

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

Dt: 02.07.2020

Dear Sri Tiwari ji,

Sub: PCDO for the month of June, 2020.

1.0 HIGHLIGHTS
Nil

2.0 RELIABILITY IMPROVEMENT

- 2.1 Inspection issues raised by M/s BHEL vide their letter No.TME/6FRA6068/RDSO/2020-21/009 dated 06/06/2020 had been examined. RDSO vide letter No.EL/2.2.13 dated 23.06.2020 has clarified the issues and M/s BHEL has been permitted to supply traction motors type 6FRA-6068 to CLW, DLW & DMW with FAG/SKF make DE/NDE bearings as per course of action laid down at Para 4 of the letter dated 24.05.2018 for a period of 30.09.2020.
- 2.2 M/s BHEL has been advised to improve the reliability of 3-phase IGBT based loco propulsion equipments vide letter No.EL/11.5.5/6 (BHEL) dated 12.06.2020.
- 2.3 M/s BTIPL has been advised to improve the reliability of 3-phase IGBT based loco propulsion equipments vide letter No.EL/11.5.5/21 dated 22.06.2020.

3.0 DEVELOPMENTAL ACTIVITIES

3.1 Development of End of Train Telemetry(EoTT)

- i) Design documents of M/s AAL, Noida for End of Train Telemetry (EoTT) received through email on 22.05.2020 had been examined. Comments have been communicated to firm vide letter No.EL/4.2.15/EoTT/AAL dated 17.06.2020.
- ii) Design documents of M/s Siemens for End of Train Telemetry (EoTT) received through email on 20.05.2020 had been examined. Comments have been communicated to firm vide letter No.EL/4.2.15/EoTT/Siemens dated 19.06.2020.

3.2 Deficiencies in reply submitted by M/s HASWELL TECHNIK PVT. LTD on high reach pantograph has been scrutinized and advised to the firm vide RDSO letter No.EL/2.2.1/High Reachdated.10.06.20.

3.3 In terms of RDSO's MOM dated 29.01.18, to address the issue of non-application of brake through DBC in service zone except emergency position in E-70 Brake System, M/s FTRIL proposed the System Operated Automatic Emergency Brake (SOAEB) system wherein when BP is not dropped by A9 in service zone, then penalty brake will

be activated through SOAEB. The SOAEB was provided in one WAG9 type loco each at ELS/TATA, ELS/RPM and ELS/AQ for extensive field trial.

In the letter of ELS/TATA apprised that if cab activation signal that routed to pneumatic panel is disconnected or low by any means, the pneumatic panel understands the particular case as "Self-Hold Mode". On other hand the cab activation signal to DBC is still active and electrical signal of DBC movement will be sent to disabled pneumatic panel. Hence, BP will not drop by either DBC movement except emergency or through SOAEB. The situation was simulated in loco/31658 (equipped with SOAEB). RDSO vide letter No.EL/3.2.19/3-Phase dated 11.06.20 has advised the firm to take up the matter and suggest appropriate solution.

- 3.4 RDSO vide letter No.EL/2.2.1/High Reach/Nike dated 12.06.20 has advised M/s Nike to submit the complete compliance of specification of High Reach Pantograph.
- 3.5 RDSO vide letter No.EL/3.2.19/3-Phase dated 17.06.20, has advised M/s Faiveley to review the QAP(revised) for E-70 brake system as there are some shortcomings noticed.
- 3.6 RDSO vide letter No.EL/3.2.15/3-phase/SDC dated 18.06.20, M/s Saber Dais has been again advised to submit design & drawing/BOM documents of 1745 lpm oil lubricated compressor Model PEL 1745.
- 3.7 Current collection trials between Delhi Cantt and Rewari of High Reach Pantograph WBL-85HR are conducted on 22/23.06.2020 and 24.06.20 and witnessed by RDSO, NR officials and M/s SCHUNK.
- 3.8 Current collection trials between Delhi Cantt and Rewari of High Reach Pantograph LX-3600 are conducted on 25.06.2020 and 26.06.20 and witnessed by NR officials and M/s FTRTIL.
- 3.9 Approval for supplying indigenous MSU Bearing (NU1964 & NJ1044) manufactured by M/s. SKF, Ahmadabad of WAG9/WAP7 Locomotive as Developmental source to Zonal Railways along with Production Units has been issued vide this office letter No.EL/1.3.10/SKF dated 23.06.2020.
- 3.10 Design documents and type & routine test plan of M/s JST make 2880 kVA transformer for Underslung EMU project has been cleared vide this office note No.EL/ 3.2.1/ Underslung EMU/Medha Dated: 27.5.2020.
- 3.11 Design document of Surge Arrester of M/s Siemens make primary & secondary surge arrester type 3EL2040-2RC31-4AA5 & 3EL2042-2RC21-4AA5 respectively for Train-18 project has been cleared vide this office note No.EL/ 3.2.1/ Train-set Dated 12.6.2020.
- 3.12 Design document scrutiny of M/s CGPISL make 1288 kVA Transformer for On-board MEMU project has been carried out and comments have been offered for compliance vide this office note No.EL/3.2.1/On-Board MEMU/CGPISL dated 22.6.2020.
- 3.13 Design document of IV coupler cable for M/s Medha make under slung MEMU project has been scrutinized and status for same has been given to PS & EMU dte. vide letter No.EL/8.1.25.1/Medha/Under slung MEMU, dated 23.06.2020.

