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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: 03.01.2019

*Dear Shri Ghanhyam Singh ji,*

**Sub: PCDO for the month of December, 2018.**

## 1.0 HIGHLIGHTS

- 1.1 A training cum Workshop on maintenance and operating of E70 and CCB brake system on 3 Phase locomotive has been organized at ELS/GZB /NR. 75 official from Railways dealing with the operation of E70 and CCB brake system as well as OEMs have attended the workshop.
- 1.2 Proof of Concept (PoC) trials of indigenously developed Data Radio by M/s Bharat Electronics Limited, Panchkula for DPWCS was conducted successfully at ELS/KZJ/SCR from 03.12.2018 to 07.12.2018.
- 1.3 **Special Maintenance Instruction NO. RDSO/2018/EL/SMI/ 0326 (Rev. '0') dated 14.12.2018**  
Special Maintenance Instruction No. RDSO/2018/EL/SMI/0326 (REV. '0') dated 14.12.2018 for setting of number of pulses/revolution and wheel diameter in Microprocessor based Control & fault diagnostic System (MPCS) V3 for correct indication of speed in MPCS had been prepared and issued vide letter No. EL/4.2.15/Gen dated 14.12.2018.
- 1.4 Scheme and circuit arrangement for push pull operation of WAP7 locomotive was issued and concerned Zonal Railways were intimated for its implementation.

## 2.0 RELIABILITY IMPROVEMENT

- 2.1 Vide letter no. EL/11.5.5/21 dated 24.12.18, MoM on reliability of M/s ABB make IGBT based propulsion system held at the works of ABB/Bangalore on 07.12.18 had been issued.
- 2.2 Vide letter no. EL/11.5.5/21 dated 24.12.18, MoM on reliability of M/s BHEL make IGBT based propulsion system held at the works of BHEL/EDN/Bangalore on 08.12.18 had been issued.

2.3 A performance review meeting on 180 KVA SIV and Microprocessor based control and fault diagnostic system was held on 21.12.2018. The minutes of performance review meeting on Static Inverter has been released vide RDSO letter no. EL/1.2.9.1 dated 28.12.2018.

2.4 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.

2.5 A revised SMI no. RDSO/2006/EL/SMI/0242 Rev "2" has been prepared on maintenance practice of under slung compressor mounted on WAP-5, WAP-7 & WAG-9 class of Electric locomotive. To avoid falling down of the compressor unit on line has been prepared.

**2.6 Performance Review Meeting for Microprocessor based Control & fault diagnostic System (MPCS)**

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. Detailed discussion was held on performance issues and action plan to improve the reliability of microprocessor based Control & fault diagnostic System (MPCS).

2.7 A meeting was held at RDSO on 20.12.2018 with Firm & Railways regarding failure of M/s Mackeil make Hurth Coupling used in WAP5 Electric Locomotives. During the meeting firm was advised to submit root cause analysis of failed membrane. The minutes of meeting (MOM) has been issued vide this office letter No. EL/3.1.35/22 dated 26.12.2018.

2.8 A meeting was held at RDSO on 24.12.2018 with Firm & Railways regarding failure of M/s Reneka make E-type CBC used in WAP7/WAG9 Electric Locomotives. During the meeting it was decided that RDSO drawing No. SK-62724 will be revised in line with AAR for 12.5mm relief in yoke corner. The minutes of meeting (MOM) has been issued vide this office letter No. EL/3.2.119 (CBC) dated 31.12.18.

2.9 Meeting with M/s AAL, M/s BTIPL & Electric loco shed, Kanpur was held on 19.12.18 at RDSO to discuss repeated failure on account of sudden brake pressure drop due to malfunction of speedometer.

**3.0 PROTOTYPE TESTING/QUALITY AUDIT - NIL**

**4.0 SPECIFICATION/STR:**

Vide letter no. EL/11.5.5/21 dated 12.12.18, modification sheet no. EL/2018/EL/MS/0475 Rev.0, regarding modification in existing Control Electronics resetting scheme of 3-phase electric locomotive had been issued.



