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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

Date: 05.07.2018

Dear Shri Ghanshyam Singh jee,

Subject: PCDO for the month of June, 2018.

1.0 HIGHLIGHTS

- 1.1 A meeting with 3- phase loco transformer manufacturers, DLW & CLW was held 19.06.2018 at RDSO to explore feasibility of reduction of transformer tank width of WAG 9H loco transformer LOT 6500 so that it can be fitted as under slung in converted loco WAG11. M/s High Volt has shown interest to design the transformer. MOM has been circulated vide letter no. EL/3.2.1/3-phase dated 19.06.2018 for further necessary action by CLW and DLW.
- 1.2 Performance review meeting on Micro Processor based Fault Diagnostic System (MPCS) had been conducted with M/s Medha & Zonal Railways at RDSO, Lucknow on 30.05.2018. Minutes of Meeting comprising action to be taken by Zonal Railways & M/s Medha for improving the reliability of MPCS had been issued vide letter No. EL/4.2.15/Gen dated 12.06.2018.
- 1.3 Modification sheet no. RDSO/2018/EL/MS/0470(Rev.0) for provision of LED type light for exchanging signals with train passing staff has been issued on 18/06/2018.
- 1.4 SMI no: RDSO/2016/EL/SMI/0287 (REV.'1'), for maintenance of Radiators of Oil Cooling Unit of 3- phase Electric Locomotives has been issued on dated 15.06.2018 to standardize the maintenance practice & improve reliability of radiator.
- 1.5 Technical audit of for 3-phase traction motors manufacturing and MSU assembly process of 6FRA 6068at CLW had been carried out by RDSO from 20.06.2018 to 22.06.2018. Technical Audit Report is under preparation and will be issued by 15th July 2018.

2.0 RELIABILITY IMPROVEMENT

- 2.1 Work of development and hosting of Online Portal for reporting and analyzing failures of Electric locomotives was assigned to Railtel vide MOU no. EL/4.2.15/Failure Portal dated 15.06.2017. The portal had been launched on Railtel server from 16.04.2018. A meeting for functionality improvements of Online Portal had been conducted with M/s Railtel & M/s Indtel at RDSO, Lucknow on 28.06.2018. Minutes of Meeting comprising functionality/improvement required in Online Portal had been issued vide letter No. EL/4.2.15/Failure Portal dated 28.06.2018.
- 2.2 A meeting on review of maintenance kits of N-32 Tap Changer for conventional Electric Locomotive with Zonal Railways held on 14.06.2018 at RDSO, Lucknow.
- 2.3 The minutes of meeting related to refurbishment of electronic cards for E 70 brake system of 3 phase system electric locomotive has been issued vide RDSO letter no EL/3.2.19/ 3 Phase dated 29.06.2018. and circulated to OEM.
- 2.4 The minutes of meeting related to standardization of Auto Flasher (AFL) logic and testing procedure for 3 phase electric locomotive has been issued vide RDSO letter no EL/3.2.19/ 2 dated 28.06.2018. and circulated to CLW, SER and OEM.
- 2.5 Vide letter no. EL/11.5.5/5 dtd. 21.06.18, MOM held at RDSO, Lucknow on 20.06.18 on reliability of BHEL make IGBT based converters was issued.
- 2.6 A meeting was held at RDSO on 05.06.2018 with Firms & Railways regarding failure of Traction link in 3-phase Electric Locomotives. The minutes of meeting (MOM) for the same have been issued vide this office letter No. EL/3.1.35/12 dated 07.06.2018 to Zonal Railways & firms. During the meeting it was decided that age wise performance of traction link should be asked from sheds to ascertain the periodicity of changing of traction link.
- 2.7 A meeting was held at RDSO on 06.06.2018 with Firms & Railways regarding failure of Elastic ring in 3-phase Electric Locomotives. The minutes of meeting (MOM) for the same have been issued vide this office letter No. EL/3.1.35/12 dated 07.06.2018 to Zonal Railways & firms. During the meeting sheds were advised to follow the replacement schedule of elastic ring.
- 2.8 A meeting was held at RDSO on 25.06.2018 with Firms & Railways regarding failure of Spheriblocs in 3-phase Electric Locomotives. The minutes of meeting (MOM) for the same have been issued vide this office letter No. EL/3.1.35/12 (SB) dated 27.06.2018 to Zonal Railways & firms. During the meeting developmental firm were advised to closely monitor the performance of spheriblocs supplied by them.