- 3.14 Design document of Energy meter for M/s CAF make for Trainset project has been scrutinized and status for same has been given to PS & EMU dte. vide letter No.EL/8.1.25.1/CAF/Train18, dated 23.06.2020.
- 3.15 Loco TCAS wiring diagram of M/s HBL, Hyderabad for WAG7 Electric Locomotive has been provisionally approved vide this office letter No.EL/0.1.3, dated 23.06.2020.
- 3.16 Design review/ comments on current collection test protocol as per Procurement cum maintenance of Electric Locomotive Factory at Madhepura has been given vide letter No.EL/3.1.35/24 dated 18.06.2020.
- 3.17 Comments on design document of Line and Traction Converter unit for IGBT based Propulsion system for under slung EMU to be Supplied by M/s Medha has been given vide note No.EL/11.5.5/1/USEMU/Medha dated 15.06.2020.
- 3.18 Approval for temperature measurement of electronics and energy efficiency test on WAG12B locomotive has been given vide letter No.EL/3.1.35/24 dated 22.06.2020.

4.0 SPECIFICATION/STR

- 4.1 Draft Technical Circular manual CAB selection in Electric Locomotive fitted with DPWCS in train consist has been circulated to Railways/PUs/OEMs for their suggestions/comments vide RDSO letter No.EL/3.1.3(DPWCS) dated 24.06.2020.
- 4.2 Draft Schedule of Technical Requirement for Thin Walled flexible elastomeric cables with copper conductor (Electron Beam irradiated curing process) for tap changer electric locomotives, 3-phase Electric locomotives, EMU, MEMU & Coaching stock has been prepared & circulated to Railways/PUs/OEMs for their suggestions/comments vide RDSO letter No.EL/2.2.37 dated 26.06.2020.

5.0 PROTOTYPE TESTING/QUALITY AUDIT

Nil

6.0 OTHER ITEMS

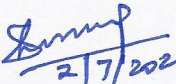
- 6.1 Motorette test protocol of Motor type TME-48-45-6 for On- Board MEMUs of M/s Medha, doc. No.TSA 021879_C received through PS & EMU Directorate note No.EL/1.3.16.6/On-Board MEMU/Medha dated 05.06.2020 has been examined. The Motorette Test Protocol document No.TSA 021879_C has been provisionally approved vide note no. EL/3.2.182/On-board MEMU/Medha dated 22.06.2020 and communicated to PS & EMU Directorate accordingly.
- 6.2 Design document No.TME/TECH/2019/1001 Rev.01 dated 03.03.2020 consisting technical data sheet, 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/2019-20/424 dated 03.03.2020 through PS & EMU Directorate note No.EL/1.3.16.7/3-phase AC EMU/ICF/BHEL dated 16.03.2020. Submitted documents have been examined and comments have been communicated vide Electrical Directorate's note No.EL/3.2.182/IM3302BZ/BHEL dated 30.06.2020.

- 6.3 M/s BHEL's compliance on motorette test submitted for traction motor type IM3302AZ for Other Than Mumbai project through PS & EMU Directorate note No.EL/1.3.16.7/ON BOARD/RCF/BHEL dated 04/05.02.2020. Submitted documents have been examined and comments have been communicated vide Electrical Directorate's note No.EL/3.2.182/OTM/163/BHEL dated 30.06.2020.

Encl: Annexure I, II & III.


With warm Regards

Yours sincerely,


2/7/2020
(Sanjiv Swarup)

Shri Rajesh Tiwari,
Member Traction,
Railway Board, Rail Bhavan,
New Delhi - 110 001

Copy for kind information to-
Additional Member (Traction), Railway Board, Rail Bhawan, New Delhi.


2/7/2020
(Sanjiv Swarup)
Pr.Exe.Dir.Stds. Electrical

Status of un-modified motor support in WAP7 & WAG9/9H three phase locomotives
Position on: 25.06.2020

Rly	Shed	TM location	WAP7	WAG9H	Total no. of bogies	Balance to be modified	PDC
CR	AQ	1,2	28	204	232	27	DEC'20
		3	30	257	287	209	
	BSL	1,2	0	0	0	0	Completed in all locos
		3	0	0	0	0	DEC'20
	KYN	1,2	0	0	0	Nil	
		3	0	96	96	96	
NR	GZB	1,2	143	0	143	0	Completed in all locos
		3	159	0	159	0	
SCR	LGD	1,2	68	164	232	0	NA
		3	84	206	290	154	DEC.'20
	KZJ	1,2	0	0	0	Nil	
		3	0	102	204	26	
SER	TATA	1,2	0	0	0	Nil	OCT.'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, BSL, GZB.

