

TENDER SPECIFICATION

NO. CLW / ES/3/0069

ALT	0	A	B	C	D				
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ENCLOSURES :

- DRG. NOS. : 1) CLW/ES/3/SK-1/0069
2) CLW/ES/3/SK-2/0069

TOTAL NO. OF SHEETS : 7

ALT	0	A	B	C	D		
SHEETS	6	7	5	7	7		

SPECIFICATION

FOR

Set of Transformer fixing Bolts and plates.
FOR WAG-9(CoCo)ELECTRIC LOCOMOTIVE

ISSUED BY :

DY.CHIEF ELECTRICAL ENGINEER/CON/TU
CHITTARANJAN LOCOMOTIVE WORKS
P.O. CHITTARANJAN - 713331
DIST: BURDWAN, WEST BENGAL (INDIA)

PREPD. BY	CHKD BY	REVIEWED BY	APPROVED BY	WAG-9 (CO-CO)	CENTRE for D & D CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-713331 NO. CLW/ES/3/0069, A/c. <i>284</i> DATE 23/6/99. <i>D</i>
<i>EDM/Elch</i>	<i>22/6/99</i> <i>SSE(Elch)</i>	<i>23/6/99</i> <i>SEE/CON</i> <i>TU-Z</i>	<i>23/6/99</i> <i>DY. CEE/</i> <i>CON/TU-Z</i>	Specification for Set of Transformer fixing Bolts and plates.	

SPECIFICATION FOR SET OF TRANSFORMER FIXING BOLTS & PLATES FOR 3-PHASE, 6000HP; WAG-9 AC ELECTRIC LOCOMOTIVE.

1. Scope.

- 1.1 This specification applies to Transformer fixing Bolts & Plates for 3-Phase, 6000 HP WAG-9 class locomotive for 25 KV AC 50HZ system.

2. Climate and Environment conditions :-

* Maximum Atmospheric temperature

: Under Sun : 70°C

* Humidity

: 100% saturation during rainy season.

Ambient temperature ranges : 0°C — 55°C (motor in air flow)
Humidity normal : 60%
maximum 100% (during rainy season)
Altitude normal 160 m a. s. l.
Cooling Power dissipation in air flow

Locomotive and equipment will be designed to work in costal areas (humid and salt laden atmosphere possible) and in desert areas (extremely dusty and dried atmosphere).

3. Technical requirement

All the items shall be manufactured, tested & supplied as per standard property and material indicated at Cl.No.6.

4. Quality assurance

ISO 7040, style -1 for Nut & Bolts. Other material details in the drg. sheet.

5. Guarantee :-

Fastener/hardware shall be guaranteed for 6 years from date of supply and 5 years from which ever is earlier. Any fastener/hardware failing during the above period shall be replaced free of cost.

PREP'D BY 23/4/99 JRM/lect	CHK'D BY 23/4/99 SSE/Elect	REVIEWED BY 23/4/99 SSE/CON/TU-IL	APPROVED BY 23/4/99 DY. CEE/CON/TU-I	Specification for Set of Transformer fixing Bolts and plates for WAG-9 (COCO) ELECTRIC LOCOMOTIVE.	CENTRE for D & D CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-713331 Date: - 23.7.99 NO. GLW/ES/3/0069. ALT NO. 0 1 2 3 4 5 6 7 8 9
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Sl. NO.	DATE	DESCRIPTION	ALT	APPROVED BY
1.	23-6-99	Special Note is added in the sheet no. 4 To make of bolts & nuts.	A	h 23/6/99
2.	26-11-99	The clause surface:- zinc Platted (Passivated) deleted and property class of Nut & Bolt shall be 8.8 minimum. Special note extended for the Hex nut (Nylon Insert).	B	h 27/11/99
3.	05-02-2002	(i) The Make of Hex Bolt M24 & Hex. Nut has been changed on sheet NO. 4 and the name of new makes are given on same sheet. (ii) Welding of M24 HEX BOLT With BASE PLATE will not be done, Therefore welding details has been deleted from sheet NO. 6	C	Ch meena 6/2/2002
4	5-4-2003	Supplier should produce following documents while supplying the materials (i) Certificate about standards, grade, property class, material etc. (ii) OEM test certificate regarding chemical composition and Mechanical / Mechanical properties. (iii) Guaranty Certificate of OEM (iv) Supplier or other than OEM should deliver the material along with supporting documents of material being purchased from OEM.	D	Ch meena 10/4/03

SPECIFICATION FOR
Set of Transformer
Fixing Bolts & plates.