## **5.0 DEVELOPMENTAL ACTIVITIES**

- 5.1 Vide letter no. EL/3.1.35/17/Medha dated 12.12.18, M/s Medha was approved to use alternate make components in 3x130 kVA IGBT based Auxilliary Converter on trial basis in two locomotives at HQ/SCR and three loco sets at ELS/TATA based locomotives.
- 5.2 Vide speed certificate no. SD.WAG11.11 dated 23.08.18, speed certificate for oscillation trial of WAG11 had been issued. Vide letter no. EL/11.5.5/20 dated 13.12.18, Northern Railway was requested to take the CRS sanction for oscillation trial.
- 5.3 Vide letter no. EL/11.5.5/14/ARC dated. 14.12.18, M/s ARC had been considered capable after capacity/capability assessment for development of Functionality Equivalent PCB Cards of GTO based Converters and MICAS VCU in three phase Electric Locomotive. One copy of Quality Assurance Plan duly approved had been issued.
- 5.4 Vide letter no. EL/4.2.17 dated 19.12.18, BHEL, ABB, BTIPL, CGPISL and Medha were advised to implement the logic conditions of standardization of working of Auto Flasher Light, as decided in MOM held at RDSO on 27.06.18, in MICAS and TCN VCU in Propulsion System in two locomotives in a shed.
- 5.5 Vide letter no. EL/4.2.17 dated 21.12.18, CLW had been informed for implementation of modified logic AFL in locomotive equipped with MICAS based VCU as decided in MOM held at RDSO on 27.06.18.
- 5.6 The meeting held on 19.12.2018 at RDSO on brake system , DPWCS, AFL & AEB with firms to discuss various reliability issues of for 3 Phase locomotive and the minutes of meeting has been released vide RDSO letter no. EL/3.2.19/3 phase dated 24.12.2018.
- 5.7 **Design approval of Regenerative Braking and loco nomination**  
Provisional design clearance for the work of 'Design, development, supply, erection, testing and commissioning of Re-generative Braking in WAG7 locomotives had been accorded to M/s Medha vide letter No. EL/3.2.19/RB/Medha dated 14.12.2018.Loco no. 27512, WAG7 of ELS/Angul had been nominated for fitment of re-generative braking system.
- 5.8 Online application No. 458 dated 22.11.2018 submitted by M/s. Power Technologies Corporation; Dehradun (Uttarakhand) for vendor registration of LED based twin beam head light has been scrutinized.
- 5.9 Instruction for "withdrawal of condition of "25% maximum quantities to use in WAP7 locomotives" for axle box bearing CRU-150 of M/s NEI make from RDSO vendor directory QAE-M-7.1-1 (type RB5080-D) has been issued to firm vide this office letter No. EL/3.2.108/3-ph dated 24.12.2018.

