

NOTE:-

D) Joints

1. Connection between,
 - a) Below ground riser and above ground riser.
 - b) Riser and Main earth conductor.
 - c) Between two main earth conductor.made by electric arc welding with low hydrogen content electrode as below:



Flat-to-Flat	-	50mmx6mm	-	3.5mm welding rod
Flat-to-Flat	-	75mmx10mm	-	4.0mm welding rod
Rod to Flat	-	50mmx6mm, 50mmx8mm, 75mmx10mm, 75mmx12mm	-	6.0mm welding rod
Rod to Rod	-	20/25/40mm dia.	-	6.0mm welding rod
2. All ground connections shall be made by electric arc welding with low hydrogen content electrodes. Joints shall be allowed to cool down gradually to atmospheric temperature before putting any load on it. All oxide films that may have formed during welding must be removed from the welded joints. Two coats of red oxide and black powder shall be applied after welding.
3. Bending of rod shall be done preferably by gas heating.

E) Power Cable Earthing

1. Metallic sheaths and armour of all multi-core power cables shall be earthed at both the equipment and switchgear end. Sheath and armour of single core cable should be earthed at switchgear end only.

F) Specific Requirements for Earthing Systems

1. Earthing terminal of each tower with peak and LM shall be connected to MS rod electrode, which in turn, shall be connected to Main Earth Mat. Star shape horizontal conductor (4-5 nos. of same size) shall be connected on top of the electrode for lightning discharge.
2. Each earthing lead from the neutral of the Power Trafo./grounding reactor / Aux. Trafo., LA, CVT shall be directly connected to Maintenance free electrode which in turn shall be connected to Main Earth Mat.

		EXECUTION PURPOSE			
		 GUJARAT ENERGY TRANSMISSION CORPN.LTD. S.P.VIDYUT BHAVAN, RACE COURSE, VADODARA - 390 007			
		General Notes on Earthing System			
		DRAWN:	CHECKED:	APPD:	
R1	AS PER TECHNICAL REQUIREMENTS	JE(ENGG.)	DE(ENGG.) EE (ENGG)	I/C ACE (ENGG)	SIZE: A4
R0	FIRST PREPARATION	SCALE:	DATE:	DRG. NO:	SHEET: REV:
REV:	DESCRIPTION:	N.T.S.	22.12.2025	GETCO / E / STD / P-012	3B OF 24 R1