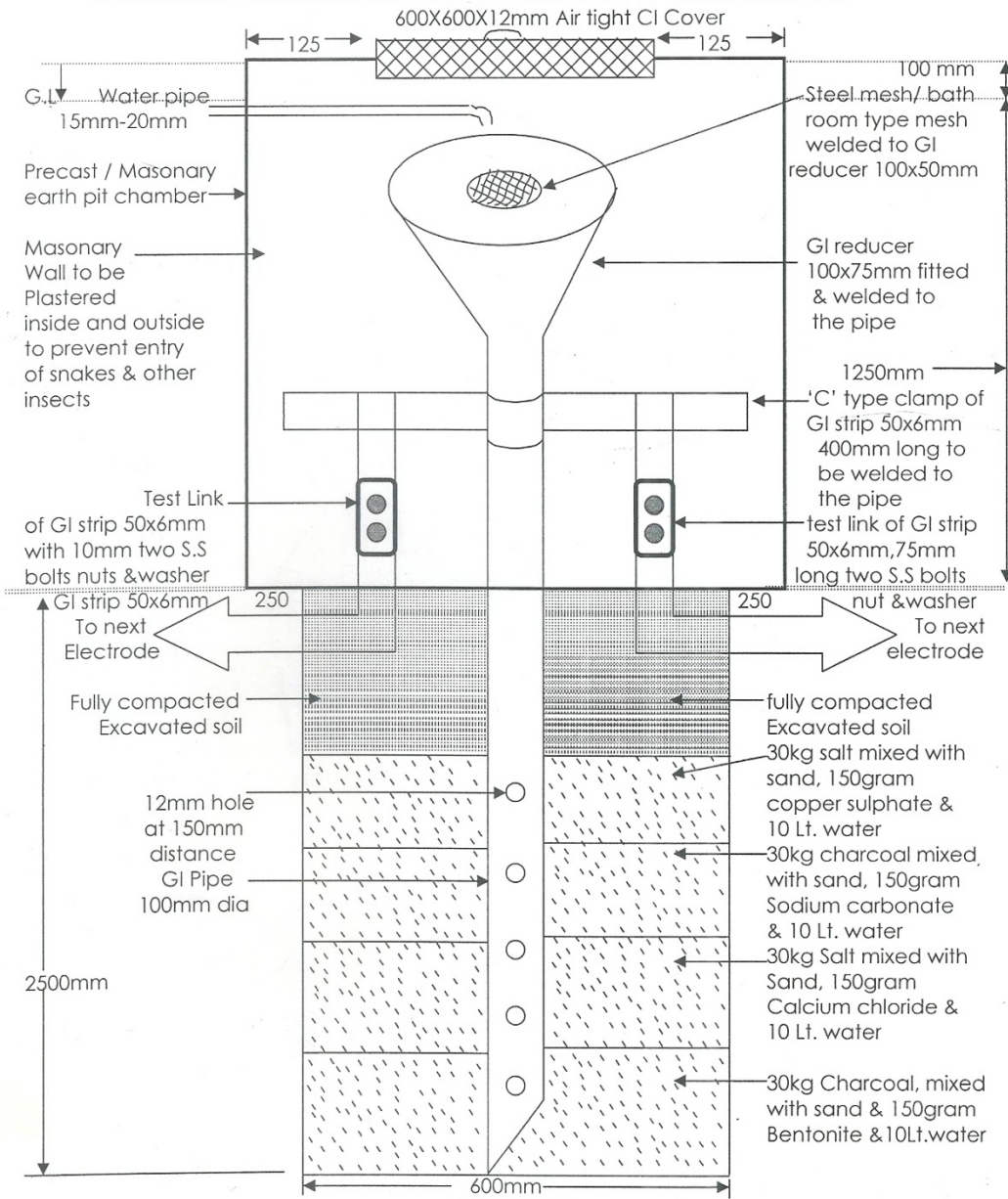


EARTH PIT DESIGN FOR PIPE EARTHING (IS: 3043)

- Single piece GI Pipe of Length 3000 mm & Diameter 100 mm (4 inch) should be used for pipe earthing. Lower portion of length 1500 mm of the GI pipe should have 12 mm holes at 150 mm intervals.
- Type of material: GI Medium Class B as per IS: 1239.
- Height of brick-masonry chamber above ground level should be 100mm. Size of brick-masonry chamber shall be 850x850 mm. 600x600x12mm air tight CI cover shall be provided on the top of the earth-pit chamber.
- The masonry wall to be plastered inside and outside to prevent entry of snakes and other insects.
- Internal height of the masonry chamber should be 600 mm (although in E&P manual it is 1250mm and as per IS-3043 it is 350 mm – both will be inconvenient for maintenance)
- Strip for Main Earth Grid: 50x6 mm GI strip with overlapped welded joints. All such joints should be painted with black bitumen/ epoxy paint. The main grid earth strip should be buried at a depth of 600 mm or more.
- Funnel with steel wire mesh/ bath room mesh: GI reducer 100x75 mm fitted and welded to GI pipe & wire mesh/ bath room mesh welded to GI reducer 100x50 mm.
- C-type clamp: 400 mm long GI strip 50x6 mm including bend to be welded to pipe electrode.
- Isolating Test Links: 75 mm long GI strip 50x6 mm with 2 nos. holes, fixed with 10mm diameter bolt, nut, check nut, flat washer on each hole. All hardware items should be of stainless steel.
- The isolating test link should be provided for measurement of electrode resistance. It shall be provided vertically just below the C-clamp and should be bolted to the main earth loop.
- PVC Water pipe 15 mm- 20mm should be provided as per IS-3043.
- All entry conduits into the chambers shall be sealed with bitumen compound.

TYPICAL ARRANGEMENT OF PIPE EARTHING



- Note :
- Moisture content should not increase 20% of the weight of the dry soil.
 - Minimum quantity of charcoal & salt shall be 60 Kgs.
 - All dimensions are in mm.