

INVENTORY NO.

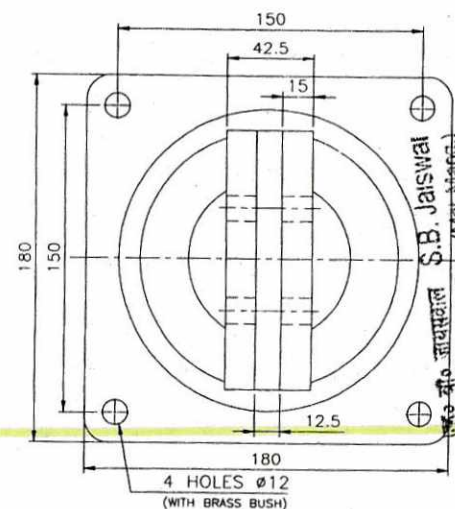
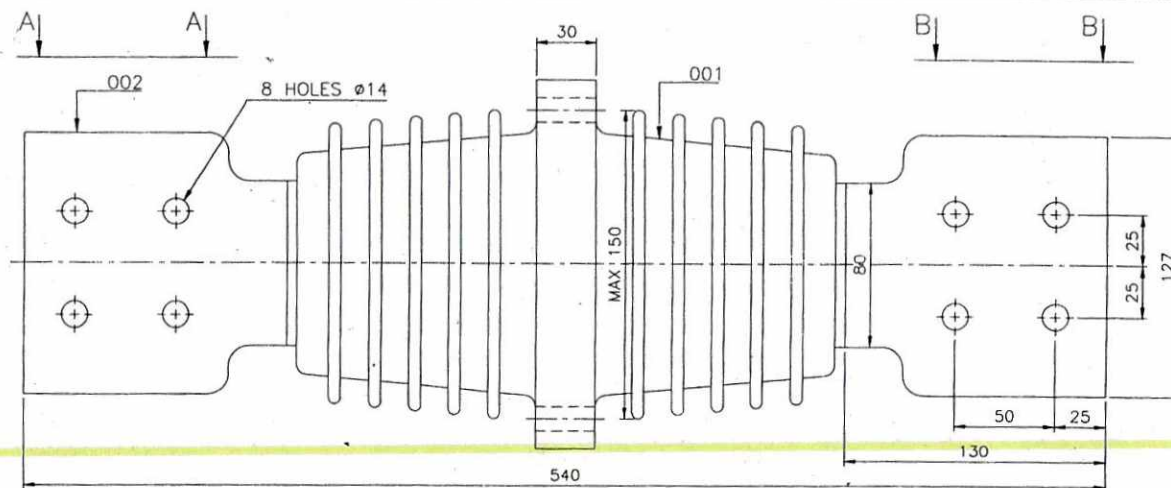
Chapman

COPYRIGHT & CONFIDENTIALITY

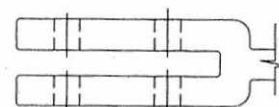
HEAVY ELECTRICALS LIMITED,
IN THE INTEREST OF THE COMPANY.

2. ME

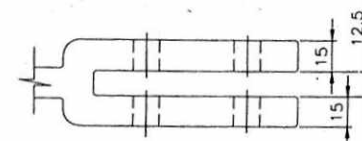
COPYRIGHT & CONFIDENTIALITY



VAR-00



VIEW-AA



VIEW-BB

NOTES:-

1. CROSS SECTION OF Cu CONDUCTOR SHOULD NOT LESS THAN PALM CROSS SECTION.
2. THE PALM CROSS SECTION INDICATED IS MINIMUM. PARTY TO PROVIDE ADEQUATE CROSS SECTION FOR REQUIRED CURRENT & TEMPERATURE RISE.
3. MATERIAL OF CONDUCTOR - HALF HARD E.C. GRADE COPPER WITH 99.9% CONDUCTIVITY.
4. COPPER CONDUCTOR SHOULD BE EITHER IN ONE PIECE OR BRAZED AFTER PROPER DOVETAILING MEETING MECHANICAL & ELECTRICAL REQUIREMENT.
5. PLATING OF END PALM - ELECTRO TINNED TK 12 TO 15 MICRON.
6. PARTIAL DISCHARGE TEST TO BE CONDUCTED AS A ROUTINE TEST.
7. ALL ROUTINE TEST TO BE CONDUCTED AS PER IS:9431 AND 2099.
8. CROSS SECTION OF CONDUCTOR BAR MINIMUM 5000 mm² (wt.24.13 Kg).
9. 10 SEC-DEW WITHSTAND TEST AT 35 kv r.m.s.