3.0 PROTOTYPE TESTING/QUALITY AUDIT

- 3.1 Technical audit of maintenance practices for 3-phase traction motor at ELS/GZB of Northern Railway had been carried out by RDSO on 04.06.2018. Technical Audit Report is under preparation and will be issued by 15th July 2018.

4.0 SPECIFICATION/STR

- 4.1 For development of interoperable DPWCS, a Meeting was convened on 26/06/18 with BEL, ARC and GE to discuss the development of common radio equipment by M/s BEL for use in DPWCS.

5.0 DEVELOPMENTAL ACTIVITIES

- 5.1 Design report Rev.1 of WAG12 locomotive issued vide letter no. EL/3.1.35/24 dated 06.06.18.
- 5.2 Vide letter no. EL/3.1.35/24 dated 25.06.18, Design comments on effect of equipment failures Rev.0 as per Procurement cum Maintenance of Electric Locomotive Factory at Madhepura was issued.
- 5.3 Vide letter no. EL/3.1.35/24 dated 25.06.18, design review/comments on Pantograph over height protection.
- 5.4 Vide letter no. EL/3.1.35/24 dated 25.06.18, review/comments on Type test & Motorette test & Technical description of traction motor type 6FRA4567E for WAG12 Locomotive was issued.
- 5.5 Vide letter no. EL/3.1.35/24 dated 26.06.18, review/comments on Battery Maintenance Manual of WAG12 Locomotive was issued.
- 5.6 Prototype clearance of 3 sets of dampers for WAP-7 Electric Locomotives has been issued to M/s. Knorr-Bremse, India Pvt., 51/4, Delhi Mathura Road, Vill. & Post-Baghola, Palwal-121102 vide this office letter no. EL/3.2.119 (Damper) dated 01.06.2018 against CLW development Purchase Order No. 17/2015/3760/34993 dated 22.06.2015.

6.0 OTHER ITEMS:


- 6.1 Document No.NHD0000266721 Rev.5 (Validation details of traction motor), revise test program (Document No.NHD0000266652 Rev'11'), technical description of traction motor (Document no.NHD0000266331 Rev'7') submitted by M/s Alstom had been examined. Observations for incorporating the comments had been given to concerned group vide note No.EL/3.2.182 dated 18.06.2018.
- 6.2 A meeting was held between M/s MELPL representatives and RDSO representatives on 28.06.2018 to discuss the issues of traction motor forwarded by RDSO vide note No.EL/3.2.182 dated 18.06.2018. Based on the deliberations, joint Minutes of Meeting had been prepared and issued vide Note No. EL/3.2.182 dated 28.06.2018.

6.3 Submitted type test report no. TR-MM-SEA-445-0008 of Toshiba make traction motor of Dalian project for Kolkata Metro had been examined. The type test report is unsigned. Electrical Directorate vide note No. EL/3.2.182/KM/30(Dalian) dated 15.06.2018 advised the PS&EMU Dte. for following:

- (i) Temperature rise test on sinusoidal supply (0% choking) may be repeated as per clause 5 (Test ID 4 (5) of approved Test Procedure document no. KD-SEA-445-023 Rev.15) and witnessed by RDSO during combined system test.
- (ii) Firm may be advised to submit duly signed complete type test report after incorporating type test results of Overall characteristic test on Powering (Lower speed of DC 675V and other 3rd Rail Voltages) & Overall characteristic test on Braking (DC750V & other 3rd Rail Voltages) and results of repeat temperature rise test on sinusoidal power supply (0% choking).

