

ओम प्रकाश केसरी
प्रधान कार्यकारी निदेशक मानक विद्युत

Om Prakash Kesari
Principal Executive Director Stds. Electrical



सत्यमेव जयते

भारत सरकार – रेल मंत्रालय
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D.O.No.EL.8.5.10.1

Dt: 01.10.2019

Dear Shri Rajesh Tiwari ji,

Sub: PCDO for the month of September, 2019.

1.0 HIGHLIGHTS

- 1.1 A compendium on Push Pull Operation of WAP5/ WAP7 Locomotive (Report no. RDSO/2019/EL/RM/0188, Rev-0) has been prepared and circulated to Railways, PUs and concerned directorate of RDSO. This compendium contains all the documents issued on subject matter. This will be helpful for Zonal Railways to plan trials and proliferation of push-pull operation.
- 1.2 A workshop cum demonstration was held on shop floor at ELS/CNB on 03.09.2019 for fitment of anti-falling traction motor arrangement in WAP7 loco by M/s Ashika Commercial Pvt Ltd, Kishangarh, Rajasthan & M/s Anup Malleables Ltd., Dhanbad. During shop floor it was decided to provide anti-falling traction motor arrangement in one loco(WAG9H) on trial basis by firms as under:
(a) M/s. Ashika Commercial Pvt Ltd, Kishangarh, Rajasthan at ELS/AQ
(b) M/s. Anup Malleables Ltd., Dhanbad at ELS/TATA.
- 1.3 The Functional Requirement Specification (FRS) bearing No.RDSO/2019/EL/FRS/0027 (Rev.0) of 4-Quadrant Converter for conventional electric locomotives converted from diesel (ALCo) locomotive was finalized & issued on 04.09.2019.
- 1.4 Technical Specification No.RDSO/2007/EL/SPEC/0053 (Rev. '0') for Elastic Ring used on three phase drive electric locomotives (WAP5, WAP7 & WAG9) has been revised as Rev.1 issued on 13.09.2019 vide this office letter No. EL/3.1.35/12 & uploaded on RDSO website.
- 1.5 63rd Electrical Standards Committee (ESC) Meeting was conducted at Diesel Locomotive Works (DLW), Varanasi on 20th & 21st September 2019. All the issues as per agenda were deliberated in details. Draft of Minutes sent to Railway Board vide letter No. EL/ESC/63rd dated 30.09.2019.

2.0 RELIABILITY IMPROVEMENT:

- 2.1 A meeting was held at RDSO on 06.09.2019 with representatives of elastic ring's manufacturers to discuss the comments received from firms on draft revised specification of elastic ring used on three phase drive electric locomotives (WAP5, WAP7 & WAG9). During the meetings following matter was discussed:

- a) Reasoned document.
- b) Clause No. 4.1, 8.1.3 & 8.1.3 of Spec. No.RDSO/2007/EL/SPEC/0053 (Rev.'0').

- 2.2 A joint meeting was held in the chamber of PEDSE/Electrical loco directorate with Motive Power Directorate on 04.09.2019 & MoM issued regarding addition of item i.e. Modified Hand Brake Assembly for Electric locomotives as per drawing no. SKEL-4993, Alt '0' under item "Modified Hand Brake Assembly" for Diesel locomotives in the Vendor Directory QM-M 8.1-1of QA/Mechanical.
- 2.3 A technical audit of M/s FTRTIL, Hosur has been organized in association with ELS/BIA, ELS/GZB, ELS/RPM, ELS/LGD and CLW. The Audit Report is under finalization.
- 2.4 A meeting was held at RDSO on dated 28.09.2019 to discuss the reliability issues of IGBT based propulsion equipments & interoperability of WTB. This meeting was headed by MTR and attended by zonal Railways & representative of OEM.

