

संजीव स्वरूप
प्रधान कार्यकारी निदेशक मानक विद्युत

Sanjiv Swarup
Principal Executive Director Stds. Electrical



भारत सरकार – रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
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D.O.No.EL.8.5.10.1

Date: 27.02.2020

Dear Sri Tiwariji,

Sub: PCDO for the month of Feb, 2020.

1.0 HIGHLIGHTS

2.0 RELIABILITY IMPROVEMENT

- 2.1 Failure investigation of TM bearings for traction motor type 6FRA6068 of loco no. 41036/WAG9 has been carried out at ELS/GMO on 06.02.2020 & 07.02.2020 jointly by RDSO, DLW, ELS/GMO, M/s Saini Electricals, M/s SKF. Joint investigation report along with observations has been sent to Railway Board vide letter no. EL/3.2.182 dated 14.02.2020.
- 2.2 Review of Scheme-I & II design of rotors of traction motor type 6FRA6068 has been conducted based on inputs received from CLW for manufacturing cost, rehabilitation details received from TMW/Nasik, performance details received from zonal railways and views from M/s BHEL & M/s Saini Electricals. In this regard, Report No. RDSO/2020/EL/RM/0189, Rev '0' has been sent to Railway Board vide letter No. EL/3.2.182 dated 31.01.2020.
- 2.3 In terms of Railway Board decision on recommendations of 39th MSG, the TOH & IOH Periodicity of WAP5 locos have been revised & advised to Zonal Railways vide this office letter no. EL/3.1.35/16 dated 12.02.2020.
- 2.4 In terms of Railway Board decision on recommendations of 39th MSG, periodicity of replacement of spheriblocs for WAP5 locos has been revised & advised to Zonal Railways vide this office letter no. EL/3.1.35/16 dated 12.02.2020.
- 2.5 Minutes of Meeting held at BHEL/EDN, Bangalore on 27.02.2020 on reliability issues of M/s BHEL make IGBT based propulsion equipment of 3-phase locomotives has been issued vide letter no. EL/11.5.5/21 dated 12.02.2020.

3.0 DEVELOPMENTAL ACTIVITIES

- 3.1 Vide RDSO letter no. EL/2.2.1/High Reach dtd.29.01.20, MOM on performance of High Reach Pantograph Type IR-05HR has been issued to M/s Contransys Private Limited.

- 3.2 Vide RDSO letter no. EL/2.2.1/High Reach dtd.29.01.20, MOM on performance of High Reach Pantograph Type LX 3600 has been issued to M/s Faiveley Transport Rail Technologies India Limited.
- 3.3 Vide RDSO letter no. EL/2.2.1/High Reach dtd.29.01.20, MOM on performance of High Reach Pantograph Type WBL-85HR has been issued to M/s SCHUNK Metal & Carbon (India) Private Limited.
- 3.4 Vide RDSO letter no. EL/3.2.108/Wheel dated 10.02.2020, committee report of wheel crack case of loco no. 28247/WAG7/ANGL/ECOR has been issued.
- 3.5 It is found that there are frequent failures of EBV affecting the train operation in M/s Knorr-Bremse make CCB on 3-phase electric locos. Also the issue of supply of overhauling kits of various valves of M/s Knorr-Bremse India Pvt. Ltd. are pending. RDSO vide letter no. EL/3.2.19/3-Phase (CCB) dated 13.02.2020, has advised the firm to attend the failures on priority with proper investigation & action plan to be taken immediately under intimation to RDSO.
- 3.6 Vide. RDSO letter no. EL/2.2.1/High Reach/Mersen dtd. 17.02.2020, M/s Mersen India Private Limited has been advised the deficiencies observed in the reply submitted on deficiencies regarding High Reach Pantograph offered by them.
- 3.7 Vide RDSO letter no. EL/3.2.15/3-phase/SDC dtd. 19.02.2020, after capacity assessment of M/s Saber Dais Compression Limited for 1745 LPM oil lubricated compressor Model PEL-1745 is advised to submit design & drawing/BOM documents of the equipment for further process.
- 3.8 Vide RDSO letter no. EL/3.2.19/3-Phase/CCB/2 dtd. 20.02.2020, a letter to M/s Knorr-Bremse India Pvt. Ltd. has been issued to sort out the problem in maintenance of terminal box in CCB because of its location.
- 3.9 Vide RDSO letter no. EL/2.2.1/High Reach dated 20.02.2020, M/s Contransys Private Limited, M/s Faiveley Transport Rail Technologies India Limited and M/s SCHUNK Metal & Carbon (India) Private Limited have been informed regarding poor current collection of High Reach Pantograph and advised to resolve the issues as early as possible on a war footing.
- 3.10 Vide RDSO letter no. EL/1.2.9.1/Siemens dated 25.02.2020, dispatch clearance for prototype unit of 2X130 KVA SIV is accorded for fitment in one electric locomotive.
- 3.11 Final Speed Certificate of WAG12B Class of locomotive up to maximum speed of 100 KMPH has been issued vide letter no. SD.WAG12B.11 on 18.02.2020.
- 3.12 The case of WAG 12B Class of locomotive has been processed for Railway Board sanction through CCRS vide letter no EL/3.1.35/4/WAG12 dated 25.02.2020.
- 3.13 Type test report no. KM-ZB-17-0032 Version-01 dated 16.09.2019 of gear drive system submitted by M/s. CRRC Dalian Co. Ltd. for 3-phase Electric Propulsion System for Kolkata metro has been cleared vide note no. EL/4.2.13 (Dalian) dated 20.02.2020.