DRN 23/6/99 SSE/Elect.	CHKD/REV 26/11/99 SEE/CON/TU-1	CENTRE FOR D & D CHITTARANJAN LOCOMOTIVE WORKS, WEST BENGAL, INDIA
APPROVED BY h 23/6/99	DATE: 23.6.99 NO: CLW/ES/3/0069.	
DY. CEE/CON/TU-I	ALT	A B C D E

6. Drawings.

1. a) Assembly drawing of Fixing plate - CLW/ES/3/SK-2/0069 - FIG-E.
- b) Dimensional drawing of Hex Bolt - CLW/ES/3/SK-1/0069 - FIG-B.
- c) Dimensional drawing of Base plate - CLW/ES/3/SK-1/0069 - FIG-C.
2. Dimensional drawing of Locking Tab - CLW/ES/3/SK-2/0069 - FIG-D.
3. Dimensional drawing of Jacking plate - CLW/ES/3/SK-2/0069 - FIG-F.
4. Dimensional drawing of Hex Nut - CLW/ES/3/SK-1/0069 - FIG-A.

PREP. BY	CHKD BY	REVIEWED BY	APPROVED BY	Specification for Set of Transformer fixing Bolts and plates for WAG-9 (COE) ELECTRIC LOCOMOTIVE.	CENTRE for D & D CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-713331 Date: - 23.6.99 NO. CLW/ES/3/0069.
Rev 23/6/99 gdm/efct	23/6/99 SSE (efct)	23/6/99	23/6/99 DY. CEE/ CON/TU-2		ALT NO. 0 R B R D

SCOPE OF SUPPLY

S/No.	Designation	Identification No.	Qty/Loco	Materials	Remarks
1.	Fixing Plate Assy. Consisting of 1(a)&1(b).	IBU2801045			CLW/ES/3/SK-2(E)/0069
1a.	Hex Bolt M24(Class 8.8)	182-00018-019	16Nos.	Steel Zinc plated (Passivated)	CLW/ES/3/SK-1(B)/0069
1.b	Base plate	IA022-00242	8Nos.	Steel Plate	CLW/ES/3/SK-1(C)/0069
2.	Locking Tab	IA026-00542	8Nos.	HUI steel Sheet	CLW/ES/3/SK-2(D)/0069
3.	Jacking Plate	IA022-00242	8Nos.	Steel Plate	CLW/ES/3/SK-2(F)/0069
4.	Hex Nut (Class 8.8)	182-00047-009	16Nos.	Steel Zinc Plated (Passivated)	CLW/ES/3/SK-1(A)/0069

ALT (C)

(B)

SPECIAL NOTE: The make of Hex. Bolt M24 & Hex. Nut should be of make TVS/Skaf/Lakshmi Precision, Hex Nut with nylon Insert from any reputed Co.

The tenderer shall confirm that the materials are as either used in 3-Phase A.C. Locomotive manufactured by ABB for Indian Railways or similar.

NOTE: (U) The make of Hex. Bolt M24 & Hex. Nut should be of make M/S TVS, M/S LPS & M/S UNBREAKO.

(R) The Firm should emboss make, Trade mark etc in their products.

(M) Supplier should produce following documents while supplying the materials.

(a) Certificate about standards, grade, property class, material etc.

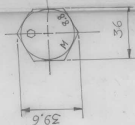
(b) OEM test certificates regarding chemical composition and metallurgical/mechanical properties.