ELECTRICAL SPECIFICATION:-

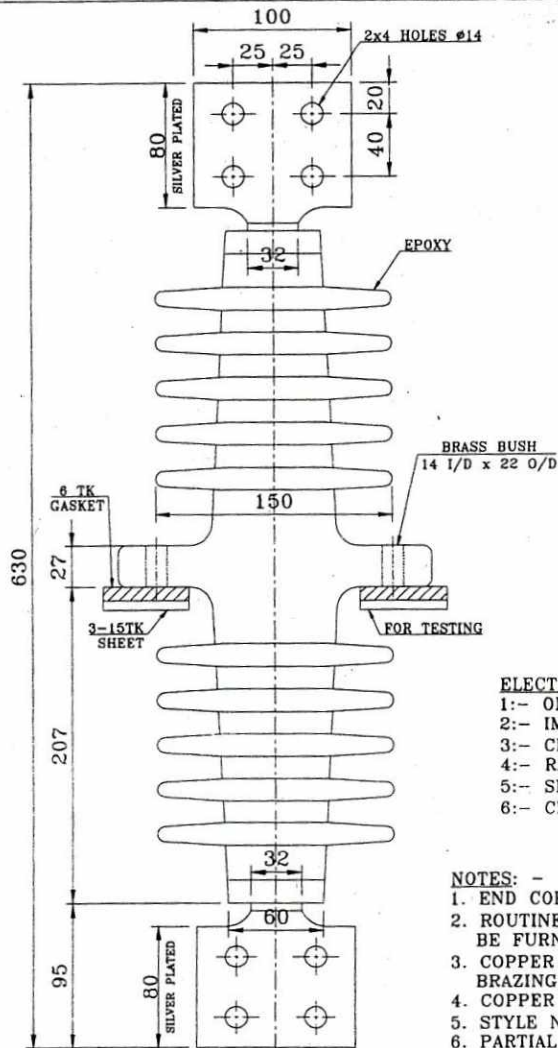
- | | | |
|-------------------------------------|---|-----------------------|
| 1. RATED VOLTAGE | : | 11 kV |
| 2. HIGHEST SYSTEM VOLTAGE | : | 12 kV |
| 3. ONE MINUTE DRY WITHSTAND VOLTAGE | : | 35 kV r.m.s. |
| 4. IMPULSE WITHSTAND VOLTAGE | : | 75 kV |
| 5. CREEPAGE DISTANCE | : | 300 mm MIN. EACH SIDE |
| 6. SHORT TIME CURRENT RATING | : | 40 kA FOR 3 Sec. |
| 7. MATERIAL OF INSULATION | : | EPOXY CLASS 'B' |
| 8. AMBIENT TEMPERATURE | : | 70°C |
| 9. TEMPERATURE RISE | : | 35°C |

REV.	DATE	ALTERED	VISHAL	REV.	DATE	ALTERED	---	REV.	DATE	ALTERED	SURESH
06	30.06.09	CHEKED		05	31.03.07	CHEKED		04	2.11.06	CHEKED	
		DRAWING RETRACED.				DRAWING GENERALLY REVISED. FIGURES MODIFIED.				IN B.O.M. IT.002 WT. ADDED.	
REV.	DATE	ALTERED	R.B.P.	REV.	DATE	ALTERED	SS VERMA	REV.	DATE	ALTERED	-SD-
03	16.06.05	CHEKED		02	21.03.05	CHEKED	-SD-	01	2.12.03	CHEKED	-SD-
		NOTE-4 MODIFIED.				NOTES(ELECTRICAL SPECIFICATION) S.N.1 RATED VOLTAGE 11KV WAS 6.6 KV S.N.2 H.V. 12 KV WAS 7.2KV DIM 140 DELETED TITLE 12 KV WAS 6.6KV VIEW-AA & BB DRAWN PROJECT GENERAL WAS KOTHAGUDUM T.P.S IT.D01 & 002 SHOWN IN B.O.M.				PALM SIZE REVISED TO 130 MM. DIM.310 REMOVED.	

