

संजीव स्वरूप  
प्रधान कार्यकारी निदेशक मानक विद्युत

**Sanjiv Swarup**  
Principal Executive Director Stds. Electrical



सत्यमेव जयते

भारत सरकार – रेल मंत्रालय  
**अनुसंधान अभिकल्प और मानक संगठन**  
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D.O.No.EL.8.5.10.1

Dt: 02.04.2020

**Sub: PCDO for the month of March, 2020.**

## 1.0 HIGHLIGHTS

### 2.0 RELIABILITY IMPROVEMENT

- 2.1 RDSO advised Zonal railways for using of imported Spheriblocs for time being in coaching electric locomotives vide this office letter no. EL/3.1.35/12 (SB) dated 05.03.2020 as recommended by RDSO in the MSG minutes held at ELS/AQ/CR on 14th & 15th OCT, 2019 which has been accepted by Railway Board's letter No. 2.19/Elect (TRS) /138/5 dated 31.01.2020.
- 2.2 A meeting to review the performance & discuss the improvements in M/s AAL make VCB type VCBA 25.10.Tr. with the representatives of M/s AAL was conducted at RDSO, Lucknow on 12.3.2020. Minutes of meeting were circulated vide letter no. EL/3.2.61 dated 16.3.2020.

### 3.0 DEVELOPMENTAL ACTIVITIES

- 1.1 **Development of End of Train Telemetry (EoTT)**- ECoR has issued POs to M/s AAL- 3 sets, M/s Signotron- 3 sets, M/s Siemens- 2 sets & M/s Tata Power- 2 sets on 14.02.2020 for manufacture & supply of EoTTs as per RDSO FRS No. RDSO/2019/EL/FRS/0025, Rev.'0' dated 25.06.2019. To review the progress of work, meeting was conducted on 06.03.2020 with ECoR/SER, M/s AAL, M/s Signotron, M/s Siemens & M/s Tata power. Detailed Minutes of meeting including action to be taken has been issued vide letter no. EL/4.2.15/EoTT dated 12.03.2020.
- 1.2 Design documents/drawings of Traction Gear Drive System & Components pertaining for on-board MEMUs submitted by M/s. Medha vide their letter nos. MAE675M: RDSO: 8973:20 dated 28.2.2020 & MAE675M: RDSO: 3786:20 dated 16.01.2020 through notes of Director (Metro)/ PS&EMU have been cleared vide Note No. EL/4.2.13 (ON-board MEMU/Medha) dated 12.03.2020 after carrying out prototype testing of Gear Drive, Main Gear, Pinion and Gear Case at firm premises i.e. MM/s. M/s. Shanti Gear Limited, Coimbatore and M/s. Medha, Hyderabad.

- 1.3 Deficiencies found during capacity assessment of M/s MTC India Rubber Metal Components Pvt. Ltd., Bangalore regarding fresh vendor registration for manufacturing and supply of Spheriblocs for three phase Electric Locomotives have been communicated to firm vide this office letter No. EL/3.1.35/12(SB)/MTC dated 06.03.2020.
- 1.4 The documents related to Drawing, design and Bill of Material of High Reach Pantograph submitted by M/s. Air Control and Chemical Engineering were evaluated and deficiencies were advised to firm vide RDSO letter no. EL/2.2.1/high reach/Accel dated 12.03.2020.

#### **4.0 PROTOTYPE TESTING/QUALITY AUDIT**

- 4.1 Prototype inspection of Traction motor of 9000 HP freight loco was conducted jointly with CLW & M/s Medha at their Works at Hyderabad against CLW PO No. 70/18/1145/01220 dated 12.04.2018 from 14.03.2020 to 24.03.2020. During this period, remaining type tests of 6FRA-6068 TMof M/s Medha were also conducted jointly with CLW. Type testing was carried out as per test protocol approved by CLW.
- 4.2 Prototype test of 3 phase locomotive brake system EMCBS of M/s Escorts was completed but there were some discrepancies & have been communicated to firm for compliance.
- 4.3 Current collection tests were carried out with high reach pantograph of M/s. Faiveley at WR on High Rise OHE from 02.03.2020 to 04.03.2020.
- 4.4 Current collection tests were carried out with High Reach Pantograph of M/s. Schunk at WR on High Rise OHE from 04.03.2020 to 07.03.2020 and from 18.03.2020 to 19.03.2020 with various designs of Aero foils.
- 4.5 Testing of Dual Mode Locomotive(DML) converted from WDP4 was conducted and witnessed by RDSO official at DLW,Varanasi from 18.03.2020 to 20.03.2020.DML can work on diesel as well as under 25kV OHE.
- 4.6 Prototype clearance for Microprocessor based electronic speed cum energy monitoring system for electric locomotive developed by M/s Medha was accorded vide letter no. EL/2.2.9/10,dtd 27.02.2020.

