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OM PRAKASH KESARI
PRINCIPAL EXECUTIVE DIRECTOR STANDARDS ELECTRICAL

D.O.No.EL.8.5.10.1

Dt:02.09.2019

Dear Shri Rajesh Tiwari ji,

Sub: PCDO for the month of August, 2019.

1.0 HIGHLIGHTS

1.1 CRS inspection of WAG11 was conducted at Delhi on 22.08.2019.

1.2 Modification Sheet NO. RDSO/2019/EL/MS/ 0478 (Rev. '0'), dated 30.07.2019

Modification Sheet NO. RDSO/2019/EL/MS/ 0478 (Rev. '0'), dated 30.07.2019 for adoption of Traction motor labyrinths of TM type 6FRA6068 as per original dimensions given by ABB to eliminate problem of gear case oil ingress in TM had been prepared and issued to all concerned vide letter No. EL/3.2.182 dated 30.07.2019. It is expected that implementation of this modification will improve reliability of Traction motor type 6FRA6068 of 3-Phase electric locomotives.

1.3 Technical Circular No. RDSO/2019/EL/TC/0153(Rev.'0') dated 27.08.2019

Modification Sheet NO. RDSO/2019/EL/MS/ 0415 (Rev. '0'), for acknowledgement of Vigilance Control Device(VCD) through PVEF in Microprocessor based control and fault diagnostic system(MPCS) version. 3 had been prepared and issued to all concerned vide letter No. EL/4.2.15/Gen dated 27.08.2019.

1.4 A Special Maintenance Instruction No. RDSO/2019/EL/SMI/0328, Rev.'0', has been prepared for fitment of M/s Frontier Alloy Steel Limited make pre-load draft gear and procedure for correction of pocket size for draft gear in existing

locomotives. The same has been issued to Zonal Railways/Production units vide this office letter No EL/3.2.119 (CBC) dated 26.08.2019.

2.0 RELIABILITY IMPROVEMENT:

2.1 A technical audit of M/s FTRTIL, Hosur has been organised in association with ELS/BIA, ELS/GZB, ELS/RPM, ELS/LGD and CLW. The Audit Report is under scrutiny.

2.2 Performance review meeting of MPCS

Performance review meeting of Microprocessor based Control & fault diagnostic System(MPCS) of conventional electric locomotives had been conducted with manufacturers, Zonal Railways, CLW & RDSO on 19.07.2019 at RDSO, Lucknow. Detailed Minutes of Meeting has been issued vide letter No. EL/4.2.15/Gen dated 07.08.2019.

2.3 Meeting on issues related to Zr.Cu rotor bars used in traction motor type 6FRA-6068.

Meeting on issues related to Zr.Cu rotor bars used in traction motor type 6FRA-6068 conducted with manufacturers & CLW at RDSO on 17.07.2019. All the firms & CLW were requested to give their suggestions on changes required in the specification and review their QAPs for compliance with the specification. Minutes of Meeting has been issued vide letter No. EL/3.2.182 dated 09.08.2019.

2.4 Performance review meeting of Traction Motor & MSU bearings

Performance review meeting of Traction Motor & MSU bearings of 25 KV electric locomotives had been conducted with manufacturers, Zonal Railways, DLW & RDSO on 28.05.2019 at RDSO, Lucknow. Detailed Minutes of Meeting has been issued vide letter No. EL/2.2.23 dated 08.08.2019.

2.5 A meeting was held at RDSO on 18.07.2019 & 19.07.2019 with representatives of M/s Alstom. During the meeting, presentation made by M/s Alstom representatives on the changes of Plan-B with Goose Neck Bogie integration was shown and explained. The points raised by RDSO on design documents related to Goose Neck Bogie and Car Body Shell for plan-B of WAG12 locomotives was discussed. The minutes of meeting (MoM) for incorporating comments in design documents of M/s Alstom has been issued to firm vide this office letter No. EL/DSE4/MELP dated 05.08.2019.