001		002	COPPER CONDUCTOR				24.13																	
						HALF HARD EC GRADE	001																	
001		001	EPOXY INSULATION			EPOXY CLASS B	-																	
VAR	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	IT.NO.	MATL.CODE	WT.																	
00					VAR.	MATL.SPCN.	QTY.																	
CUSTOMER				PROJECT/PRODUCT																				
GENERAL				SEGREGATED PHASE BUSDUCT																				
 BHARAT HEAVY ELECTRICALS LIMITED RUDRAPUR				<table><tr><td></td><td>NAME</td><td>SIGN.</td><td>DATE</td><td rowspan="4">NO. OF VAR.</td></tr><tr><td>DRN.</td><td>A.K.S.</td><td>-SD-</td><td>9.6.95</td></tr><tr><td>CKD.</td><td>S.N.MNJ</td><td>-SD-</td><td>10.6.95</td></tr><tr><td>APPD.</td><td>V.K.M.</td><td>-SD-</td><td>12.6.95</td></tr></table>					NAME	SIGN.	DATE	NO. OF VAR.	DRN.	A.K.S.	-SD-	9.6.95	CKD.	S.N.MNJ	-SD-	10.6.95	APPD.	V.K.M.	-SD-	12.6.95
	NAME	SIGN.	DATE	NO. OF VAR.																				
DRN.	A.K.S.	-SD-	9.6.95																					
CKD.	S.N.MNJ	-SD-	10.6.95																					
APPD.	V.K.M.	-SD-	12.6.95																					
DEP'T.	UNTL.DIM.GR.		SCALE	WEIGHT-KG	REF.TO ASSY.DRG.	IT.NO.	NO.OF ITEM																	
ECC	C/M/F		N.T.S.	-	-	-	-																	
TITLE					DRAWING NO.		REV.																	
12KV EPOXY CAST BUSHING FOR SPB (4000A)					35410053238		06																	
					SHEET NO. - 01	NO.OF SHEETS - 01	SZ - A3																	

39
23

REV.	DATE	ALTERD	REV.	DATE	ALTERD	REV.	DATE	ALTERD
		CHECKED	04	24.04.91	CHECKED	03	21.02.91	CHECKED
NOTE 6 ADDED.			NOTES 1 TO 5 ADDED.					

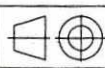


ELECTRICAL SPECIFICATION: -

- 1:- ONE MINUTE DRY & WET WITHSTAND VOLTAGE :55 KV
- 2:- IMPULSE WITHSTAND VOLTAGE :150 KV
- 3:- CREEPAGE DISTANCE MINIMUM (EACH SIDE) :600 MM
- 4:- RATED VOLTAGE :24 KV
- 5:- SHORT TIME CURRENT RATING (ONE SECOND) :150 KArms
- 6:- CROSS SECTION OF COPPER COND. (MIN.) :600 SQMM

NOTES: -

- 1. END COPPER PALMS TO BE SILVER PLATED TO MIN. 12 MICRONS.
- 2. ROUTINE / TYPE TEST CERTIFICATE / DIMENSIONAL REPORT TO BE FURNISHED ALONG WITH SUPPLY.
- 3. COPPER CONDUCTOR TO BE ONR PIECE BY FORGING PROCESS/BY BRAZING THE PLAMS WITH SUFFICIENT STRENGTH.
- 4. COPPER SHOULD BE TO P.S. NO. AA - 12005
- 5. STYLE NO. AND PARTY'S NAME SHOULD BE MARK ON EACH BUSHING.
- 6. PARTIAL DISCHARGE TEST TO BE CONDUCTED AS ROUTINE TEST.

CUSTOMER				PROJECT/PRODUCT							
 BHARAT HEAVY ELECTRICALS LIMITED RUDRAPUR				GENERAL							
								NAME	SIGN.	DATE	NO. OF VAR.
								DRN.	S/D	20.06.02	
DEPTT. ECC	UNTOI.DIM.GR. C/M/F		SCALE N.T.S.	WEIGHT-KG	REF.TO ASSY.DRG.	IT.NO.	NO.OF ITEM				
TITLE					DRAWING NO.		REV.				
EPOXY ROOF BUSHING NG & SPVT CUBICLE					45422351101		04				
SHEET NO.- 01			NO.OF SHEETS- 01		SIZE- A4						

S.B. Jaiswal
 Engg. (Mat. Mang.)
 BHEL-Rudrapur
 202153