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भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011
Government of India-Ministry of Railways
Research Design & Standards Organisation
Lucknow - 226011



No. EL/3.2.13/1

Dated 08.08.2000

Chief Electrical Engineer,

- Central Railway, Mumbai CST- 400 001.
- Eastern Railway, Fairlie Place, Calcutta- 700 001
- East Central Railway, Chandrashekharapur, Bhubaneswar- 751 001.
- Northern Railway, Baroda House, New Delhi-110 001
- North Central Railway, Hasting Road, Allahabad-211 001.
- Southern Railway, Park Town, Chennai-600 003
- South Central Railway, Rail Nilayam, Secunderabad -500 371
- South Eastern Railway, Garden Reach, Calcutta-700 043
- South Western Railway, Bangalore - 560 046
- Western Railway, Churchgate, Mumbai -400 020
- West Central Railway, Jabalpur
- New Zone Railway, Bilaspur
- Chittaranjan Locomotive Works, Chittaranjan- 713 331

MODIFICATION SHEET NO. ELRS/MS/ 0285 Rev. '1' - 2000

1.0 TITLE :

Revision of tolerances and depiction of hardened zone on connection strap bush seat on the sleeve provided on inner brake hangers on flexi-coil mark-I bogies.

2.0 OBJECT :

- 2.1 Railways have been reporting the problem of brake blocks getting jammed as well as faster wear on connection straps' seats on the sleeve provided on inner brake hangers on flexi-coil mark - I bogies used on WAP1/4 class of locomotives. During investigations carried out by RDSO as well as Railways, it came to the notice that tolerances on the diameter of sleeve ends (CLW's Drg. No .03/4/19/112) which acts as seats for inner and outer connection strap bushes have not been properly selected. As a result, if diameter of the connection strap bush is with lower tolerances (42.00 mm) then connection strap cannot be mounted on its seat on sleeve ends whose diameter even with lower tolerance is 42.07 mm. As a result due to forced fitment of connection straps on the sleeve ends, connection straps become tight and restrict angular movement during brake application and brake release resulting into jamming of brake blocks.

- 2.2 In the CLW's Drg. No. 03/4/19/112, of sleeve, zone of connection strap seat have not been shown as hardened. As a result, the seats of the connection straps are wearing out very fast needing replacement at quick intervals.
- 2.3 In the CLW's existing drawings of brake hanger lever assemblies (inner ones), sleeve (CLW Drg. No. 03/4/19/112 is to be welded with lever. As no jigs/fixtures are available with the suppliers, correct perpendicularity of sleeve with the lever is not ensured resulting into misaligned inner and outer brake hangers. Moreover, as and when sleeve ends get worn out, whole brake hanger normally requires replacement.

To sort out all the above problems, a modified drawing of the sleeve has been prepared and arrangement of sleeve fixation on the lever on inner brake hangers have been changed.

3.0 WORK TO BE CARRIED OUT :

Drawing of the sleeve to be used on inner brake hangers is to be adopted as per RDSO's Drg. No. SKEL-4549, alt. '1' showing details of threaded arrangement with nut, revised tolerances of connection straps' seats diameters on the sleeve and its hardened zone.

4.0 APPLICATION ON THE CLASS OF LOCOMOTIVES :

WAP1/WAP4 class of Electric Locomotives.

5.0 MATERIAL REQUIRED :

Sleeve as per RDSO's drawing No. SKEL-4549, alt '1'.

6.0 MATERIAL RENDERED SURPLUS : None

7.0 REFERENCE :

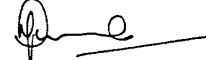
Decisions taken in the co-ordination meeting held with CLW & Railways at Electric Loco Shed Kanpur on 27.04.2000.

8.0 MODIFICATION DRAWING :

RDSO's Drg. No. SKEL 4549, Alt. '1'.

9.0 AGENCY FOR IMPLEMENTATION :

1. All Electric Loco Sheds.
2. All POH Workshops.
3. CLW/Chittaranjan



(O.H.Pande)

for Director General/Elect.

Encl: As above

NOTE : This modification sheet superseeds earlier modification sheet no.
ELRS/MIS/0285, Rev. '0' -2000.

Copy to : As per Standard Mailing List No.EL/M/0028, Ver. '0'.

