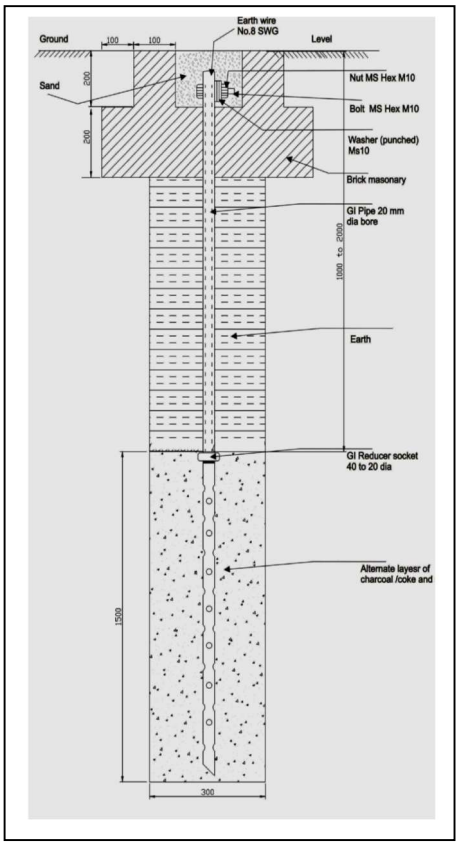
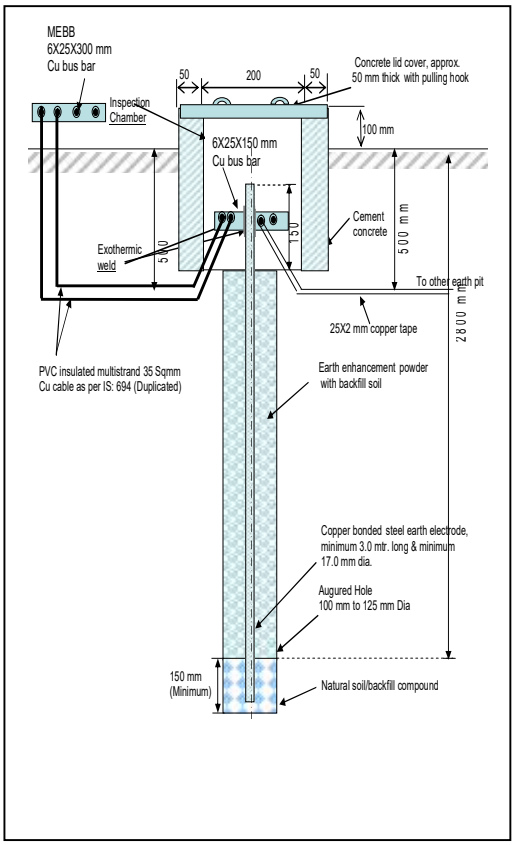
Measurment of Earth resistance by Fall of potential method

1. The earth lead wire from the earth electrode must be disconnected
2. The digital earth tester has four terminals. Short the terminals E1 & P1 and connect to the earth electrode(E) whose resistance has to be found.
3. Connect the P_2 to the potential spike P, E_2 to the current spike C as shown in the figure.
4. The distances between "Earth electrode" and "Potential electrode", D_1 and "current electrode" D_2 should be equal to 25 meters..
5. First turn the range selector switch to 1000Ω position. The digital display will come in action and will read zero.
6. Now press the test switch, the LCD display will indicate the resistance. If the reading is too small the range selector switch may be turned to 10 Ω.
7. Record the reading: Earth Resistance = _____ Ω





Maintanence in Pipe earths

1. Keep the earth pit Clean
2. Ensure the tightness of the earth lead wire. GI bolt and nut with spring washers and plate washers mut be used if not welded. Apply grease/petroleum jelly to prevent oxidation of the joint.
3. Check the continuity of the earth lead wire from the pipe to the earth bus bar/ equipment.
4. Pour water inside the pipe during summer/dry season for maintaining moisture.
5. Salt treatment of the earth pipe can be done once in 4 years to improve the earth resistance value. Dig a circular trench of 1m dia at depth of 30cm around the pipe Put the salt about 8 kgs, and pour water into it.
6. Measure and record the earth resistance value and date , once in a year preferably during summer.
7. Label on the earth pit, the equipment to which it is connected for easy identification.