- 5.10 Document of Twin beam LED base headlight submitted by M/s BEML for MEMU coach has been scrutinized. Comment on the same give vide note EL/6.11.1 dated 28.12.18.
- 5.11 Design document of M/s SADTEM make Line Voltage Transformer (LVT) type LOCO3/AE has been cleared against RCF PO no. 029160577.T1720523 dated 15.01.2018 allotted to M/s BHEL for 25 kV BG AC EMU/MEMU vide this office note no. EL/Indig. EMU/BHEL dated 14.12.2018.
- 5.12 Routine test reports of M/s SADTEM make 17 nos. & 03 nos. Line Voltage Transformers (LVTs) have been cleared vide this office note nos. EL/Indig. EMU/BHEL dated 21.12.2018 & 26.12.2018 respectively against RCF PO no. 029160577.T1720523 dated 15.01.2018 allotted to M/s BHEL for 25 kV BG AC EMU/MEMU.
- 5.13 Routine test schedule no. TRE/1050kVA-ACEMU, Rev. 0 for 1050 kVA 25 kV BG AC EMU/MEMU transformer has been cleared vide this office note no. EL/Indig. EMU/BHEL dated 21.12.2018.
- 5.14 A meeting was held at Electrical Directorate, RDSO on 18.12.18 to discuss on various issues related to trials of WAG12 locomotive of Madhepura Electric Locomotive Private Limited.
- 6.0 OTHER ITEMS:**
- 6.1 Capacity assessment & STR verification of M/s Escorts, Faridabad was carried out on 05.12.2018 to 06.12.2018, who has applied for vendor registration for micro processor computerized brake system for 3 phase locomotive.
- 6.2 Railways has been advised to send the field performance of oil free compressor of 1750 lpm model RR 20100, which were fitted in ELS/LGD/TKD and ELS/CNB. Vide RDSO letter no EL/3.2.15 (oil free) dated 17.12.2018.
- 6.3 FEA reports of 100g shock load as per table 3 of IEC: 61373 on Suspension tube of TM type 3701BY/BX for Metro Railway Kolkata submitted by M/s BHEL vide their letter no. TME/TM3701/RDSO/2018-19/269 dtd.14.11.2018 through PS & EMU Directorate's note no. ईएल/स्पेक/एमआरएस/1.1 dated 26.11.2018 had been examined. Acceptance of FEA and other issues communicated vide Electrical Directorate's note no. EL/4.3.42 (Metro) dated 18.12.2018.
- 6.4 Design documents No. TME/TECH/2018/1001 Rev.03 of M/s BHEL for traction motor type IM3302AZ for 3-phase propulsion for other than Mumbai project submitted through PS & EMU Directorate's note no. EL/1.3.16.7 dated 10.12.2018 had been examined and comments had been communicated vide Electrical Directorate's notes no. EL/3.2.182/OTM/163/BHEL dated 07.12.2018 & 14.12.2018.
- 6.5 A meeting was conducted to discuss comments on draft FRS No. RDSO/2018/EoTT, Rev "Draft" and reasoned document on 05.12.2018 at RDSO



Lucknow. Based on the discussion, the draft FRS had been modified and uploaded on RDSO website on 17.12.2018 for 15 days i.e. upto 31.12.2018 for comments by the prospective vendors.

- 6.6 Information of representative electric locomotive as per prescribed format was provided to Research directorate vide letter no. EL/3.1.28, dated 13.12.2018.
- 6.7 Corrigendum was proposed in the IRSOD(BG) Revised,2004 on regular basis to avoid condonation cases of repeated nature to Track directorate vide letter no. EL/3.1.28, dated 28.12.2018.


**7.0 Other items:**

**FRESH VENDOR REGISTRATION APPLICATION DURING DECEMBER'2018**

Group	No. of Online Application received	No. of Application registered after fee verification	No. of application where query raised	No. of application rejected due to deficiencies
JDSE/Mech	1	1	0	0
DSE/Pn	1	1	0	0
Total	2	2	0	0

*with regards,*


Yours sincerely,

 03.1.19  
(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.

 03.1.19  
(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	WAP7	WAG9/9H	Total no. of bogies	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	
ECoR	WAT	1&2	0	12	12	All bogies modified by M/s Ved.	NA
		3	0	12	12	All bogies modified.	NA
NR	GZB	ALL	143	0	143	48 bogies modified M/s. Ved, Kanpur.	April'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.	June'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.	
SECR	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
WCR	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			20		

**Annexure- II**

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

<b>SN</b>	<b>Shed</b>	<b>No. of WAG-9/9H locos</b>	<b>Modified with TBU/PBU</b>	<b>Un-Modified with TBU/PBU</b>	<b>Converted to conventional rigging</b>
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
<b>Total</b>		<b>1123</b>	<b>279</b>	<b>839</b>	<b>5</b>