



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT
ARIYALUR
ELECTRICAL MANUAL**

Issue No:02	Rev. No: 00	Effective Date: 01.11.2019	SOP/Elect /14
Issued By: MR		Approved By: HOD ELECTRICAL	
SOP For Earth Pit Maintenance			

Scope : This Procedure is to establish and ensure safe method of Earth Pit Maintenance

Responsibility : Section Engineer – Electrical

Accountability : Section Head-Electrical

PPE:

1. Safety helmet,
2. Safety shoe,
3. Rubber Gloves.

Tools:

1. Insulated tools
2. Discharge rods
3. Earth Meggar

Hazard Analysis:

Risks associated	Mitigating Measures
Electrical shock	Use of proper tools

Training needs:

1. Usage of tools and Nature of Hazards
2. Usage of PPEs

Procedure:

1. Get general work permit from the concerned Electrical section in-charge.
2. Open the Earth Pit Chamber Cover, while opening handle the cover firmly, and take care about Insects / snake bite.
3. Clean the Pit with Wire Brush / Hand Blower / Cloth. While cleaning, use PPEs like Nose mask, goggles and hand Gloves.
4. Open the earth flat from the Earth Electrode.



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5. With the Earth Tester, Measure the Earth Pit Resistance Value (Individual Value)
6. Connect the Earth Flats and Measure the Earth Pit Resistance Value (Grid Value)
7. Add Water and Salt / Char coal to the Pit if required, While water pouring, avoid water spillage in the ground.
8. If required measure the Earth Resistance after a day or two for confirming the earth resistance within the range.
9. Check the Condition of Bolts, Nuts and Washers, if required replace and apply the Grease to avoid the rust. While applying, avoid spillage of Grease.
10. Close the Earth Pit Chamber Cover. While closing, handle the cover firmly

Emergency / Emergency Shut OFF:

1. If electrical shock injury or burn is there, give First aid and inform to the Safety department or Call Emergency number 3108/9865152222/9750963761.

Records/Annexure:

JSA is enclosed below.



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SOP For Earth Pit Maintenance

JOB SAFETY ANALYSIS: (JSA)

Job Safety Analysis	Job: Earth pit maintenance	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electricians	Supervisor: Section Engineer	Department: Electrical	Section: Plant	Approved by:
Reqd./recommended PPE: Safety helmet, Safety shoe & Rubber Gloves.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Checking Physical condition	Injury due to fall of slab / material	Proper handling of Weight objects	Slip while displacing the slabs	Proper Handling methods
	Injury due to insects / snake bite	Be alert while opening earth pit cover and inspect for insects /snake availability	Not taking care on this aspect	Tool box talk before job
Earth flat disconnection & re-connection	Electric shock	Proper discharging methods	Usage of Improper tools & Non availability of alternate Discharge path	Usage of proper tools & Proper arrangement of Alternate discharge path
	Body injury	Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body. Fingers can get caught between earth flats.	Without PPE don't perform the job/ Proper training / Follow SOP
Measuring Earth pit value	Electric shock	Safe Maintenance procedure	Improper measuring tools	Usage of Proper instruments