#### **5.0 OTHER ITEMS:**

- 5.1 Radiography & DP test reports of ventilator fans of M/s BHEL make traction motor type IM 3601AZ has been examined and observations communicated to PS & EMU Dte. Vide note no. EL/3.2.1829BHEL) dated 16.03.2020.
- 5.2 Capability cum capacity assessment of M/s SKF Technologies (India) Pvt. Limited, Ahmedabad for fresh vendor registration reference ID:795dt. 17.10.2019 for manufacturing and supply of TM bearing (NU2236, only DE side) for traction motor type 6FRA6068 was conducted on 02.03.2020.Based on the capability assessment & submission of other requisite documents, RDSO vide letter No. EL/2.2.13/SKF/NU2236 dt, 20.03.2020 has advised M/s SKF to get educational order of 10 loco(60 TMs) for field trial for six months.

- 5.3 RDSO vide letter No. EL/2.2.13 dated 17.03.2020 has permitted M/s BHEL to supply traction motor type 6FRA6068 to CLW, DLW& DMW with FAG make NDE bearing as per course of action contained at Para 4 of the letter No. EL/2.2.13 dated 24.05.2018 for a period of 30.06.2020.
- 5.4 Design document of M/s Siemens make Primary and Secondary surge arrester type 3EL2040-2RC31-4AA5 & 3EL2042-2RC21-4AA5 to be supplied by M/s Medha for Under-slung MEMU project has been cleared for use in aforesaid project vide this Dte. Note no. EL/3.2.1/Indig. EMU/ Medha dated 12.3.2020.
- 5.5 Clearance to M/s AAL make VCB type VCBA 25.10.Tr. with M/s CGPISL make VST type VL35416-33P & M/s Vitro make VST type VI-430 and earthing switch to be supplied by M/s CAF was accorded vide this Dte. Note no. EL/3.2.1/Train Set dated 18.3.2020 for use in 25 kV Train set project.
- 5.6 Clearance to M/s SEIL make VCB type 22CB with their own make VST type V807-VG(VG4BR), M/s Rotex make magnet valve & M/s Parker make pressure regulator to be supplied by M/s BHEL was accorded vide this Dte. Note no. EL/3.2.1/Indig. EMU/ BHEL dated 18.3.2020.
- 5.7 In line with Railway Board decisions on recommendation of 39th MSG, draft maintenance kits of GR/SMGR have been prepared based on the comments of SR & SCR and circulated for comments of Zonal Railways & OEMs of Tap Changer vide this office letter no. EL/3.2.30 dated 11.3.2020. 8.In compliance to RB's letter no. 2020/CEDO/SR/06(2),dtd 13.03.2020, CLW was communicated some improvements in BG WAP 7HS class of locomotive as suggested by CCRS ,vide RDSO letter no. EL/3.1.35/37(WAP7),dtd 20.03.2020.
- 5.8 Meeting was conducted on 07..02.2020 at Railway Board regarding OCU blower and impeller for 3 phase electric locomotive and Minutes of Meeting (MoM) for same was circulated to CLW vide letter no. EL/3.2.176/2,dtd 24.03.2020.
- 5.9 Meeting was conducted through Tele conference regarding' proving the interoperability between DPWCS of different makes and Minutes of Meeting (MoM) was circulated vide letter no. EL/3.1.3/DPWCS dtd 18.03.2020.
- 5.10 MOM for 63rd ESC meeting was circulated to all stakeholders of IRs vide letter no. EL/ESC/63rd dated 18.03.2020 and same along with decisions of Railway Board on the recommendations of items of 63rd ESC meeting were posted on RDSO website vide letter no. EL/ESC/63rd dtd 18.03.2020.

Encl: Annexure I ,II & III

Yours sincerely,

**(Sanjiv Swarup)**

**Shri Rajesh Tiwari,  
Member Traction,  
Railway Board, Rail Bhavan,  
New Delhi - 110 001**

Copy for kind information to-  
Additional Member (Electrical), Railway Board, Rail Bhawan, New Delhi.