(c) Guaranty certificate of OEM.

(d) Supplier other than OEM should deliver the material along with supporting documents of material being purchased from OEM.

PREP.D. BY	CHKD BY	REVIEWED BY	APPROVED BY	SPECIFICATION FOR SET OF TRANSFORMER FIXING BOLTS & PLATES.	CENTRE for D & D CHITTARANJAN LOCOMOTIVE WORKS CHITTARANJAN-713331 Date: - 23/6/99 NO. CLW/ES/3/0069.
23/6/99 SSE (Elect)	23/6/99 SEE/CON/	23/6/99 DY. CEE/	23/6/99 CON/TU-X		

ALT (D)



IDENT. NO.	NOM. DIA. (d)	PITCH OF THRD	S	e	h	m	MRS
182-008	M24	3.0	36.0	44.6	28.0	20.2	127
47-009							

ANODE: ZINC PLATED (PASSIVATED)

④ SURFACE:- ZINC PLATED COUPLER
PROPERTY CLASS:- 2.8 (min. 2.5)



MATERIAL:- STEEL PLATE.

IDENT. NO.: - I A022-00242.



TO IS: 1364, P-8.8 (HEXAGON HEAD BOLT)

AS PER IS: 1367 PT. III.

① SURFACE:- ZINC PLATED (PASSIVATED)

IDENT. NO.	l	b
A22-00018- Q19.	220	73

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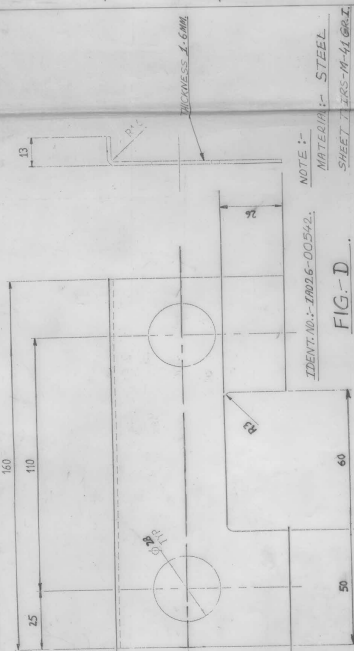


FIG.-D

IDENT. NO.: IA026-00542.

TE:-

MATERIAL:- STEEL
SHEET THICKNESS:- 41 GR.



FIG.-F, IDENT.NO.: - IAO22-00242.

THICKNESS:- 15 mm. FINISH SIZE.

MATERIAL :- STEEL TO IS: 2062 GR.C

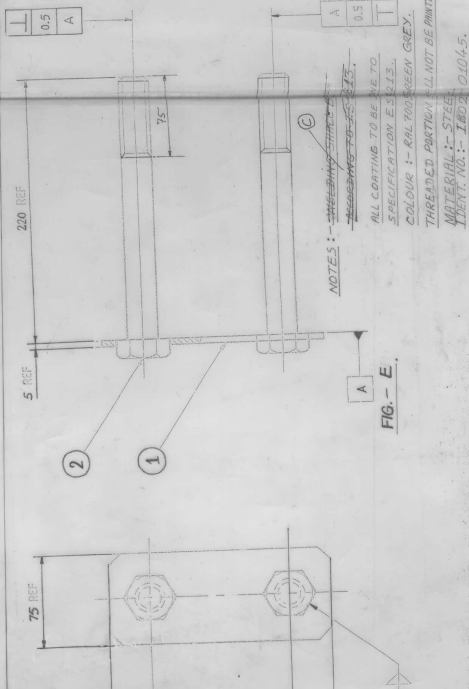


FIG. - E

NOTES :- ~~STEELING PART A~~
~~WORKING TO IS 316~~
ALL COATING TO BE IN TO
SPECIFICATION ES 13.
COLOUR :- RAL 7000 GREEN GREY.
THREADED PORTION WILL NOT BE PAINTED
MATERIAL :- STEEL
IDENT. NO. :- 1MB0210404.

[illegible]