

TENDER SPECIFICATION

No.CLW/ES/3/0052

ALT	0	A	B	C	D
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ENCLOSURES:

1. ANNEXURE:
2. DRG. No.:

CLW/ES/3/SK-1/0052
 CLW/ES/3/SK-2/0052
 CLW/ES/3/SK-3/0052
 CLW/ES/3/SK-4/0052

TOTAL NUMBER OF SHEETS

SHEETS					

SPECIFICATION FOR HIGH VOLTAGE BUSHING FOR WAG-9 (COCO)
 ELECTRIC LOCOMOTIVES

ISSUED BY:

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

RE-DRN/ RE-CKD <i>[Signature]</i>	REVIEWED	WAG-9/ WAP-5/WAP-7	APPROVED BY <i>[Signature]</i>	CHITTARANJAN LOCOMOTIVE WORKS WEST BENGAL (INDIA) ALT. A B C D NO.CLW/ES/3/0052
JE-1	AEE/D	SPECIFICATION FOR HIGH VOLTAGE BUSHING	DY.CEE/D-1	

ALTERATION RECORD SHEET

AMENDMENT NO.	DATE OF AMENDMENT	PAGE NO.	ALT.	REASONS	AUTHORITY
1.	19/05/1998		A	Deleted Cl. No.7 to 7.7 at Page No.6,7,8,9 & 11	
2.	19/05/1998		A	Deleted Previous Drg. No. 1. CLW/ES/3/SK-4/0052 2. CLW/ES/3/SK-5/0052 3. CLW/ES/3/SK-6/0052 4. CLW/ES/3/SK-7/0052 5. CLW/ES/3/SK-8/0052	
3.	1/04/2006	10	B	Specification Re-Type and Brass Nut-M20 Added in Scope of supply.	
4.	6/9/10		C	Specification throughhp revised due to inclusion of New Drg. CLW/ES/3/SK/0052	<i>Auth</i> -6/9/10
5.	27/2/16	5	D	NITRILE BONDED CORX GASKET INCLUDE IN SCOPE OF SUPPLY IN CLAUSE NO. 5.2 (a)	<i>Auth</i> 27/2/16

RE-DRN/ RE-CKD <i>Auth</i>	REVIEWED	WAG-9/ WAP-5/WAP-7	APPROVED BY <i>Auth</i>	CHITTARANJAN LOCOMOTIVE WORKS WEST BENGAL (INDIA) ALT. XB #0
JE-1	AEE/D	SPECIFICATION FOR HIGH VOLTAGE BUSHING	DY.CEE/D-1	NO.CLW/ES/3/ 0052

3.0 Standards:

3.1	IEC:60077	Rules FOR Electrical Traction Devices
3.2	IEC:61373	Vibration & Shock
3.3	IEC:60270	Partial Discharge Measurement
3.4	IEC:60137	Insulated Bushings for Alternating Voltages
3.5	IEC:60060	Voltage Test under Rainfall
3.6	IEC:2099	Insulated Bushings for Alternating Voltages

4.0 Technical Data:

4.1	Rated System Voltage	:	35 KV Class
4.2	Nominal Current (Approx.) at 70 °C Air Temp.	:	630A
4.3	Frequency	:	50 Hz \pm 3%
4.4	Power Frequency Withstand Voltage (Dry)	:	75 KV rms
4.5	Power Frequency Withstand Voltage (Wet)	:	75 KV rms
4.6	Impulse Voltage Withstand Voltage (1.2/50 Wave Shape)	:	170 KVP
4.7	Creepage Path of Bushing	:	\geq 806 mm

5.0 General Feature:

5.1 Outdoor Type High Voltage Bushing with Porcelain/Epoxy Housing shall be used on the roof of the 3-Phase Drive Locomotives. The High Voltage Bushing shall be an integrated unit comprising upper part of Bushing compatible to external connection with mounting base suitable for mounting on 160 mm PCD with 6 nos. holes of 14 mm dia and lower part shall be compatible/have proper interface with T-Type Elastimold connectors Type 755/56 BLR, a part of Cable Head Termination (CHT) assembly coming from main Transformer.

5.2 To avoid water entry inside the Locomotive through mounting arrangement, provision of 'O' ring with groove on the mounting SS flange or any alternate suitable method shall be provided.

Alt \leftarrow 5.2(a) suitable Nitrile Bonded Cork Gasket of 5mm
(D) \pm 1mm thick (IS: 4253 Part-2 1989) to be supplied
by firm.

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JE-I	AEE/D	SPECIFICATION FOR HIGH VOLTAGE BUSHING	DY.CEE/D-I	NO.CLW/ES/3/ 0052