3.0 DEVELOPMENTAL ACTIVITIES

- 3.1 Clearance to M/s ABB make 1250 kVA EMU transformer has been accorded against ICF purchase order no. 08/17/1119/1101/F dated 19.01.2018 for under-slung MEMUs vide this office note no. EL/3.2.1/Indig. EMU/ Medha dated 02.09.2019.
- 3.2 RDSO vide letter No.EL/1.2.19/3-Phase (Hind) dated 09.09.2019, fresh vendor registration application and concerned documents of brake system for 3-phase Locomotive of M/s Hind Rectifiers Ltd. has been scrutinized and deficiencies advised.
- 3.3 RDSO vide letter no. EL/1.2.9.1/Medha dated 09.09.2019, after submission of clarifications of deficiencies of 130 KVA SIV by M/s Medha, RDSO has accepted the application for further processing after scrutiny.
- 3.4 RDSO vide letter no. EL/1.2.9.1/Hind dated 09.09.2019, after resubmission of clarifications of deficiencies of 130 KVA SIV by M/s Hind, the same has been scrutinized and found to be in order. It is advised to develop prototype, submit the ITR (internal test report) & prototype test protocol and offer prototype for type test and QAP verification.
- 3.5 RDSO vide letter no. EL/3.2.15/3-phase dated 13.09.2019, the document of M/s Saber Dais Compression Ltd. of 1745 lpm oil lubricated compressor has been scrutinized and minor deficiencies observed were advised for further clarifications.
- 3.6 Field Trial of M/s AAL Noida make Hotel Load converter fitted in loco No.30502 was conducted in Train No-12009/ 12010 (Ahmadabad Shatabdi Exp Train) on dt. 14/15 Sep. 2019 in presence of RDSO/CLW and M/s AAL representatives.
- 3.7 A meeting was held at Bangalore on 17.09.2019 & 18.09.2019 regarding Driver Display Unit (DDU) at 2nd workshop of WAG12 locomotives. Joint note of the same has been issued vide this office letter no. EL/3.1.35/24 dated 25.09.2019.

4.0 PROTOTYPE TESTING/QUALITY AUDIT

- 4.1 Prototype testing of three phase traction motor type 6FRA6068 TM of M/s CRRC-Pioneer was carried out jointly by the representatives of RDSO and CLW from 29-08-2019 to 03-09-2019.
- 4.2 Type testing of Inductor of regenerative braking system has been conducted from 18.09.2019 to 21.09.2019 at the works of M/s Medha, Hyderabad. Partial discharge test is to be conducted from outside agency. Firm has to submit type test report.

5.0 OTHER ITEMS:

- 5.1 Final draft of Technical Circular No. ELRS/TC/0076, Rev. 02 along with reasoned document containing comments/suggestions received is further uploaded for comments/suggestions from Zonal Railways/PUs, transformer and gasket manufacturers on RDSO website for a period of 15 days, i.e. from 11.09.2019 to 26.09.2019.
- 5.2 A meeting was convened at RDSO on 13.09.2019 with OEMs of Crew Voice & Video Recording System (CVVRS), Motive Power Directorate & Railways to discuss the Draft of specification for Crew Voice & Video Recording System (CVVRS) bearing no. RDSO/2015/EL/SPEC/0118 (rev '1'). The Minutes of Meeting (MOM) was prepared & issued vide letter No.EL/0.1.3/Driver, dated 13.09.2019.
- 5.3 Revised design document for traction motor type TME 49-35-4 for Under-Slung EMUs/MEMUs submitted by M/s Medha had been examined as per Specification No. RDSO/PE/SPEC/EMU/0096-2008 (Rev.4) of Dec, 2009 along with ICF annexures ICF/EMU0096-01, Rev.'2'. Comments had been given vide Electrical Dte.'s note No.EL/3.2.182/Under-Slung EMU/ MEMU/Medha dated 19.09.2019.
- 5.4 CLW vide letter No. CLW/TM/9160 dated 28.08.2019 had requested RDSO to provide the acceptance criteria, reference standard and brief test procedure for the tests to be conducted on the alternate Kapton polyimide film 150FCRC of M/s Dupont and L50CR11 of M/s Kaneka, USA. RDSO vide letter No. EL/2.2.8 dated 03.09.2019 had advised requisite details/observations to CLW.
- 5.5 CLW vide letter No. CLW/TM/9160 dated 14.08.2019 had forwarded the test results of L50CR11 film of M/s Kaneka, USA to RDSO for study and comments. Tests results had been examined. RDSO vide letter No. EL/2.2.8 dated 05.09.2019 had sent comments for further action to be taken by CLW.
- 5.6 Clarifications for not conducting motorette test for traction motor type IM3302AZ submitted by M/s BHEL vide their letter no. TME/IM3302/RDSO/2019-20/371 dated 02.08.2019 had been examined in reference with contract specification and relevant standards. Comments had been given to PS & EMU Directorate vide Electrical Directorate's note no. EL/3.2.182/OTM/163/BHEL dated 26.09.2019.

