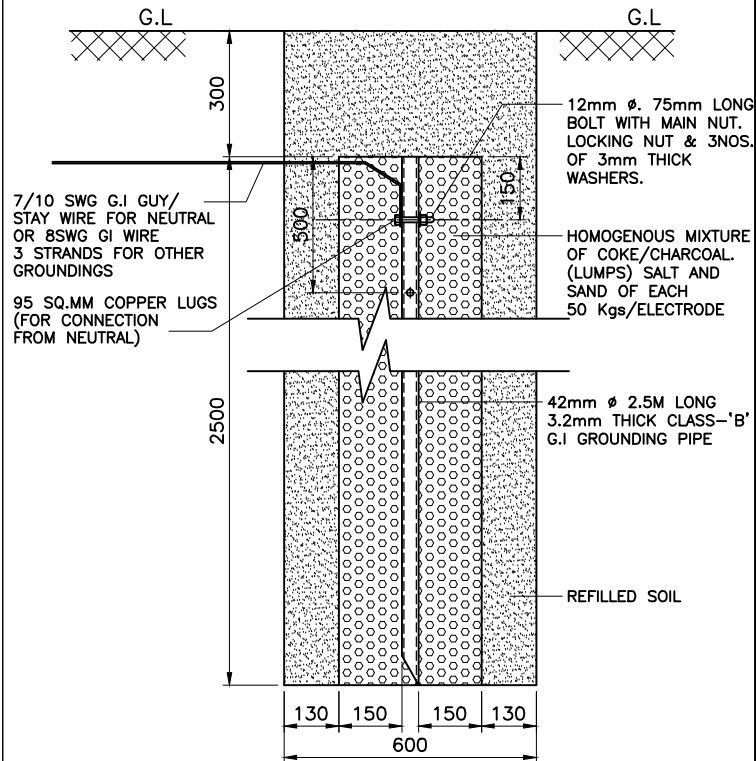
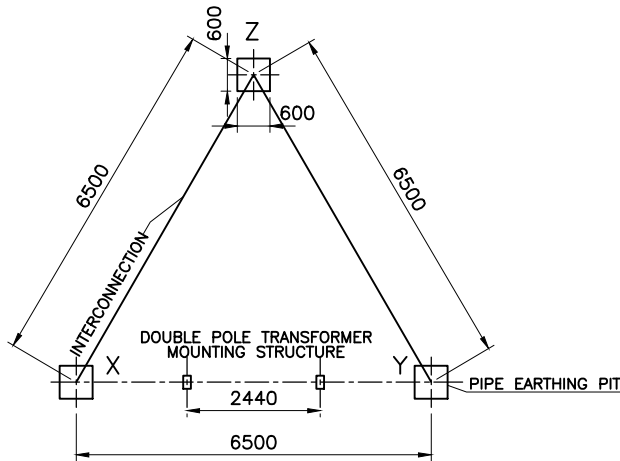