2.6 A meeting was held at RDSO on 09.08.2019 with representatives of ELS/GZB & firm on reliability issue of Aluminium Alloy Axle Guide Link (Wheel Set Guide) in WAP5 Electric Locomotives. During the meetings following points were discussed:

- a) Zonal Railways are advised to carryout RDPT on guide links in every schedule inspect in homing shed to detect such type failure.
- b) Zonal Railways are requested to replace Spheribloc as per prescribed scheduled.
- c) In order to detect any sub surface flaw, it is felt necessary to introduce UST in IOH / POH schedule for this safety item.

2.7 A meeting was held at RDSO on 21.08.2019 with representatives of Electric loco sheds & Firms to review the performance of Spheribloc and its replacement. During the meeting following points were discussed:

- a) Railways were requested to furnish detailed analysis of performance of Spheribloc for review the periodicity of replacement.
- b) M/s BHC were asked to submit the investigation report of failed samples collected from ELS/LGD.
- c) Development of jig/fixture for fitment of Spheriblocs.
- d) Railways were requested to upload performance feedback of vendors on RDSO web portal.

3.0 DEVELOPMENTAL ACTIVITIES

3.1 RDSO vide letter no. EL/1.2.9.1 dated 30.07.2019, Minutes of Performance Review Meeting of 180 KVA SIV held at RDSO on 19.07.2019 has been issued to railways and vendors. Same is loaded in RDSO website.

3.2 RDSO vide letter no. EL/2.2.1/High Reach dated 14.08.2019, Minutes of Meeting on development of High Reach Pantograph held at RDSO on 13.08.2019 has been issued.

3.3 RDSO vide letter no. EL/1.2.9.1/Medha dated 29.07.2019, fresh vendor registration application and concerned documents of 2 X130 KVA SIV Converter for Electric Locomotive of M/s Medha has been scrutinized and deficiencies advised.

3.4 RDSO vide letter no. EL/1.2.9.1/Siemens dated 16.08.2019, the design details of 2 X130 KVA SIV Converter for Electric Locomotive of M/s Siemens has been scrutinized and minor deficiencies observed were advised for further clarification.

- 3.5 RDSO vide letter no. EL/1.2.9.1/Hind dated 16.08.2019, the design details of 2 X130 KVA SIV Converter for Electric Locomotive of M/s Hind has been scrutinized and minor deficiencies observed were advised for further clarification.
- 3.6 RDSO vide letter no. EL/1.2.9.1/ABB dated 16.08.2019, the design details of 2 X130 KVA SIV Converter for Electric Locomotive of M/s ABB has been scrutinized and minor deficiencies observed were advised for further clarification.
- 3.7 RDSO vide letter no. EL/3.2.19/3-Phase/CCB dated 16.08.2019, the scope of supply (BOM) document no. TA35177/1/2019/KBIL/WAG-9/WAP-7/Rev '0' and TA35177/1/2019/KBIL/ WAP-5/Rev '0' including drivers vigilance control device for Computer Control Brake System (CCB) for WAG9/WAP7 and WAP5 class of locomotive respectively of M/s Knorr-Bremse India Pvt. Ltd are provisionally approved.
- 3.8 Speed certificate for Oscillation Trial of WAG12A Locomotive for maximum speed of 110 Kmph on BE-MB-SRE or NMDA-SNL section of Northern Railway to NR for necessary sanction was issued vide this office letter no. EL/3.1.35/4/WAG12 dated 20-08-2019.
- 3.9 The MOM of the meeting held at RDSO on 19th August-2019 regarding Trial/Test of WAG9HH Loco no. 90001 has been issued vide letter no. EL/3.1.35/37 dated 20-08-2019.
- 3.10 Prototype testing of M/s Medha Make Loco ESMON as per RDSO specification no. ELRS/SPEC/SPM/0002(Rev'04) was carried out by RDSO officials from 21.08.2019 to 25.08.2018 at the works of M/s Medha, Hyderabad.
- 3.11 Re-test (applicable test as per PS&EMU note no. EL/1.3.16.7/Indig EMU/ Medha dated 28.05.2019) of M/s High-Volt make 1300 kVA EMU transformer has been witnessed and cleared vide note no. EL/3.2.1/ Indig. EMU/ Medha dated 16.08.2019.
- 3.12 Foot plate inspection of train no. 22222 with push pull arrangement (WAP7) was carried out on 09/10 August-2019. The observations regarding compliance of speed certificate no. MC/LHB/ COACH/Push Pull-Gen dated 12-07-2019 have been issued vide letter no. EL/3.1.35/4 dated 23-08-2019.
- 3.13 Provisional design clearance of Regenerative Converter for WAG7 has been given.