with regards,


Yours sincerely,

 05/7/18
(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 |) | |

 05/7/18
(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 Locos to be done</u>	<u>Cumulative up to date</u>	<u>No. of Locos to be done</u>	<u>Cumulative up to date</u>	<u>No. of Locos to be done</u>	<u>Cumulative up to date</u>	<u>No. of Locos to be done</u>	<u>Cumulative up to date</u>	<u>No. of Locos to be done</u>	<u>Cumulative up to date</u>
CR	AQ	100	53	175	175	175	175	169	169	169	73
CR	KYN	0	0	64	155	64	155	64	155	64	181
ECOR	WAT	0	0	0	140	0	140	0	140	0	133
ECR	GMO	69	43	157	157	157	157	157	120	157	60
ER	HWH	3	3	25	25	25	25	25	32	25	25
NCR	CNB	0	0	13	13	13	13	0	0	13	13
NR	GZB	90	65	86	86	166	166	142	142	87	87
NR	LDH	0	0	21	21	21	21	21	21	21	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	TATA	4	0	152	200	152	211	152	173	152	120
SR	RPM	0	0	56	56	56	56	56	56	56	55
WCR	TKD	35	35	141	144	141	144	141	144	141	71
WR	BRC	2	2	84	84	84	84	83	83	22	22
Grand	TTL	399	228	1221	1478	1301	1594	1235	1414	1139	1029

Annexure-II

Inspection position of RDSO Cell

Sr.No.	Item Name	No. of Items inspected
	Bhopal	
		58
1.	Pinion 17 Teeth	10
2.	TM Armature Complete for TM 4907	104
3.	Bull Gear 74 Teeth	37
4	Bull Gear 90 Teeth	30
5.	Traction Motor Complete 4907 (GR 18:74)	100
6.	Main Field Coil Assly.	8
7.	Control Panel for Traction	10
8.	Complete Wound Rotor for HHP loco	6
9.	Aux. Generator 3101 AY	2
10.	Power Rectifier	10
11.	Traction Motor Suspension Unit for 1400 HP	68
12.	TM 6FRA 6068	35
13.	C1001 TM (GR 18:65)	6
14.	Rehab.Traction Alternator	24
15.	Complete Stator 6FRA 6068	1
16.	Rehab TM C1005	300
17.	Compole& Coil assly.	
	JHS	
1	Transformer -3 phase, 7775 KVA	07
2	Transformer -ACEMU,1050 KVA	13
3	Wheel set	16

Annexure-III

Status of un-modified motor support (TM-1 & 2 locations) in WAP7 & WAG9/9H three phase locomotives

Rly	Shed	TM location	WAP 7	WAG9/9 H	Total	Action plan	PDC
CR	AQ	1,2&3	28	214	242	For 242 bogies for TM 1 & 2 position retendered, LOA awarded to M/s Ashika commercial pvt ltd Kolkata on 25.01.2018. 34 bogies completed. For TM 3 position not being changed.	Mar'19
		3			71		
CR	KYN	ALL	0	21	21	16 bogies have been modified by M/s. Anup Malleables, Jharkhand.	Sep'18
ER	HWH	ALL	0	0	0	All modified	N/A
ECR	GMO	ALL	0	49+198*	247	Tender awarded to M/s. Ved, Kanpur. Work started in Jan.2018. 90 bogies have been modified.	Mar'19
ECoR	WAT	1,2&3	0	12*	12	7 no. modified by M/s Ved. Only 5 bogies remaining.	Sep'18
NR	GZB	ALL	143	0	143	16 bogies modified M/s. Ved, Kanpur.	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	49	0	49	41 bogies modified by M/s Ved Kanpur.	Oct'18
		3	69		69	48 bogies modified.	
SCR	LGD	1&2	68	161	229	88 bogies have been modified by M/s. Ved, Kanpur.	Jan'19 (for TM 1&2 position)
		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	66	66	21 no. bogies have been modified by M/s Ved, Kanpur. For 49 bogies case file under finance vetting.	Dec.'18
SECR	BIA	1,2&3	16	58	74	37 nos. modified by M/s. Anup Malleables, Jharkhand.	Dec'18
WR	BRC	ALL	0	0	0	All modified	N/A
WCR	TKD	1, 2 & 3	39	77	116	Modified PO issued to M/s. Anup Malleables, Jharkhand for 116 bogies for all three locations on 13.02.2018. 16 bogies completed. For 20 bogies for only TM 3 position tender opened 2 times but could not be finalized.	Mar'19
		3			20		

Annexure- IV

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	15	13	02	0
2	AQ	156	64	92	0
3	KYN	67	0	67	0
4	GMO	179	0	179	0
5	WAT	140	Locos to be checked as per MS 455		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	25	Locos to be checked as per MS 455		0
14	BNDM	34			0