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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

Date: 06.02.2018

Dear Shri Ghanshyam Singh jee,

Sub: PCDO for the month of January, 2018

1.0 HIGHLIGHTS

- 1.1 Special Maintenance Instruction No. RDSO/2007/EL/SMI/0246, Rev.'1', has been revised and the revised SMI No. RDSO/2007/EL/SMI/0246, Rev. '2' for Maintenance axle box bearing for WAP 7&WAG 9/9H Electric Locomotives has been issued to Railways vide this office letter No. EL/3.2.108 (3-phase) dated 15.01.2018.
- 1.2 Specification No. RDSO/2018/EL/SPEC/0133/Rev. '0' for "Development of Regenerative Braking Feature in WAG7 locomotive" had been finalized and issued vide letter No. EL/3.2.19/RB dated 09.01.2018. Copy of this specification has also been uploaded on RDSO website.
- 1.3 Specification No. RDSO/2018/EL/SPEC/0132/Rev. '0' for "GPS device for Electric Locomotives in Indian Railways" had been finalized and issued vide letter No. EL/4.2.15/GPS dated 09.01.2018. Copy of this specification has also been uploaded on RDSO website.
- 1.4 Reliability Action Plan (RAP) for conventional & three phase electrical locomotives issued vide RDSO letter no. EL/3.6.4/2, dated 09/01/2018 in the form of Technical circular no. RDSO/2017/EL/TC/0142(Rev.0), dated 09/01/2018.

2.0 DEVELOPMENTAL WORKS

- 2.1 Design review of Traction Motor of WAG12 Locomotive had been issued vide letter no. EL/3.1.35/24 dated 16.01.18.
- 2.2 Design review of validation detail of Speed Indicator and Blowers of WAG12 Locomotive issued vide letter no. EL/3.1.35/24 dated 31.01.18.
- 2.3 Meeting to review the preparation of "Development of Re-regenerative Braking Feature in WAG7 locomotive" as per RDSO specification no. RDSO/2017/EL/SPEC/0133 was conducted with all the prospective suppliers at RDSO on 30.01.2018. Minutes of meeting has been issued vide letter No. EL/3.2.19/RB dated 30.01.2018.
- 2.4 Vide letter no. EL/11.5.5/14 dated 03.01.18, MOM had been issued to firms regarding development of functionally equivalent electronic cards of IGBT based 3-phase locomotives.
- 2.5 Vide letter no. EL/3.1.35/24 dated 09.01.18, MOM held at RDSO on 09.01.18 regarding 12000 HP electric locomotive to be manufactured at Madhepura had been issued.
- 2.6 Vide letter no. EL/11.5.5/4 dated 17.01.18, to check the modified software of WAP-7 Locomotive with improved adhesion had been re-issued for further trial. Modified software to be downloaded in 5 locomotives each at ELS/HWH and ELS/LGD on trial basis.
- 2.7 Railway Board MOM circulated vide letter no. 2001/Elect(G)/170/1 dated 18.12.17, it had been decided to carry out trials on WAP-5 locomotive in push-pull mode. In this regard RDSO has formulated scheme and informed to Western Railway vide letter no. EL/3.1.35/4 dated 25.01.18. The trial with wired MU and DPWCS may be conducted with same pair of WAP-5 locomotive and necessary modification may be carried out in two WAP-5 locomotives.

- 2.8 The wind tunnel test of high reach pantograph supplied by M/s. Faiveley transport Rail technologies India Limited has been carried out at IIT/ Kanpur. Same has been witnessed by RDSO. The wind tunnel test report is awaited.
- 2.9 The Quality Assurance Plan (QAP) prepared and submitted by M/s BHEL, Jhansi for inspection of WAG 9H locomotive against Railway Board order no. 2017/RS(F)/P-459/1/OP-231 dated 11.08.2017 has been cleared vide this office letter no. EL/3.1.22/4 dated 18.01.2018.

3.0 RELIABILITY IMPROVEMENT

- 3.1 A meeting has been organized on deliberation of development of high reach Pantograph at RDSO on 29.01.2018. The minutes of meeting have been issued to Zonal railways and Vendors vide RDSO letter no EL/ 2.2.1/ High reach dated 30.01.2018.
- 3.2 As Zonal railways reported about non application of brake through A- 9 in service (except emergency position) in E 70 brake system of 3 phase locomotive. A reliability action plan has been drawn through meetings with the representatives of user railways and suppliers. The minutes of meeting has been issued vide RDSO letter no EL/ 3.2.19/ 3 phase dated 30.01.2018.
- 3.3 Railways reported failures of paper filters used in CCB brake system in 3 phase locomotive within 06 months due to moisture. M/s KBIL/Palval has developed borosilicate filter in place of paper filter. RDSO has advised firm to provide borosilicate filter in place of paper filter in two locomotive each in ELS/ GZB, LGD, AQ, BRC & TATA vide RDSO letter no EL/ 3.2.19/ 3 phase (CCB) dated 30.01.2018 as a trial.
- 3.4 Amendment to Technical Circular No. ELRS/TC/0031(Rev. '01')-2002 was issued vide this office letter no. EL/3.6.21, dated 17/01/2018 to address the issue of falling of TMs as under:
- All conventional electric locos used for hauling passenger trains: Sandwich mounting must be replaced in each TOH
 - All conventional electric locos used for hauling goods trains- Sandwich mounting must be replaced in each alternate major schedule.

