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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

Date: 09.03.2018

EL/2.2.13

Principal Chief Electrical Engineers,

- Central Railway, Mumbai, CST-400 001
- Eastern Railway, Fairlie Place, Calcutta-700 001
- Western Railway, Churchgate, Mumbai-400 020
- South Eastern Railway, Garden Reach, Kolkata-700 043
- Southern Railway, Park Town, Chennai-600 003
- Chittaranjan Locomotive Works, Chittaranjan-713 331 (WB)

Sub: Minutes of Meeting for discussion on 'Expediting the supply of Traction Motor/Motor Suspension Unit/Axle Box Bearings'

Ref: RDSO's letter no. EL/2.2.13 dated 23.02.2018

Minutes of Meeting for 'Expediting the supply of Traction Motor/Motor Suspension Unit/Axle Box Bearings' held at RDSO on 9.03.2018 had been issued and may be downloaded from RDSO website using following path:

<http://www.rdso.indianrailways.gov.in> → Directorate → Electric Loco → Important letters/Documents → EL/2.2.13 dated 09.03.2018

This is for your kind information please.

(Signature)
9.3.18

(P.K. Saraswat)

for Director General/Electrical

Copy to:-

(i) Secretary (Electric Traction), Railway Board, Rail Bhawan, New Delhi-110 001:
(Kind Atten : Shri A.K. Goswami, DEE/RS) for kind information please.

(ii) M/s SKF India Ltd, 611-617, 6th Floor, Bestech Chambers, B Block, Sushand Lok
Phase-1, Gurgaon-122002 (Haryana).

(iii) M/s Schaeffler India Ltd., Maneja Vadordara-390013

(iv) M/s National Engineering Industries Ltd., Khatipura Road, Jaipur-302006

(Signature)
9.3.18

(P.K. Saraswat)

for Director General/Electrical

Minutes of Meeting for 'Expediting the supply of Traction Motor/Motor Suspension Unit/Axle Box Bearings' held at RDSO on 9.03.2018

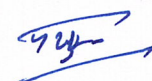
Present:

RDSO			NEI		
1	Shri O. P. Kesari	PEDSE	1	Shri Shiv Dutt Sharma	AGM
2	Shri A. K. Shukla	EDSE	2	Shri Pradeep Jain	Manager
3	Shri P.K. Saraswat	DSE/TM	3	Shri Chetan Sharma	Manager
4	Smt. Pratibha Gupta	JDSE/C&S	4	Shri Amrendra Singh	Asst. Manager
POH BSL			Schaeffler		
5	Shri B L Bathu	Sr. EDPM	5	Shri Narendra Bhagwani	GM
6	Shri Ashutosh Shukla	SSE	SKF		
CLW			6	Shri Sundar Negi	Asst. Manager
7	Shri SS Yadav	SEE	7	Shri Abhishek Sharma	Asst. Manager
KPA					
8	Shri SK Roy	AWM			

1. Production of three phase locomotives had increased and production of conventional locomotives had been stopped by CLW. CLW, POH workshops and Zonal Railways are facing crisis of bearing supply with increase in bearing requirement for production of locomotives.
2. RDSO vide letter no. EL/2.2.13 dated 23.2.2018 had invited bearing manufacturers and representatives from CLW and Zonal Railways to discuss the supply issues for bearings.
3. During the meeting, all the firms were advised to expedite the supply of bearings against existing purchase orders so that manufacturing locomotives and replacement of bearings in existing locomotive as per prescribed periodicity can be carried out. From the Purchase Order details, it is observed that firms are quoting delivery period of more than one year also. All the firms were requested to quote minimum possible delivery period required for future tenders.
4. As per CLW's Joint Procedure Order-72 dated 12.2.2018, production target of electric locomotives for 2018-19 is 413 (WAG9 - 240, WAP7 - 143, WAP5 - 30) (including quantity of DLW, DMW & DKAE, for which material to be procured by CLW). CLW also purchase about 3 months quantity (25%) as buffer stock. Total requirement of CLW for bearings for production of locomotives in 2018-19 will be 2873 TM sets of 6FRA6068 & 150 TM sets of 6FXA7059.
5. Additionally DLW & DMW will procure material for 160 Loco sets or 960 TM sets of 6FRA6068.