- 3.14 Type test report no. TEC-KME-TTRE-S006-02(Gearbox-G467) type test report EN 20200113 dated 14.01.2019 of gear box submitted by M/s. Zhuzhou CRRC TECL for 3-phase IGBT based electric for Kolkata metro has been cleared vide note no. EL/4.2.13 (Zhuzhou CRRC TECL) dated 26.02.2020.

4.0 PROTOTYPE TESTING/QUALITY AUDIT

- 4.1 Based on prototype test carried on 30.01.2020 to 31.01.2020 of M/s Mersen India Private Limited regarding metallised carbon strips with ADD, clearance to supply the equipment is given to the firm vide RDSO letter no. EL/2.2.25/ADD/Mersen dtd. 20.02.2020.
- 4.2 Prototype test results of traction motor type MJC-280-1, manufactured by M/s ABB, India witnessed by RDSO at M/s BT, Germany from 04.11.19 to 08.11.19 & 11.11.19 to 15.11.19 for BEML Project has been examined and found to be in order. Prototype clearance has been accorded vide Electrical Dte's note no. EL/3.2.182 (BEML) dated 12.02.2020.

5.0 OTHER ITEMS:

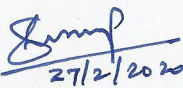
- 5.1 Minutes of meeting including the Railway Board's decisions for 39th MSG (Elect. Loco) meeting held at ELS/AQ/CR on 14th & 15th Oct'2019 was circulated among Zonal Railways/PUs etc. vide letter no. EL/2.1.8, dated 12.02.2020.
- 5.2 A meeting was held at Railway Board on 07.02.2020 with CLW to resolve all the issues pertaining to Oil Cooling Unit of 3-phase electric locomotives.
- 5.3 RDSO official visited ELS/CNB on 04.02.2020 to study the roof bar arrangement in conventional locomotive to address the problem of implementing the MS 405 & 446 together.
- 5.4 The proposal of M/s CAF to use energy meter in place of CT/PT in Train Set received from PS&EMU Dte was examined & comments were communicated vide note no. EL/8.1.25.1/CAF/ Train-18 dated 11.02.2020.
- 5.5 RDSO official attended the meeting at CLW on 24.02.2020 regarding various issues i.e. speed certificate for long haul train operation, proper cab selection in remote locos , prototype testing of M/s Lotus make DPWCS of 3-phase locos and proving of interoperability with M/s BEL make data radios.
- 5.6 SER had reported large scale tripping of feeder CB at TSS due to flashover of ET-2. This issue was examined & advice of RDSO communicated to SER vide letter no. EL/2.2.23 dated 20.02.2020.
- 5.7 Validation doc. No. NHD0000266721-Rev '9' for traction motor of WAG12 locomotive submitted by M/s MELPL has been examined. Comments has been furnished vide note No.EL.3.2.182 (Madhepura) dated 13.02.2020.
- 5.8 M/s Siemens proposal for new 6000HP locomotive traction motor & upgradation of WAP5 locomotive has been examined. Firm has been requested vide this office letter No. EL/3.2.182 dated 19.02.2020 to give a detail presentation on their proposal.

