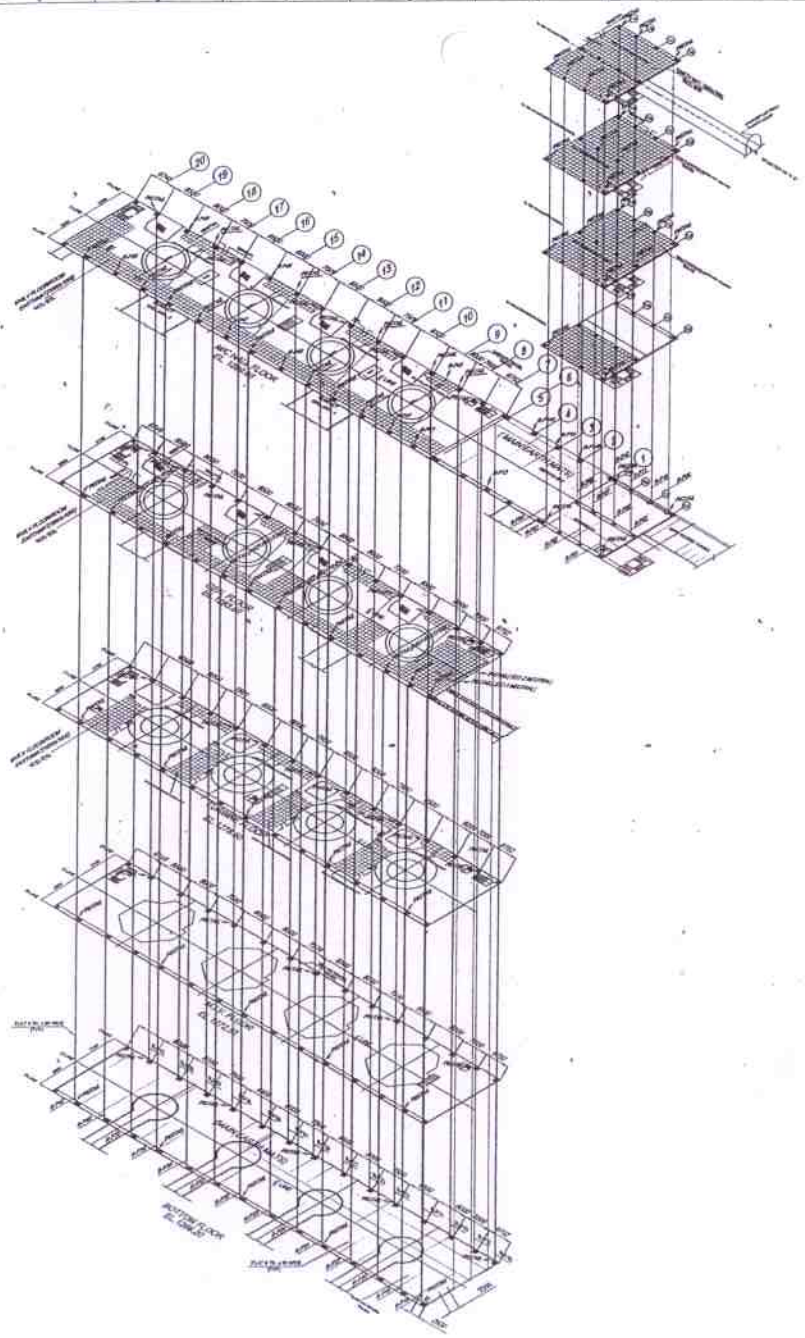

LEGEND

Risers/Pigtails

(a) Main under ground Earth mats of 40mm dia. MS rod

(b) MV/LV floor/room earth mats of 28mm dia. MS rod (1000mm x 1000mm)

1. Separate earth mats of 1000mm X 1000mm, dia 28mm rod shall be laid at LV & MV room/floor as indicated in respective floors. The mats at LV/MV room/floor shall be interconnected to the main under ground earth mats of power house through column/rings risers. Each mats shall be connected at two places
2. MV/LV Room/Floor earth mats to be laid on the floor below finish floor.
3. For main under ground earthing mats refer drawing no. 12930041001
4. All steel columns shall be connected to the grounding system whether specifically shown or not.
5. Risers/ pigtails from earthing grid shall consist of one member of 40mm dia MS rod such length as to project 300 mm above the finish
6. Earthing grid conductors shall be welded at all points of crossing by welding as per technical specification.
7. Bending of earth grid conductors wherever necessary shall be done by gas heating.
8. Sequence of excavation and laying of earth conductors shall be decided at site in consultation with site engineer.
9. For actual locations of columns/civil structure please refer civil drawings.
10. The risers above ground shall be coated with two coats of anti corrosive paint.
11. Earthing conductor running on column, wall etc. shall be supported by suitable welding/cleating at interval of 1000mm and 750mm respectively.
12. Ring main all around the periphery at 300mm above the finished floor with suitable clamping arrgt. shall be p
13. Riser up to various floor of power house and all other areas including earth mat ring at various floor of power house, 33KV/11KV switchgear/415V switchgear, cable and bus duct gallery etc. shall be 65 X 8 mm GS
14. Connection for earthing for 415V MCC/distribution board/transformer /LT motor above 125KW/ columns, structure, cable trays and bus duct enclosure shall be 50 X 6 mm GS flat.
15. Connection for earthing for LT motor of 25KW to 125KW crane, rails, rail tracks & other non-current carrying metals parts shall be 25 x 6 mm GS flat.
16. Connection for earthing for LT motor of 1KW to 25KW, control panel & control desk shall be 25 x 3 mm GS fla
17. Two pigtail shall be taken out from MV/LV floor/room earth mat at suitable location (if possible)
18. All risers (except neutral earthing, electronic earthing riser) shall be connected to ring main & MV/LV floor/room earth mat grid
19. Two pigtails (if possible) at suitable location near panels, boards, cubicles, motors & other elect. equipments sha taken from 28 mm floor grid for earthing of equipment body. Alternatively two independent flats shall be taken taken from ring main provided on the floors.
20. The earthing layout arrangement is subject to upd[illegible]ification as and when required in future due to finalization of civil layout drawings and any civil constraints during issuance of civil construction drawing of various elevations
21. Two earthpits each of 400x 400x3750(deep) dimensions will be provided for each transformer bank as per IS 3043 (1987) PAGE NO.24.

NTPC LIMITED

CENTRAL ELECTRICITY A

BHARAT HEAVY ELECTRICALS LTD. BHOPAL

EARTHING LAYOUT FOR MV/LV ROOM/
FLOOR EARTH MATS IN POWER HOUSE

12930041003