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भारत सरकार-रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ-226 011
Government of India - Ministry of Railways
Research Designs & Standards Organization
LUCKNOW – 226 011

Om Prakash Kesari
Executive Director Standards Electrical/Co-ord

D.O.No.EL.8.5.10.1

Date : 07.08.2017

Subject : PCDO for the month of July,2017.

1.0 HIGHLIGHTS

- 1.1 38th MSG was conducted on 28th and 29th July'17. The agenda items and other important issues pertaining to locos were discussed. The draft minutes of meeting has been submitted to Railway Board for approval.
- 1.2 Technical Specification for passenger locomotives with speed potential of 200 kmph (spec. no. RDSO/2017/EL/SPEC/0129 Rev.1) had been issued and sent to Railway Board.
- 1.3 Speed certificate for WAG9H loco with conventional brake rigging has been issued with new transportation code WAG9HC for needful action by Zonal railways and CLW.

2.0 RELIABILITY IMPROVEMENT

- 2.1 MoM on reliability Improvement of IGBT based SR & BUR of BT & AAL had been issued vide letter no. EL/11.5.5/5 dtd. 06.07.17. In this firm wise action plan in a time bound manner has been indicated.
- 2.2 MoM on reliability Improvement of IGBT based propulsion system of BHEL had been issued vide letter no. EL/11.5.5/5 dtd. 12.07.17. In this meeting M/s BHEL has been advised for using Mil grade components for electronic cards and review the capacitance of DC link capacitors.

- 2.3 MoM on reliability Improvement of IGBT based SR & BUR of CGL had been issued Vide letter no. EL/11.5.5/5 dtd. 14.07.17.
- 2.4 A performance review meeting on reliability of 3-phase locomotive transformer held on 07.07.2017 at RDSO, Lucknow with CLW and transformer manufacturers. The minutes of meeting (MOM) has been issued vide this office letter no. EL/3.2.1/ 3-phase/ HL dated 11.07.2017. Firms were advised to expedite the completion of modification to prevent circulating current.
- 2.5 A meeting was conducted on 11.07.2017 at RDSO with vendors and railway officials regarding reliability issues of 180 KVA Static Converter and draw action plan to resolve failures of 180 KVA Static Converter . The minutes of meeting has been issued vide RDSO letter no EL/1.2.9.1 dated 17.07.2017 and uploaded on website.
- 2.6 Performance Review Meeting on carbon brushes for Hitachi TMs was conducted jointly with Manufacturers and Zonal Railways at RDSO on 11.07.2017. Discussions on failure as well as other performance related issues were held during the meeting. Detailed Minutes of Meeting comprising make wise failure statistics, action to be taken for improvement of performance of carbon brushes and details of carbon brushes to be replaced has been prepared and issued vide RDSO letter No. EL/2.2.70 dated 18.07.2017 for implementation by the firms and Railways.
- 2.7 Performance review meeting on Microprocessor based Control and Fault Diagnostic System (MPCS) was conducted jointly with Manufacturers and Zonal Railways at RDSO on 11.07.2017. Detailed Minutes of Meeting comprising make wise failure statistics & action to be taken for improvement of performance of MPCS has been issued vide letter no. No. EL/4.2.15/Gen dated 19.07.2017 for implementation by the Railways and MPCS manufacturers.

3.0 PROTOTYPE TESTING/QAQUALITY AUDIT

- 3.1 Type testing of High Reach pantograph type ABOH developed by M/s Stone india Ltd / Kolkata was carried out at firm's premises. The balance test i.e. endurance test is under progress.

4.0 SPECIFICATION/STR

- 4.1 Vide letter no. EL/11.5.5/19 dtd. 10.07.17, draft tech. spec. for Upgradation of WAP-5 locos in Twin Bo-Bo mode with speed potential of 200 kmph had been uploaded on RDSO website for comments.
- 4.2 Modified Final Draft Specification for Microprocessor Based Electronic Speed Cum Energy Monitoring System (ESMON) for Electric Locomotives has been uploaded on RDSO website on 21/07/2017 for 15 days for comments/suggestion of PUs/Industry & Railways. The modified Final Draft Specification has also been sent through email to all OEMs/Prospective Vendors/Railways for comments/suggestions.
- 4.3 A meeting was held on 18-07-2017 to discuss the data sheets of technical specification no. ELRS/SPEC/ELC/0019 Rev., '3' for e-beam thin walled cables with OEMs. Based on the discussions during the meeting held at RDSO, Lucknow on 18.07.2017, draft specification no. ELRS/SPEC/ELC/0019 Rev., '4' has been uploaded on 25.07.2017 on RDSO website for comments for a period of one month duly revising existing specification no. ELRS/SPEC/ELC/0019 Rev., '3'

5.0 DEVELOPMENTAL ACTIVITIES

- 5.1 Vide letter no. EL/11.5.5/6/ABB dtd. 06.07.17, field trial test protocol had been provisionally approved for field trial of ABB make 2x500 kVA hotel load converter.
- 5.2 Vide letter no. EL/11.5.5/6/Siemens dtd. 17.07.17, clearance of 2 x cubicle design of 2x500 kVA hotel load converter of Siemens had been provisionally approved.
- 5.3 Vide letter no. EL/11.5.5/2/IGBT dtd. 25.07.17, clearance for consistency type test of AAL make 3x130 kVA, IGBT based BUR against CLW P.O. No. 70/2016/1115/10557 dtd. 19.01.16 had been accorded.
- 5.4 The revised GA drawing no 1-3910.6445 Rev F dated 11.01.2017 and Pan head drawing no 1-3918.5470 Rev f dated 11.07.2017 of pantograph type WBL- 23.03 being user in MRVC first phase has been studied and approved vide RDSO letter no EL/2.2.1/MRVC dated 21.07.2017.