ADE - Doc
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RDSO

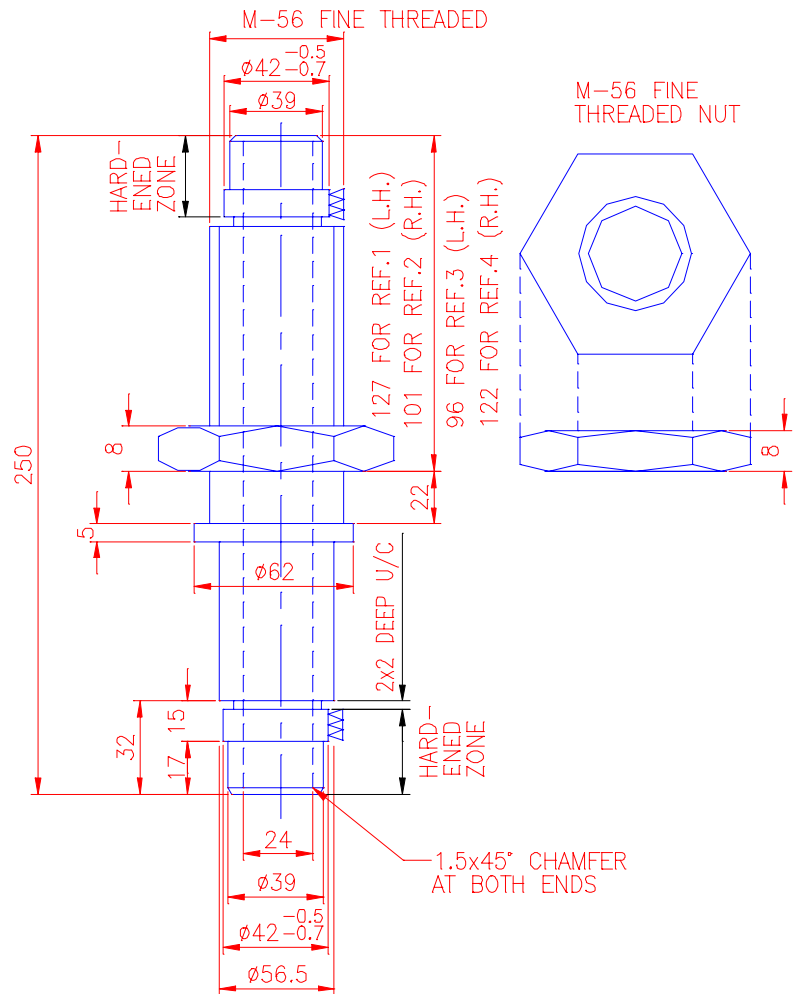
PIN



(O.H.Pande)



for Director General/Elect.

Encl: As above



NOTE:-

1. ALL DIMENSIONS ARE IN mm.
2. SURFACE ROUGHNESS VALUE TO IS:3073-1991
3. A SAMPLE TO BE INSPECTED BY CONSIGNEE BEFORE BULK SUPPLY-IF THE MATERIAL IS INSPECTED BY RITES THEN THE SAMPLE SHOULD COME THROUGH RITES FOR APPROVAL
4. HARDENED ZONE SURFACES SHALL BE CASE HARDENED TO THE DEPTH OF MINIMUM 1mm. TO ACHIEVE HARDNESS 58 ± 2 HRC.

4		SLEEVE FOR BRAKE HANGER LEVER (R.H.) INBOARD	03/3/19/40 ALT.4	2	STEEL	IS:2062 1992
3		SLEEVE FOR BRAKE HANGER LEVER (L.H.) INBOARD	03/3/19/40 ALT.4	2	STEEL	IS:2062 1992
2		SLEEVE FOR BRAKE HANGER LEVER (R.H.)	03/2/19/66 ALT.5 REF.2 03/2/19/64 ALT.5 REF.2	4	STEEL	IS:2062 1992
1		SLEEVE FOR BRAKE HANGER LEVER (L.H.)	03/2/19/66 ALT.5 REF.1 03/2/19/64 ALT.5 REF.1	4	STEEL	IS:2062 1992
REF. No.	DRG. PART No.	DESCRIPTION	DETAIL DRG. No.	No./LOCO	MATL	SPEC No.
REF.No.	CLW DRG.No. 03/4/19/112		SCALE:— NTS	APP.BY 	FOR DG.	
MODIFIED SLEEVE (FOR BRAKE HANGER LEVER ASSLY)					FIRST ISSUED MAY—2000	
					SUPERSEDE.	
RDSO ELECT.DTE.			SKEL.4549 ALT. '1'		SUPERSEDED BY.	

Dt.	8.5.2K
DRN	Koush
CHD	MAHANT
FILE No.	EL/3.2.13/1

1	NOTE No.4 ADDED.	JDSE-2	
ALT.	DESCRIPTION	APPROVED	DATE