6. CLW also had existing RSP provisions for 60 loco sets of motorized bogie for WAG9/WAP7, 110 motorized wheel sets of WAG9 & 50 TMs. Thus requirement of bearings for RSP will be 520 TM sets of 6FRA6068 and 470 sets of MSU bearing for 6FRA6068 TM.
7. Total quantity of bearings to be procured by production units for 2018-19 will be around 4353 TM sets of 6FRA6068, 150 TM sets of 6FXA7059 and 4303 sets of MSU bearing for 6FRA6068 TM. Bearing manufacturers are requested to gear up for meeting this demand timely and start importing the bearings in advance.
8. Apart from the production units, Zonal Railways also replace the bearings as per prescribed periodicity. Present 3 Phase electric loco holding of Indian Railway is 1599 (WAG9 – 1038, WAP7 – 429, WAP5 – 132). Conventional loco holding is 4077 (3362 locomotives with HS15250A TM, 704 locomotives with TAO-659 TM & 11 WAG6 locomotives).
9. In 3 phase locomotives, TM bearing is must change item in IOH & MSU bearings are must change item in POH. Thus, average annual replacement requirement for TM bearings will be approximately 1682 TM set for 6FRA6068 TM & 118 TM sets for 6FXA7059 TM. Average annual replacement requirement for MSU bearings will be 805 set for 6FRA6068 TM.
10. Total requirement of 3 phase locomotive bearings for locomotive production & maintenance will approximately be 6035 TM sets for 6FRA6068 TM, 268 TM sets for 6FXA7059 TM & 5108 sets of MSU bearings for 6FRA6068 TM.
11. In conventional locomotives, TM & MSU bearings are must change item in POH. Thus, average annual replacement requirement for TM bearings will be approximately 2335 TM sets for HS15250A TM, 704 TM sets for TAO-659 TM & 2335 sets of MSU bearings for HS15250A TM.
12. It is also observed during meeting that some POH Shops are not having adequate EAC to replace the bearings as per requirement. For example, POH shop BSL is having EAC of 80 sets of bearings for 6FRA6068 TM for 2017-18, whereas POH target for 2017-18 is 33 WAG9/WAP7 locomotives. Total requirement of 6FRA6068 TM bearings is 198 set against EAC of 80 sets. For 3phase MSU bearings, EAC is 240 sets which is adequate, but PO placed/Supply received was only 60 sets, POH target is 33 locos, requirement of bearings is 198 sets and shortfall is 138 sets from the supply. Similarly, for Hitachi TM bearings, EAC is 225 sets, POH target is 60 locos, requirement of bearings is 360 sets and shortfall is 135 sets. For TAO TM bearings, EAC is 115 sets, POH target is 40 locos, requirement of bearings is 240 sets and shortfall is 125 sets.



13. List of purchase orders for bearings where delivery period had already been expired is given below:

Brg type	Firm	Rly	PO No.	PO date	PO Qty.	DP	Revised Target Date Given by Firm in meeting
NU 2236 & NJ 320 (6FRA606 8TM)	SKF	SR	26-16-5031-41209	14-06-17	84 sets	16.02.18	31.5.2018
NU328 (TAO TM)	SKF	CR	37173035104 318	06.10.17	44 No.	31.01.18	31.7.2018
NU330 (Hitachi TM)	NEI	KPA	51612681019 59	10.03.2017	234 No.	10.07.17	30.4.2018
NH324 (Hitachi TM)	NEI	SR	26 16 2022 1 01608	7-Mar-17	42 No.	9.8.17, 31.01.18, 15.03.18	Dispatched on 28.2.2018
NH324 (Hitachi TM)	NEI	SR	26 16 2022 1 41219	20-Jun-17	50 No.	23.10.17, 31.1.18, 31.03.18	15.3.2018

14. List of purchase orders for TM/MSU bearings where delivery period is not expired are attached as annexure –‘A’

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5.2.18

(P.K. Saraswat)

