW 6 Axle IGBT Based 3-phase Drive Electric Freight Locomotive (specification no. RDSO/2010/EL/SPEC/0108, Rev.'2') on dated 29.08.2017.

- 2.5 Vide letter no. EL/3.1.35/4 dtd. 23.08.17, CLW was informed the allotment of unique transportation code as WAP5HS for WAP5 locomotives capable to running of 225 kmph.
- 2.6 Up-gradation of M/s Universal Cable Ltd., Satna to “List of approved vendors” for manufacturing & supply of Thin walled flexible Elastomeric Cable with copper conductor for Tap Changer Electric locomotives, AC-DC EMUs, BG AC EMUs & MEMU/ Coaching stock with chemical curing process as per RDSO specification no. ELRS/SPEC/ELC/0019, Rev.’3’ has been done for cable sizes of 25 sq mm. and above vide this office letter no. EL/8.1.25.1/Universal dated 23.08.2017.
- 2.7 Vide letter no. EL/11.5.5/1/CGL dtd. 14.08.17, procurement of indigenized Gate Unit Power Supply (KYA924 D01) of M/s.CGL may be done as spares by CLW & Zonal Railways.
- 2.8 A meeting was conducted on 23.08.2017 at RDSO with vendors and railway officials regarding feasibility of use of BUR 2 & 3 in place of 180 KVA Static Converter. The minutes of meeting has been issued vide RDSO letter no EL/1.2.9.1/ BUR dated -31.08.2017 .2017 and uploaded on website. Firm has been advised to implement of BUR 2 & 3 at ELS/LGD or ELS/AQ preferably.
- 2.9 A meeting was held at RDSO on 21.08.17 to discuss feasibility of EP assist system with E 70 & CCB brake system in 3 phase locomotive. The minutes has been issued vide RDSO letter no EL/3.2.19/EP assist dated 23.08.17

### **3.0 RELIABILITY IMPROVEMENT**

- 3.1 A meeting was held at RDSO on 08.08.2017 regarding failure of sandwich mounting rubber pad in electric locomotives. The minutes of meeting regarding failure of sandwich mounting unit in electric locomotive has been issued on 09.08.2017 vide this office letter No. EL/3.2.172 (SMU).
- 3.2 A meeting was held at RDSO on 09.08.2017 regarding failure of (crack/breakage) of traction link bar. The minutes of meeting regarding traction link bar in electric locomotives has been issued to Zonal Railways/firm on 11.08.2017 vide this office letter No. EL/3.1.35/12.
- 3.3 A meeting was held at RDSO on 10.08.2017 regarding failure of hurth coupling (crown gear coupling). The minutes of meeting regarding failure of crown gear coupling in WAP-5 Electric Locomotives has been issued to CLW, NR, WR & firm on 16.08.2017 vide this office letter No. EL/3.1.35/22.

#### **4.0 SPECIFICATION/STR**

- 4.1 Draft specification for interoperable Distributed Power Wireless Control System (DPWCS) for Electric locomotives was prepared & uploaded on RDSO website for comments vide letter no. EL/3.1.3/DPWCS dated 18.08.2017.
- 4.2 Schedule of Technical Requirement (STR) for Auxiliary Machine bearings used in Electric locomotives & EMUs/MEMUs bearing No. RDSO/2017/EL/STR/0090 (Rev. '0') issued on 14.08.2017 and sent to Railways & firms vide letter no. EL/2.2.48 dated 17.08.2017.

#### **5.0 PROTOTYPE TESTING/QUALITY AUDIT**

- 5.1 Partial prototype testing of M/s Huber+Suhner make Thin walled flexible Elastomeric Cable with copper conductor for Tap Changer Electric locomotives, AC-DC EMUs, BG AC EMUs & MEMU/ Coaching stock as per RDSO specification no. ELRS/SPEC/ELC/0019, Rev.'3' has been carried out on 29th and 30th Aug. 2017 at ERDA, Vadodara.
- 5.2 Prototype testing of traction Motor type C1023 (Equivalent to NGEF Traction Motor) manufactured by M/s CGL for Metro Railway, Kolkata is under progress since 21.08.2017 at their Works at Mandideep, Bhopal.

#### **6.0 OTHER ACTIVITIES**

- 6.1 Meeting held at RDSO on 09.08.2017 with OEMs of Auxiliary Machine Bearings to discuss the FINAL draft of Schedule of Technical Requirement (STR) for manufacturing & supply of Auxiliary Machine Bearings. MOM was duly signed & communicated to OEMs vide letter no. EL/2.2.48 dated 09.08.2017.
- 6.2 Draft technical specification No. RDSO/2017/EL/SPEC/XXXX, Rev.'0' for up-gradation of WAP5 locomotive in twin Bo-Bo mode with speed potential of 200 kmph has been examined. Draft specification has been uploaded on RDSO website with reasoned documents.
- 6.3 Validation plan doc. no. NHD0000266721, Rev 0 and Test program doc. no. NHD0000266652, Rev.4 for Traction Motor Type 6FRA4567E submitted by M/s Alstom for Madhepura Project have been examined. Comments has been given vide letter No. EL/3.2.182/Madhepura dated 24.08.2017.