BILL OF MATERIAL DISTRIBUTION TRANSFORMER CENTRE GROUNDING



DETAILS OF PIPE EARTH ELECTRODE



SL. NO.	MATERIAL	SPECIFICATION	QUANTITY
1.	GI GROUNDING PIPE	42mm DIA. 3.2mm THICK, 2.5 Mtr. LONG GI PIPE WITH TWO NOS. OF 12mm DIA. THROUGH HOLE AS SHOWN IN DRAWING. 3.23 Kgs./Mtr.	3 NOS.
2.	'L' PLATE	MADE OF EC GRADE COPPER OF SIZE, a) 150x75x6 mm b) 100x50x4mm	CAPACITY OF TRANSFORMERS 1 NO. FOR 250 KVA AND ABOVE 1 NO. FOR 100 KVA AND BELOW
3.	TERMINAL LUGS	a) 95 SQ.mm. LONG BARREL HEAVY DUTY TINNED COPPER TERMINALS.(WEIGHT-62 Cms.)	a) FOR CONNECTING TO 'L' PLATE FOR TRANSFORMER NEUTRAL EARTHING - 2 NOS. b) FOR CONNECTION AT GROUND PIPE FOR NEUTRAL GROUNDING FROM a) ABOVE - 2 NOS. c) FOR INTERCONNECTING 3 NOS. ELECTRODES - 3 NOS. d) FOR LIGHTNING ARRESTOR GROUNDING - 1 NO. e) FOR METAL PARTS GROUNDING - 1 NO.
4.	GI/GUY/STAY WIRE	7x10 SWG GI GUY/STAY WIRE FOR CONNECTING FROM TRANSFORMER NEUTRAL TO GROUNDING - 2 RUNS.	8 Kgs./17 Mtrs.
5.	8 SWG GI WIRE	8 SWG GI WIRE FOR CONNECTING LIGHTNING ARRESTORS. TO BODY & OTHER METAL PARTS AND INTER CONNECTION 3 NOS. ELECTRODES.	103 Mtrs. 7.0 Kgs.
6.	BOLTS & NUTS	12 mm GI BOLT NUT WITH WASHERS. 12 mm BRASS BOLTS WITH WASHERS.	3 NOS. (FOR GROUNDING PIPES) 3 NOS. (FOR GROUND CONNECTION) 3 NOS. (FOR ELECTRODE INTER CONNECTION) 2 NOS. (AT TC BUSHINGS) FOR 250 KVA & ABOVE DTC. 2 NOS (AT TC NEUTRAL BUSHINGS) FOR 100 KVA & BELOW DTC.
7.	PVC ALKATHINE TUBE	TRANSPARENT ALKATHINE TUBE 19 mm DIA, 2 mm THICK	10 Mtrs. (FROM BUSHING UPTO GROUND LEVEL)
8.	CHARCOAL	GOOD QUALITY (ONLY LUMPS)	30 Kgs PER ELECTRODE
9.	SALT	GOOD QUALITY (CRYSTALLINE)	50 Kgs PER ELECTRODE
10.	SAND	RIVER SAND	50 Kgs. PER ELECTRODE

NOTES:-

1. ONE DIRECT CONNECTION FROM THREE 11KV LAs TO BE CONNECTED TO Z-EARTH ELECTRODE. BY 8 SWG GI WIRE (3 STRANDS).
2. DISTINCT TWO EARTH CONNECTION FROM THE BUSHING TO BE RUN IN TRANSPARENT ALKATHINE TUBE AND CONNECTED TO EARTH ELECTRODE X & Y THROUGH 7/10 SWG GI STAY / GUY WIRE.
3. ONE SEPARATE CONNECTION FROM THE TRANSFORMER BODY EARTHING TERMINALS HG FUSE METAL BASE. RAIL/TUBULAR POLES AND GOS OPERATING HANDLE AND OTHER METAL PARTS TO BE CONNECTED TO SEPARATE ELECTRODES X THROUGH 8 SWG ON WIRE (3 STRANDS)
4. ALL THE THREE ELECTRODES VIZ. X,Y & Z SHALL BE INTER CONNECTED BY TWO STRANDS OF 8 SWG GI WIRE 500 mm BELOW GROUND LEVEL BY RUNNING G.I WIRE THROUGH THE TWO HOLES PROVIDED.
5. THIS METHOD OF EARTH PIT LOCATIONS MAY BE ADOPTED WHERE NECESSARY SPACE IS AVAILABLE.
6. IN URBAN AREAS WHERE NECESSARY SPACE IS LIMITED, THE NO. OF EARTH PITS COULD BE LOCATED SUITABLE AND OBTAIN THE REQUIRED MINIMUM EARTH RESISTANCE AS PER I.E RULES
7. IF MACHINERY IS USED FOR EXCAVATING THE GROUNDING PIT. REFILLING OF SOIL IS NOT NECESSARY.
8. ALL DIMENSIONS ARE IN mm AND NOT FOR SCALE.

	Signatures	All dimensions are in mm unless otherwise stated.	 BESCOM
Chd	 AGM (QS&S)	DETAILS OF DISTRIBUTION TRANSFORMER GROUNDING (WITH INTERCONNECTION)	Approved:
Sub	 DGM (QS&S)		 General Manager,(Elec.) QS&S
	SCALE: N.T.S		DRG.NO.BESCOM/GM/QS&S/47 REV-002 DATED:24-11-2018