For Director General/ Electrical

Annexure-A

1. Status of Pending Orders on Schaeffler India Ltd. As on 9-March-2018

Sl. No.	Rly	PO No.	PO Date	PO Qty.	DP as per PO	Motor Type	MSU/TM	Bearing type	Remark by firm
1.	SCR	29171028190005	1/1/2018	80 sets	10.03.2018, 30.03.2018, 30.08.2018	6FRA6068	TM	NU2236 & NJ320	32 sets in May 2018 48 sets in Aug 2018
2.	SCR	85171500197405	24-10-17	24 sets	30.04.2018, 30.10.2018	Hitachi	TM	NU330	12 – Supplied 12- SCR needs in Oct 18
3.	WC R	20174146 2/1/2018	-	148 sets	nil	6FRA6068	TM	NU2236 & NJ320	AAT / Order pending
4.	WC R	20184146A 8/2/2018	-	15 sets	nil	6FRA6068	TM	NU2236 & NJ320	AAT received - 15 sets in Aug 2018
5.	SR	26 17 2023 1	6-Dec-17	90	30-Mar-18	Hitachi	TM	NU330	PO received for 286+70
6.	SR	05195	6-Dec-17	140	31-May-18	Hitachi	TM	NU330	=356. 90 bearings supplied.
7.	SR		6-Dec-17	70	29-Jun-18	Hitachi	TM	NU330	266 offered to Rites for insp. Supply in March.
8.	SR		6-Dec-17	126	29-Jun-18	Hitachi	TM	NU330	
9.	SR	27 17 2207 1 01315	19-Jan-18	143	25-May-18	TAO	TM	NH318	Dispatched
10.	CR	27173249104481	16.10.17	11	15.04.18, 31.10.18	6FRA6068	TM	NU2236 & NJ320	Order recd for 193 sets. Supply 74 sets in Mar 18
11.	CR		16.10.17	136 sets	31.10.18, 15.04.18	6FRA6068	TM	NU2236 & NJ320	Supply 58 sets in May 18 Supply 119 sets in Oct 18 (58 sets another order recd)
12.	CR	27173344101586	13.02.18	16	21.02.18	6FXA7059	TM	NU224 & NH219	Dispatched
13.	CL W	83/17/51/10924	04.01.17	476 sets	27.04.18	6FRA6068	TM	NU2236 & NJ320	Balance 50 sets to be supplied in Mar 18

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14.	CL W	83/18/51/111160	12.09.17	438 sets	31.12.18	6FRA6068	TM	NU2236 & NJ320	Supply 29 sets in Mar 18 Supply 146 sets in May Supply 137 sets in Aug 18 Supply 78 sets in Oct 18 Supply 48 sets in Dec 18
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2. Status of Pending orders on SKF India Ltd as on 09th March 2018,

SN	Rly	PO No.	PO Date	PO Qty.	DP as per PO	Motor Type	MSU/ TM	Bearing type	Firm's Remark (Tentative Terminal Delivery date)
1.	SCR	29171028198855	18-12-17	53 Sets	31.07.2018, 30.08.2018, 30.12.2018	6FRA6068	TM	NU2236 & NJ320	Nov/December 2018
2.	SCR	85171396190244	17-01-18	14 Sets	17.11.2018	6FRA6068	MSU	NU1964 & NH1044	September/October 2018
3.	SCR	85171396190254	18-01-18	5 sets	18.09.2018	6FRA6068	MSU	NU1964 & NH1044	September/October 2018
4.	SCR	85175002129012	17-01-18	24 sets	17.11.2018	6FRA6068	MSU	NU1964 & NH1044	September/October 2018
5.	SR	26-16-5031-41209	14-06-17	84 sets	16.02.18	6FRA6068	TM	NU2236 & NJ320	May 2018
6.	SR	26 17 2208 1 03483	26-Jul-17	130	31-May-18	TAO	TM	NU328	August 2018
7.	NR	19170609103605.0 0	08.08.17	171 sets	08.04.18	6FRA6068	TM	NU2236 & NJ320	60 sets supplied 24 sets under insp. 87 sets by April