- 5.10 Submitted documents have been scrutinized of SKF Technologies (India) Pvt. Limited, Ahmedabad for fresh vendor registration for manufacturing and supply of TM bearing (NU2236, only DE side) for traction motor type 6FRA6068. Firm has been considered for capability assessment. RDSO vide letter no. EL/2.2.13/SKF/NU2236 dated 17.02.2020 has communicated M/s SKF to arrange assessment in first week of March' 2020.
- 5.11 Design document no. TME/TECH/2019/1001 Rev.00 dated 23.11.2019 consisting technical details, type & special test schedule, routine test schedule, Quality Assurance Plan, etc. of traction motor type IM3302BZ has been submitted by M/s BHEL vide their letter no. TME/3302/RDSO/2019-20/401 dated 06.12.2019 through PS & EMU Directorate note no. EL/1.3.16.7/3-phaseAC EMU/ICF/BHEL dated 22.01.2020. Submitted documents have been examined and comments have been communicated vide Electrical Directorate's note no. EL/3.2.182/IM3302BZ/BHEL dated 17.02.2020.
- 5.12 Electrical Dte. vide note no. EL/8.1.25.1/3Ph MEMU/RCF/BHEL, dated 17.02.2020 have furnished the comments on design documents of different type of jumper cables of M/s Huber + Suhner submitted by BHEL/NDLS and forwarded by PS & EMU.

With Warm Regards'

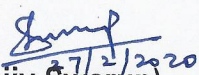
Encl: Annexure I ,II & III

Yours sincerely,


27/2/2020
(Sanjiv Swarup)

**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.


27/2/2020
(Sanjiv Swarup)
Pr.Exe.Dir.Stds. Electrical

Annexure-I

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

Position on: 26.02.2020

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Balance to be modified	PDC
CR	AQ	1,2	28	204	232	32	Mar'20
		3	30	257	287	226	
	BSL	1,2	0	0	0	0	Completed in all locos
		3	0	0	0	0	
	KYN	1,2	0	0	0	Nil	Mar'20
		3	0	96	96	96	
		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	
	KZJ	1,2	0	0	0	Nil	June.' 20
		3	0	99	198	26	
SER	TATA	1,2	0	0	0	Nil	June.'20
		3	0	49	44	05	

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, GMO.

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	26	13	0	13
2	AQ	156	71 ^(22TBU/PBU+41BL)	85	11
3	KYN	69	16	53	0
4	GMO	177	0	177	0
5	WAT	142	14.5	122.5	5
6	LDH	129	22	0	107
7	CNB	79	12	0	67
8	LGD	111 ^(7-WAG9HC)	27	76	8 ^(7-WAG9HC)
9	KZJ	99	34	14	45
10	TATA	133	0	133	20
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		1410	357.5	754.5	321

Annexure-III

Population of high Reach Pantograph as on Feb'20

RLY	Shed	Rev.1										Rev.2										Total Shed wise (Rev1+2)
		WAG-5	WAG-7	WAG-9	WAG-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	WCAM-3	WCAG-1	Shop Floor	Rev 2 Total	
CR	AQ	0	0	14	0	0	0	0	6	20	0	0	14	0	4	0	0	0	0	0	18	38
CR	KYN	0	0	1	0	0	0	0	0	1	0	0	29	0	1	0	0	1	1	0	32	33
CR	BSL	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	1	14	14
NR	LDH	0	6	0	0	0	0	0	3	9	0	1	34	0	0	0	1	0	0	0	36	45
NR	GZB	0	0	0	0	0	0	0	0	0	0	0	0	31	2	0	0	0	0	8	41	41
NR	KIGY	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
NCR	JHS	1	17	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	18
NCR	CNB	0	12	34	0	0	0	0	10	56	0	0	0	0	0	0	0	0	0	0	0	56
ER	ASN	0	0	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	0	0
ECR	GMO	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	32	32
ECR	MGS	0	0	0	0	0	0	0	0	0	0	3	0	0	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	0	0	3
ECOR	VSKP	0	0	0	0	0	0	0	4	4	0	0	6	0	0	0	0	0	0	2	8	12
SCR	KZJ	0	0	0	0	0	0	0	0	0	0	2	34	0	0	0	0	0	0	3	39	39
SCR	LGD	0	0	8	0	0	0	0	2	10	0	0	14	0	0	0	0	0	0	1	15	25
SCR	BZA	0	1	0	0	0	0	0	2	3	0	5	0	0	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	0	0
SER	BNDM	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0
SER	SRC	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	10
SER	TATA	0	2	6	0	0	0	0	3	11	0	0	8	0	0	0	0	0	0	8	12	12
SECR	BIA	0	0	8	0	2	0	0	14	24	0	0	0	0	3	0	0	0	0	0	8	19
SR	AJJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	27
SR	ED	0	3	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	0	0	0
SR	RPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7	7
WCR	ET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WCR	NKJ	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	2	2	2
WCR	TKD	0	0	0	0	0	0	0	2	2	0	0	41	0	7	0	0	0	0	1	10	10
WR	BL	0	0	0	0	0	0	0	0	0	0	51	0	0	0	0	0	0	0	7	55	57
WR	BRC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	51
IR	TOTAL	1	45	81	0	2	0	0	46	175	0	71	229	74	59	0	10	1	1	93	183	746