- 3.14 Design scheme/sketches for provision of water closet in WAP-5 and WAP-7(with hotel load converter) Electric Locomotives have been prepared and issued to all Zonal railways vide this office letter No. EL/3.1.10/1 dated 05.08.2019. Scheme for provision of water closet in WAG-5 with SIV and Compressor behind Cab1 also advised through above letter.

4.0 PROTOTYPE TESTING/QUALITY AUDIT

5.0 SPECIFICATION/STR

- 5.1 Specification for Crew Voice & Video Recording System (CVVRS) bearing no. bearing no. RDSO/2015/EL/SPEC/0118 (rev '0') has been revised as Rev.1 for improving the recording quality (video as well as audio by CVVRS) & for specifying the nos. of camera required in the system etc. and the draft of same is uploaded on RDSO website for a period of one month i.e. from 16.08.2019 to 15.09.2019 for comments /suggestions from Zonal Railways/PUs & CVVRS manufacturers.

6.0 OTHER ITEMS:

- 6.1 Technical Circular for "Oil leakage from the transformer bushings and covers in 3-phase locomotives" no. ELRS/TC/0076, Rev. 1 has been revised as Rev. 02 and the draft of same is uploaded on RDSO website for a period of one month i.e. from 08.08.2019 to 07.09.2019 for comments/ suggestions from Zonal Railways/PUs and Transformer & Gasket manufacturers.
- 6.2 RDSO official attended the meeting at Railway Board on 13.08.2019 regarding implementation of Real Time Train Information System (RTIS) on Electric Locomotives.
- 6.3 Test protocol document no. TM20231 Rev.00 dated 28.06.2019 for Rotor temperature measurement of traction motor type IM3302AZ submitted by M/s BHEL vide their letter no. TME/IM3302/RDSO/2019-20/336 dated 28.06.2019 had been examined. Comments on Test protocol document no. TM20231 Rev.00 had been given to PS & EMU Directorate vide Electrical Directorate's note no. EL/3.2.182/OTM/163/BHEL dated 30.07.2019.
- 6.4 Capacity cum capability assessment of M/s Schaeffler India Limited, Vadodara for fresh registration of bearing of Traction Motor type 6FRA6068 had been conducted on 21.08.2019.

- 6.5 Revised design document for traction motor type TME 48-45-6 for On-Board MEMU submitted by M/s Medha through PS & EMU Directorate note no. EL/1.3.16.6/On-Board MEMU/Medha dated 22.07.2019 had been examined as per Specification No. RDSO/PE/SPEC/EMU/0096-2008(Rev.4) of Dec, 2009 along with ICF annexures ICF/EMU0096-02, Rev'0'. Comments had been given vide Electrical Dte.'s note no. EL/3.2.182/On-Board MEMU/Medha dated 20.08.2019.

Encl:Annexure I & II

with regards,

Yours sincerely,

Om Prakash Kesari 02/9/19
(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.

Om Prakash Kesari 02/9/19
(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	65	Mar'20
		3	30	257	287	283	
	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	166	46	112	8
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+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	69	2
12	TKD	103	82	0	21
13	NKJ	29	11	14	4
14	BNDM	29	15	14	0
Total		1238	315.5	805.5	117