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	29	13	0	13
2	AQ	155	71 ^(22TBU/PBU+41BL)	84	11
3	KYN	69	16	53	0
4	GMO	177	0	177	0
5	WAT	153	21.5	113.5	18
6	LDH	129	22	0	107
7	CNB	79	12	0	67
8	LGD	130 ⁽⁸⁹⁺⁴¹⁾	28	61	41 ^(37-WAG9H; 4-WAG9)
9	KZJ	102	40	14	48
10	TATA	133	0	133	20
11	BIA	136	75	32	29
12	TKD	103	82	0	21
13	NKJ	63	26	14	23
14	BNDM	19	0	19	19
Total		1477	406.5	700.5	417

Annexure-III

Provision of 2 High Reach Pantograph in electric locomotives as on date 26-Jun-2020			
RLY	Shed	Quantity of Locos with type of loco and its number provided with 2 HRPTs	Pop
CR	AQ	16 WAG-9 (32005, 31264, 32032,32052, 31114,31116, 32073, 31271, 31276, 31981, 31110, 32374, 32380, 31027, 31270, 31277)	63
CR	KYN	7 WAG9 (31575,32431, 31453, 31384, 31387,32232, 31382)	27
CR	BSL	9 WAG9 (31560, 31406, 31738, 31642, 31403, 31516, 32401, 31402, 31404)	29
NR	LDH	17 WAG9 (32252, 32142, 32387, 32455, 31665, 32166, 32286, 32315, 32263, 32246, 32317, 32436, 32454, 32585, 32283, 32252, 32397) 3 WAG-7 (24590, 24583, 24580)	50
NR	TKD/D	11 WAP1 (22024, 22028, 22029, 22036, 22037, 22039, 22040, 22049, 22050, 22056, 22076)	25
NR	GZB	21 WAP5 (30001, 30002, 30003, 30011, 30014, 30018, 30021, 30022, 30024, 30025, 30043, 30098, 30132, 30133, 30135, 30136, 30141, 30145, 30146, 30149, 30164)	46
NR	KJGY	2 WAG-9 (32805, 32714)	1
NCR	JHS	9 WAG-7 (24514, 24523, 24509, 24508, 27064, 27614, 24507, 27567, 27617)	21
NCR	CNB	20 WAG9 (32265, 32394, 32233, 32229, 32549, 32433, 32291, 32308, 32268, 32338, 32645, 32318, 32266, 32346, 32244, 32446, 32307, 32545,32256,32309)	56
ER	ASN	0	0
ER	HWH	0	0
ER	BWN	11 WAG9 (31619, 31416, 32515, 32563, 32516, 32560,31418,31409, 32557, 32451,34015)	11
ECR	GMO	14 Nos. WAG-9 (1. 32289, 2. 32339, 3. 32652, 4. 31853, 5. 31473, 6. 31859, 7. 31857, 8. 31509, 9. 31533, 10. 31488, 11. 31413, 12. 31834, 13. 31508)	35
ECR	MGS	3(WAG7-27038, 27032,27057)	6
ECR	BJU	2 WAG-9 (32334,32444)	10
ECOR	ANGL	0	2
ECOR	VSKP	7 WAG-9 (31625, 32607, 32810, 32809, 31623, 32693,32690)	24
SCR	KZJ	15 WAG-9 (34001, 34002, 32542,32247, 32458, 32325, 32718, 32280, 32408, 32410,32649, 32389 GY,32279,32520,32461)	46
SCR	LGD	13 WAG9 (32700, 31143, 32367, 32655, 32480, 32418,32681,32653, 32066 GY, 32413, 32481,32670,32363)	44
SCR	BZA	02 WAG-7 (28249,28424)	8
SER	BKSC	3 WAG-9 - 32755, 32672,32521	15
SER	BNDM	0	6
SER	SRC	3 WAP7(37324, 37326, 37336)	12
SER	TATA	03 WAG9 (32324, 32647, 32582), 01 WAG7 (27602)	27
SER	ROU	03 WAG9 (32597,32281,32302)	29
SECR	BIA	6 WAG-9H (32688, 31844,31806,32679,32757,32807)	32
SR	AJJ	0	0
SR	ED	3 WAG-7	11
SR	RPM	0	0
WCR	ET	2 WAP 7 (39006, 39097)	7
WCR	NKJ	3 WAG-9 (32290, 31943 & 32468)	16
WCR	TKD	15 WAG9 (31607,31471,31181, 31297, 32335,31614, 32170, 32264, 32295, 32332, 31610, 31170, 32321,32654,31503)	60
WR	BL	4 WAP-4 (22293, 22324, 22351,22344) 7 WAG-7(28727, 28621, 28752, 24691,28726,24689,28640)	64
WR	BRC	1 WAP-5 (30185) 28 WAP-7 (30470, 30474, 30480, 30526, 30527, 30531, 30569, 30585, 30598, 30719, 30759, 30761, 30767, 37126, 37128, 37163, 37164, 37302, 37303, 39018, 39027, 39065, 39103, 37175, 30574, 30637, 37111, 30634)	144
total	IR	WAG9 - 166, WAG7-19, WAP7 -33, WAP5 -22, WAP4- 4, WAP1-11	927