



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT
DALMIAPURAM**



Issue No. 02	Rev. No: 01	Effective Date: 22.05.2015	SOP/Elect /19
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Issued By: S & P	Approved By: Elect. & Inst Head
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SOP For Substation Maintenance

Scope/Purpose : This Procedure is to establish and ensure safe Maintenance Practices in Substation

Responsibility : Section Supervisor – Electrical

Accountability : Head-Electrical

PPE:

1. Safety helmet
2. Safety shoe
3. Rubber Gloves
4. Safety Belt
5. Nose Mask

Tools:

1. Insulated tools
2. Air Blower
3. Screw Driver
4. Cutting-Plier
5. Discharge Rod
6. Spanner set
7. Test Lamp
8. Fuse Puller
9. Ladder

Hazard Analysis:

Risks associated

Electrical shock
Fall from Height

Mitigating Measures

Use of insulated tools & proper discharging methods
Use of Ladder & Safety belt

Training needs:

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



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Procedure:

- a) Get work permit from the concerned Electrical section in-charge.
- b) Ensure Physical isolation of AB switches & Circuit Breakers.
- c) Barricade the working area.
- d) Use Hand gloves during over head line discharging.
- e) Discharge the Over head lines by Earth switches.
- f) Connect Discharge Rods in each phase.
- g) Place the Ladder to approach Insulators & Buses.
- h) Check & Ensure the Ladder is locked for that position.
- i) Wear safety belt and climbing up in ladder.
- j) Lock the Safety belt during insulator cleaning work.
- k) Use Hand gloves during insulator cleaning.
- l) Use Insulated tools during Maintenance works.
- m) Clean & Check Support Insulators.
- n) Clean & Check Current Transformers.
- o) Clean & Check Potential Transformers.
- p) Clean & Check Lightning arresters.
- q) Clean & Check Circuit Breakers.
- r) Clean & Check Power Transformers.
- s) Clean & Check Control cubicles.
- t) Remove Ladder and place in storage place.
- u) Remove Discharge Rods.



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- v) Normalize the Isolators & Earth switches.
- w) Clear the Work permit.

Emergency / Emergency Shut OFF:

1. If any injury is there, and inform to the safety department or call Emergency number 251 / 254 / 568 /9842994062.

Records/Annexure:

1. JSA is enclosed below.



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JOB SAFETY ANALYSIS: (JSA)

Job Safety Analysis	Job: Substation Maintenance	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electrician & Contract Employee	Supervisor: Section Supervisor	Department: Electrical	Section: Plant	Approved by:
Req'd/recommended PPE: Safety helmet, Safety shoe, Safety Belts & Rubber Gloves.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Switch Off & Isolation	Electric Shock	By using Hand gloves	Partial opening of Isolator switches / Control circuit failure	Proper Switch off & Isolation methods
Maintenance Activities	Electric shock due to un-discharged components	Proper Discharging methods	Live circuit / Usage of Improper tools	Proper discharge methods & permanent connection of Discharge rods during Maintenance
Insulators cleaning	Fall from Height	By using Safety belts	Slip / Fall of Ladder	Usage of Safety belts & Ensuring Ladder is locked.

HEAD E & I

HEAD TECHNICAL