Earthing Procedure

Procedure for installing a Chemical Earthing system using Pipe **method** with your provided specifications:

🔩 **Materials Provided:**

- **Pipe**: 114 mm outer diameter, 2.5 meters long, **MS with copper coating**
- **Backfill compound (BFC)**: 75 kg (chemical earthing compound / 3 nos bags,)

⚙️ **Tools Required:**

- Earth auger / drilling machine
- Shovel, spade, water
- Welding or clamping tools
- Measuring tape
- Funnel or pipe for pouring BFC

📋 **Procedure for Chemical Earthing Installation (Strip-in-Pipe):**

1. Site Preparation

- Select an appropriate location, ideally a moist area to ensure good soil conductivity.
- Mark the location and ensure there are no underground utilities.

2. Digging the Earth Pit

- Dig a borehole of **at least 3 meters depth** and **150–200 mm diameter** (larger than the pipe for BFC to surround it properly).

3. Preparing the Electrode

- Check that the copper coating on the MS pipe is intact and corrosion-free.

4. Placing the Electrode

- Insert the Strip-in-Pipe electrode vertically into the borehole, making sure the top end remains about **300 mm below ground level** (to allow for connection box or earth chamber).

5. Backfilling with Chemical Compound

- Gradually pour the **75 kg of Backfill Compound (BFC)** around the electrode in layers:
    - First, **mix the BFC with water** (if specified by manufacturer) to form a slurry.
    - Pour slowly to fill gaps around the electrode and ensure full contact with soil.
    - Allow the compound to settle and remove air pockets by gently tamping if necessary.

6. Earth Pit Top Layer

- Fill the top 300 mm of the pit with soil or install Pit cover (concrete cover / PVC Cover) and inspection chamber for future maintenance.
- Make sure to leave enough access to the electrode terminal.

7. Earth Strip Termination: customer to connect earthing strip here. (customer scope)

8. Testing the Earth Resistance

- After installation, test the system with an Earth Resistance Tester (Megger).
- Ideal earth resistance: **< 1.5 ohm** (varies by application and soil conditions).

7. **Notes:**

- Ensure all components are from reputable manufacturers / ISI Grade and corrosion resistant.
- Installation should follow **IS 3043** or **IEEE 80** standards.

Notes -

1. Site Selection

- Ensure the site is at least **1.5 meters away** from any building structure to comply with safety standards.

2. Backfilling with Chemical Compound

- Mix the **75 kg of Backfill Compound (BFC)** with water (if specified by the manufacturer) to form a slurry.

- Pour the slurry around the electrode in layers, allowing each layer to settle before adding the next. Ensure the compound fills all gaps around the electrode to maintain good soil contact.