5.5 Design review/comments of clarification on TCN, Rev.1 and Traction Motor Rev.2 Documents as per Procurement cum Maintenance of Electric Locomotive Factory at Madhepura issued vide letter no. EL/3.1.35/24 dtd. 11.07.17 & 25.07.17 respectively.

6.0 Other items:

6.1 Comments on design documents submitted by M/s Medha for Traction motor type TME-45-40-4 for IGBT based 3 phase drive propulsion of Metro Railway , Kolkata was communicated vide note no. EL/3.2.182/KM/166(Medha) dated 06.07.2017.

6.2 Routine test Protocol No. MI-MP-FQP-23/02 Rev-02 dated 04.07.17 for inspection of constant pressure spring brush holder system for Hitachi Traction motors developed by M/s Mersen India Pvt. Ltd., Bangalore has been provisionally approved vide letter No. EL/3.2.100/CSPBH/Mersen dated 12.07.2017.

6.3 Drawings of traction motor imported bearings NJ320 of 6FRA6068 traction motor and NJ219 of 6FXA7059 traction motor with additional 'XL' marking by M/s FAG has been approved provisionally vide letter No. EL/2.2.13dated 12.07.2017.

6.4 Revised test protocol no. TM20190 rev'01 dated 06.07.2017 for instrumented trial of DE & NDE ventilators of Traction Motor type IM3601 submitted by M/s BHEL had been examined and approved vide RDSO letter No. EL/3.2.182(BHEL) dated 13.07.2017.

6.5 Design Document number NHD0000266331, Rev.2 for Traction Motor Type 6FRA4567 E was examined and comments were submitted to DSE/TPL group vide note No. EL/3.2.182/Madhepuradt.20.07.2017 to be forwarded to M/s Alstom as a part of Madhepura Electric Locomotive Project (WAG₁₂).

- 6.6 Test procedure document no. KD-SEA-445-023, Rev.13 for M/s Toshiba make traction motor for IGBT based 3 phase drive propulsion of Metro Railway, Kolkata submitted by M/s Dalian Locomotive, China against contract specification No.RDSO/PE/SPEC/EMU/0030-2003(Rev.1) of April 2009 has been examined. Comments have been given vide RDSO notes No. EL/3.2.182/KM/30(Dalian) dated 10.07.2017.

Yours sincerely,

(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. Secu tp DG/RDSO |) | |

(Om Prakash Kesari)
For Director General/Electrical

Annexure for July'17

		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	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	GMO	69	41	152	152	152	152	152	116	152	57
ER	HWH	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	157
SECR	BIA	10	3	71	46	71	71	64	18	71	31
SER	TATA	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	74	71	74	74	73	73	14	14
Grand	TTL	392	201	1105	1157	1170	1260	1106	1087	1031	798

Annexure-II

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

Rly	Shed	TM location	WAP7	WAG9/9H	Total	Action plan	PDC
CR	AQ	1,2&3	28	214	242	Tender opened for 242 bogies for TM1 & 2 position but rates quoted are very high.	Sept'18
		3			71		
CR	KYN	ALL	0	21	21	Tender Opened on 12.06.2017. But get discharged. Under re-tendering.	Sept'18
ER	HWH	ALL	14	0	14	PO already placed. Plan to modify 04 bogies per week.	Aug'17
ECR	GMO	ALL	0	198*	198	Tender opened on 29.06.17. TC under preparation.	March' 18
ECoR	WAT	1,2&3	0	12*	12	Tender opened, under TC rates are on higher side.	March'18
		3	0	10	10		
NR	GZB	ALL	143	0	143	Tender opened on 09.07.17. Nobody participated. Will be re-tender.	1.5 years after issue of LOA
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 opened. And two round of negotiation done but Rates are still 30% higher. One more round of negotiation will be done.	Aug'18
		3	17		17		
SCR	LGD	1&2	68	161	229	Modification work at TM 1&2 position for 86 bogies tender opened on 04.05.2017 and for 142 bogies tender opened on 22.05.17 and is under negotiation.	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 Opened on 29.06.2017 for 40 bogies for location 1, 2 & 3. TC under preparation.	July'18
		3	0	70	70	Planned through HQ store.	
SECR	BIA	1,2&3	16	58	74	Tender opened on 02.06.2017.	Dec'17
		1&2	0	23	23	Work awarded.	
WR	BRC	ALL	0	0	0	All modified	N/A
WCR	TKD	1&2	37	73*	110	Tender Opened on 30.05.2017 for 116 nos bogies for all 3 positions. Negotiation called with firm as quoted rates are higher by 40% from estimated cost.	Jan'19
		3	46	73	119		

*Trade Bogies: ACPL/ABB (GMO-39, WAT-2, TKD-2, TATA-4)