- 5.7 Test protocol no. TM20231, Rev.01 for measurement of rotor temperature of TM type IM3302AZ submitted by BHEL vide letter No. TME/IM3302/RDSO/2019-20/371 dated 03.09.2019 had been examined. Test protocol no. TM20231, Rev.01 had been approved for repeat of temperature rise test on TM type IM3302AZ vide Electrical Directorate's note no. EL/3.2.182/OTM/163/BHEL dated 27.09.2019.

Encl: Annexure I & II


with regards,

Yours sincerely,

 01.10.19
(Om Prakash Kesari)

**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.

 01.10.19
(Om Prakash Kesari)
for Director General/Electrical

Annexure-I

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

Position on: 13.08.2019

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Balance to be modified	PDC
CR	AQ	1,2	28	204	232	60	Mar'20
		3	30	257	287	278	
	BSL	1,2	0	6	6	6	
		3	0	21	21	21	
	KYN	1,2	0	0	0	Nil	
		3	0	96	96	96	
ECR	GMO	1,2	0	198	198	58	Dec'19
		3	0	49	49	0	
NR	GZB	1,2	143	0	143	64	Dec'19
		3	159	0	159	73	
SCR	LGD	1,2	68	164	232	0	NA
		3	84	206	290	240	Dec.' 19
	KZJ	1,2	0	0	0	Nil	
		3	0	102	102	9	
SER	TATA	1,2	0	0	0	Nil	Dec.'19
		3	0	49	49	49	

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.

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	55(21+34)	103	8
3	KYN	69	16	53	0
4	GMO	177	0	177	0
5	WAT	141	14.5	124.5	1
6	LDH	51	22	0	29
7	CNB	42	9	3	30
8	LGD+GY(D)	104+7(WAG9HC)	27	76	1+7(WAG9HC received from CLW)
9	KZJ +GY(D)	51	27	10	14
10	TATA	152	1	151	0
11	BIA	102	31	66	5
12	TKD	103	82	0	21
13	NKJ	55	20	14	19
14	BNDM	29	15	14	0
Total		1257	334.5	792.5	135

POPULATION OF HIGH REACH PANTOGRAPH

R/LY	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	Shop Floor		
CR	AQ	0	0	0	0	0	0	0	0	19	0	0	3	0	2	0	0	0	5	24
CR	KYN	0	0	0	0	0	0	0	0	1	0	0	28	0	1	0	0	2	31	32
CR	BSL	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	1	14	14
NR	LDH	0	6	0	0	0	0	0	3	9	0	1	31	0	0	0	1	0	33	42
NR	GZB	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	35	44	44
NR	KGY	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
NCR	JHS	1	18	0	0	0	0	0	1	20	1	0	0	0	0	0	0	0	1	21
NCR	CNB	0	6	27	0	0	0	0	5	38	0	0	0	0	0	0	0	0	0	38
ER	ASN	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
ECR	GMO	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	21	21
ECR	MGS	0	0	0	0	0	0	0	0	0	0	3	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	3
ECOR	VSKP	0	0	3	0	0	0	0	3	6	0	0	1	0	0	0	0	3	4	10
SCR	KZJ	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	2	25	25
SCR	LGD	0	0	9	0	0	0	0	2	11	0	0	9	0	0	0	0	0	9	20
SCR	BZA	0	1	0	0	0	0	0	2	3	0	5	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
SER	BNDIM	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10
SER	SRC	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	3
SER	TATA	0	2	6	0	0	0	0	3	11	0	0	8	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	3	27
SR	AJJ	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	4	7
SR	RPM	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	2	2	2
WCR	NKU	0	0	0	0	0	0	0	0	0	0	5	4	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	7	55	57
WR	BL	0	0	0	0	0	0	0	0	0	0	51	0	0	0	0	0	0	51	51
WR	BRC	0	0	0	0	0	0	0	0	0	0	0	0	27	11	0	7	42	87	87
IR	TOTAL	1	40	78	0	2	0	0	40	161	1	69	182	35	26	0	8	97	418	579