6.4 Change of name from M/s FAG Bearings India Ltd., to M/s Schaeffler India Limited has been approved vide letter No. EL/2.2.13 dated 25.08.2017.

Yours sincerely,

**(Om Prakash Kesari)**

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

Copy to-

1. Additional Member (Electrical), )  
Railway Board, Rail Bhawan, ) For kind information  
New Delhi. )
2. Secy to DG/RDSO )

**(Om Prakash Kesari)**  
For Director General/Electrical

## Annexure-I

Railway	Shed	Replacement of EPROM 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	169	169	169	169	169	169	169	73
CR	KYN	0	0	64	155	64	155	64	155	64	181
ECOR	WAT	0	0	33	33	33	32	33	30	33	25
ECR	GMO	69	42	154	154	154	154	154	119	154	59
ER	HWH	3	3	25	25	25	25	25	32	25	25
NCR	CNB	0	0	8	8	8	8	0	0	8	8
NR	GZB	90	45	86	86	151	151	124	124	87	87
NR	LDH	0	0	0	0	0	0	0	0	0	0
SCR	LGD	86	24	176	176	176	176	161	161	161	158
SECR	BIA	10	3	71	46	71	71	64	18	71	31
SER	TATA	2	0	76	65	76	76	70	38	76	29
SR	RPM	0	0	56	56	56	56	56	56	56	55
WCR	TKD	30	30	115	115	115	115	115	115	115	56
WR	BRC	2	2	74	71	74	74	73	73	14	14
<b>Grand</b>	<b>TTL</b>	<b>392</b>	<b>202</b>	<b>1107</b>	<b>1159</b>	<b>1172</b>	<b>1262</b>	<b>1108</b>	<b>1090</b>	<b>1033</b>	<b>801</b>

## Annexure-II

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

Rly	Shed	TM location	WAP 7	WAG9/ 9H	Total	Action plan	PDC
CR	AQ	1,2&3	28	214	242	Tender opened for 242 bogies for TM1 & 2 position but rates quoted are very high. Two round negotiation done but rates are still high.	Sept'18
		3			71		
CR	KYN	ALL	0	21	21	Tender Opened on 12.06.2017. But get discharged. Retendered. Opened on 24.08.17 under brief note vetting.	Sept'18
ER	HWH	ALL	12	0	12	PO already placed. Plan to modify 04 bogies per week.	Sept.'17
ECR	GMO	ALL	0	198*	198	Tender opened on 29.06.17. Rates are 40% higher.	March' 18
ECoR	WAT	1,2&3	0	12*	12	Tender opened. One round negotiation done, rates are still high. 2 <sup>nd</sup> round negotiation will be done.	March'18
		3	0	10	10		
NR	GZB	ALL	143	0	143	Tender opened on 09.07.17. Nobody participated. Under retendering will open on 11.09.17.	1.5 years after issue of LOA
NR	LDH	ALL	0	0	0	All modified	N/A
NCR	CNB	ALL	0	0	0	All modified	N/A
SR	RPM	1,2&3	50	0	50	Tender opened. And two round of negotiation done but Rates are still 36% higher. One more round of negotiation will be done on 11.09.17.	Aug'18
		3	17		17		
SCR	LGD	1&2	68	161	229	Modification work at TM 1&2 position for 86 bogies tender opened on 04.05.2017 and for 142 bogies tender opened on 22.05.17 and two round negotiation done rates are still 30% high43we.	Jan'19(for TM 1&2 position)
		3	84	206	290	Modification work to be done during POH.	
SER	TATA	1,2&3	0	40*	40	Tender Opened on 29.06.2017 for 40 bogies for location 1, 2 & 3. Rates are 42% higher, under negotiation.	July'18
		3	0	70	70	Planned through HQ store. PO for 21 nos. placed.	
SECR	BIA	1,2&3	16	58	74	Tender opened on 02.06.2017. 2 <sup>nd</sup> round negotiation held on 29.08.17.	Dec'17
		1&2	0	0	0	All modified.	
WR	BRC	ALL	0	0	0	All modified	N/A
WCR	TKD	1&2	37	73*	110	Tender Opened on 30.05.2017 for 116 nos bogies for all 3 positions. Tender discharged due to higher rates. Retendered opened on 05.09.17.	Jan'19
		3	46	73	119		

\*Trade Bogies: ACPL/ABB (GMO-39, WAT-2, TKD-2, TATA-4)