**(Sanjiv Swarup)**  
**Pr.Exe.Dir.Stds. Electrical**

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

Position on: 25.03.2020

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Balance to be modified	PDC
CR	AQ	1,2	28	204	232	32	Jun'20
		3	30	257	287	226	
	BSL	1,2	0	0	0	0	Completed in all locos
		3	0	0	0	0	
	KYN	1,2	0	0	0	0	June'20
		3	0	96	96	96	
3		0	49	49	0		
NR	GZB	1,2	143	0	143	64	Dec'20
		3	159	0	159	73	
SCR	LGD	1,2	68	164	232	0	NA June.' 20
		3	84	206	290	240	
	KZJ	1,2	0	0	0	Nil	
		3	0	99	198	26	
SER	TATA	1,2	0	0	0	Nil	June.'20
		3	0	49	44	05	

**Note:** Following sheds have already modified motor support in all locations of bogies.  
HWH, WAT, LDH, CNB, BRC, ED, BNDM, SRC, ET, NKJ, BIA, RPM,TKD, GMO.

## 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	26	13	0	13
2	AQ	156	71 <sub>(22TBU/PBU+41BL)</sub>	85	11
3	KYN	69	16	53	0
4	GMO	177	0	177	0
5	WAT	142	14.5	122.5	5
6	LDH	129	22	0	107
7	CNB	79	12	0	67
8	LGD	111 <sub>(7-WAG9HC)</sub>	27	76	8 <sub>(7-WAG9HC)</sub>
9	KZJ	99	38	14	45
10	TATA	133	0	133	20
11	BIA	118	31	68	19
12	TKD	103	82	0	21
13	NKJ	63	26	14	23
14	BNDM	19	0	19	19
<b>Total</b>		<b>1424</b>	<b>352.5</b>	<b>761.5</b>	<b>358</b>

Annexure-III

Population of high Reach Pantograph as on March'20																						
RLY	Shed	Rev.1									Rev.2									Rev 2 Total	Total Shed wise (Rev1+2)	
		WAG-5	WAG-7	WAG-9	WAP-5	WAP-7	WAP-1	WAP-4	Shop Floor	Rev 1 Total	WAG-5	WAG-7	WAG-9	WAP-5	WAP-7	WAP-1	WAP-4	WCAM-3	WCAG-1			Shop Floor
CR	AQ	0	0	14	0	0	0	0	6	20	0	0	14	0	4	0	0	0	0	0	18	38
CR	KYN	0	0	1	0	0	0	0	0	1	0	0	29	0	1	0	0	1	1	0	32	33
CR	BSL	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	1	14	14
NR	LDH	0	6	0	0	0	0	0	3	9	0	1	34	0	0	0	1	0	0	0	36	45
NR	GZB	0	0	0	0	0	0	0	0	0	0	0	0	31	2	0	0	0	0	8	41	41
NR	KJGY	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
NCR	JHS	1	17	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	18
NCR	CNB	0	12	34	0	0	0	0	10	56	0	0	0	0	0	0	0	0	0	0	0	56
ER	ASN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ER	HWH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ECR	GMO	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	32	32
ECR	MGS	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	3
ECOR	ANGL	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
ECOR	VSKP	0	0	0	0	0	0	0	4	4	0	0	6	0	0	0	0	0	0	2	8	12
SCR	KZJ	0	0	0	0	0	0	0	0	0	0	2	34	0	0	0	0	0	0	3	39	39
SCR	LGD	0	0	8	0	0	0	0	2	10	0	0	14	0	0	0	0	0	0	1	15	25
SCR	BZA	0	1	0	0	0	0	0	2	3	0	5	0	0	0	0	0	0	0	0	5	8
SER	BKSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SER	BNDM	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	10
SER	SRC	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	8	12	12
SER	TATA	0	2	6	0	0	0	0	3	11	0	0	8	0	0	0	0	0	0	0	8	19
SECR	BIA	0	0	8	0	2	0	0	14	24	0	0	0	0	3	0	0	0	0	0	3	27
SR	AJJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SR	ED	0	3	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	0	4	7
SR	RPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WCR	ET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
WCR	NKJ	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	1	10	10
WCR	TKD	0	0	0	0	0	0	0	2	2	0	0	41	0	7	0	0	0	0	7	55	57
WR	BL	0	0	0	0	0	0	0	0	0	0	51	0	0	0	0	0	0	0	0	51	51
WR	BRC	0	0	0	0	0	0	0	0	0	0	0	0	43	38	0	9	0	0	93	183	183
IR	TOTAL	1	45	81	0	2	0	0	46	175	0	71	229	74	59	0	10	1	1	126	571	746