7/4/18

8.	NR	19170610104062.0 0	13.09.17	15 sets	13.03.18	6FXA7059	TM	NU224 & NH219	05 sets supplied in Dec' 17 10 sets dispatched 9.3.2018
9.	NR	19160610101027.0 0	02.01.18	28 sets	02.09.18	6FXA7059	TM	NU224 & NH219	By August
10.	WR	22-17-3802-1- 04591	20.11.17	55 sets	20.04.18	6FXA7059	TM	NU224 & NH219	13 sets by March 42sets by July
11.	CR	37173035104318	06.10.17	44 nos.	31.01.18	TAO	TM	NU328	By July
12.	CR	27173344101573	12.02.18	14 sets	25.10.18	6FXA7059	TM	NU224 & NH219	By September
13.	CL W	83/17/51/10884	19.11.16	1110 sets	29.12.17	6FRA6068	TM	NU2236 & NJ320	750 sets supplied. 360 sets by May.
14.	CL W	83/18/51/11143	12.09.17	1023 sets	31.12.18	6FRA6068	TM	NU2236 & NJ320	Supplies shall commence by May.

3. Status of Pending Orders of M/S National Engineering Industries Ltd Jaipur as on 09.03.2018

SN	Rly	PO No.	PO Date	PO Qty.	DP as per PO	Motor Type	MSU /TM	Bearing type	Firm's remarks (Tentative Terminal Delivery Date)
1.	SCR	85171396190245	17-01-18	6 Sets	17.07.2018	6FRA6068	MSU	NU1964 & NH1044	31.05.2018
2.	SCR	85171396190253	18-01-18	1 Set	18.07.2018	6FRA6068	MSU	NU1964 & NH1044	31.03.2018
3.	SCR	85161500191725	21-04-17	76	30.04.2018	Hitachi	TM	NU330	31.05.2018
4.	SCR	85171500197386	23-10-17	6	23.04.2018	Hitachi	TM	NU330	31.05.2018

5.	SCR	85161420191761	24-04-17	139	30.03.2018, 30.04.2018	Hitachi	TM	NH324	31.05.2018
6.	SCR	85171441194418	13-07-17	7 Sets	30.04.2018	Hitachi	MSU	CE side	30.04.2018
7.	SCR	85171441190602	21-02-18	3 Sets	21.08.2018	Hitachi	MSU	CE side	31.05.2018
8.	SCR	85171427197410	24-10-17	4	30.04.2018	Hitachi	MSU	PE side	30.04.2018
9.	SCR	85171427198837	15-12-17	12	30.06.2018	Hitachi	MSU	PE side	31.05.2018
10.	SCR	85171427190583	20-02-18	3	20.08.2018	Hitachi	MSU	PE side	31.05.2018
11.	SCR	85175002129013	17-01-18	6 Set	17.07.2018	6FRA6068	MSU	NU1964 & NH1044	30.06.2018
12.	SR	26 16 2022 1 01608	7-Mar-17	42	9-Aug-17	Hitachi	TM	NH324	Dispatched on 28.02.2018
13.	SR	26 16 2022 1 41219	20-Jun-17	50	23-Oct-17	Hitachi	TM	NH324	15.03.2018
14.	SR	26 17 2023 1 05196	6-Dec-17	71	30-Mar-18	Hitachi	TM	NU330	25.03.2018
15.	SR	26 17 2022 1 01734	12-Feb- 18	50	18-May-18	Hitachi	TM	NU330	05.05.2018
16.	SR	26/17/5119/1/4101 6	17-Jan-18	4	23-Jul-18	Hitachi	MSU	PE & CE	30.04.2018
17.	SR	72 18 0057 1 00011	15-Feb- 18	15	17-Aug-18	Hitachi	TM	NH324	31.07.2018
18.	WR	14-70-794-1-00498	29.01.18	16	29.07.18	Hitachi	TM	NU330	15.07.2018
19.	CR	43165290150409	03.01.17	30	14.06.17	Hitachi	TM	NH324	PO cancelled vide MA dated 17.07.17
20.	CR	47165450102046	27.03.17	92	30.04.18	Hitachi	TM	NU330	30.04.2018
21.	KPA	5161268101959	10.03.201 7	234	10.07.17	Hitachi	TM	NU330	30.04.2018