- 3.5 A meeting was held at RDSO on 29.12.2017 with manufactures of Spheriblocs, Zonal Railway and CLW regarding premature failures of Spheriblocs in 3-phase Electric Locomotives. The minutes of meeting (MOM) for the same has been issued vide this office letter No. EL/3.1.32 (SB) dated 03.01.2018.

4.0 SPECIFICATION/STR

- 4.1 For finalization of specification of EP assist brake system for 3 phase locomotive compatible with EP assist brake system on coaches, a meeting was organized at RDSO on 03.01.2018 with OEM's. Next meeting has been called on 07.02.2018 to finalize the undecided issues.
- 4.2 RDSO has uploaded the draft specification no: RDSO /2015/ EL/ SPEC/ 0119 (Rev '2') titled as "Functional requirement specification for fuel cell sensor based breath alcohol analyzer for general purpose use on Indian Railways" on RDSO website for suggestion/comments of Industry/Railways besides sending of same to Railways through emailed vide letter no. EL/0.1.3/BA, dated 17/01/2018.
- 4.3 Schedule of Technical Requirements No. RDSO/2008/EL/STR/0050, Rev. '0' for spheriblocs and membranes of hurth coupling of three phase Electric Locomotive has been revised as RDSO/2008/EL/STR/0050, Rev. '1' and uploaded on 17.01.2018 at RDSO website for comments from industries and zonal railways for one month.

5.0 PROTOTYPE TESTING / QUALITY AUDIT:


- 5.1 The witness of prototype test of screw type compressor (oil lubricated) model SL -24 for WAG -12 type of locomotive against Madhepura Project has been carried out at works of M/s. KBIL (Suzhou) china from 15.01.18 to 20.01.2018 . The test includes MASU with air dryer and screw type compressor. The results of the test witnessed were found satisfactory. The detail test report will be submitted by M/s. Alstom to RDSO. The test report is awaited.

6.0 OTHER ACTIVITIES

- 6.1 The process of filing patent for designs of Dual Mode Shunting Loco was initiated with the approval of DG/RDSO. Further, the case has been sent to Railway Board for approval to enable RDSO in filing the patent.

with regards,


Yours sincerely,

 06/2/18
(Om Prakash Kesari)

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

Copy to-

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

 06/2/18
(Om Prakash Kesari)
For Director General/Electrical

Annexure-I

		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	
<u>Railway</u>	<u>Shed</u>	<u>No. of Loco s to be done</u>	<u>Cumulative up to date</u>	<u>No. of Loco s to be done</u>	<u>Cumulative up to date</u>	<u>No. of Loco s to be done</u>	<u>Cumulative up to date</u>	<u>No. of Loco s to be done</u>	<u>Cumulative up to date</u>	<u>No. of Loco s to be done</u>	<u>Cumulative up to date</u>
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	GM O	69	43	157	157	157	157	157	120	157	60
ER	HW H	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	TAT A	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	84	84	84	84	83	83	22	22
Grand	TTL	392	203	1120	1175	1185	1275	1121	1101	1044	810

Annexure-II

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

Rly	Shed	TM location	WA P7	WAG9 /9H	Total	Action plan	PDC
CR	AQ	1,2&3	28	214	242	For 242 bogies for TM 1 & 2 position retendered. Tender opening on 18/12/2017.	Sept'18
		3			71		
CR	KYN	ALL	0	21	21	Tender awarded to M/s. Anup Malleables, Jharkhand on 22nd OCT 17. Work will start by December end.	Mar'18
ER	HWH	ALL	0	0	0	All modified	N/A
ECR	GMO	ALL	0	198*	198	Tender awarded to M/s. Ved, Kanpur. Work will start by December end.	Dec' 18
ECoR	WAT	1,2&3	0	12*	12	Tender awarded to M/s. Ved, Kanpur on 13.10.17. Work will started by December end.	May'18
		3	0	10	10		
NR	GZB	ALL	143	0	143	LOA issued to M/s. Ved, Kanpur. Work not started yet.	Jan'19
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 awarded to M/s. Ved, Kanpur. Work will start by December end.	Aug'18
		3	17		17		
SCR	LGD	1&2	68	161	229	Tender awarded to M/s. Ved, Kanpur. Work has started.	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 awarded to M/s. Anup Malleables, Jharkhand. Work will start by December end.	Dec'18
		3	0	66	66	Tender awarded to Ved, Kanpur for 21 no. bogies. Work has started.	Jun'18
SECR	BIA	1,2&3	16	58	74	LOA issued to M/s. Anup Malleables, Jharkhand in September' 17. Work not started yet.	Dec'18
WR	BRC	ALL	0	0	0	All modified	N/A
WCR	TKD	1&2	37	73*	110	PO issued to M/s. Anup Malleables, Jharkhand for 116 bogie for all three locations. Work will start by December end.	Jan'19
		3	46	73	119		