

# DALMIA CEMENT (B) LIMITED - CEMENT PLANT ARIYALUR

# **ELECTRICAL MANUAL**

**Rev. No: 00 Effective Date: 01.11.2019** ELEC/SOP/023 **Issue No:02** 

**Issued By: M.R Approved By: HOD - ELECTRICAL** 

**SOP** for Power Cable Replacement in Lift

Scope : Replacement of damaged power cable in Pre heater, Cement mill and Cement

Silo lift

Responsibility : Electricians

Accountability : Electrical Engineer

PPE:

1. Nose mask

2. Goggles

3. Cotton Gloves

4. Safety shoes

5. Safety helmet

6. Full body harness with double lanyard

Tools:

1. DE Spanner set

2. Ring Spanner set

3. Waste Cloth

4. Box spanner set

5. Hammer

#### Hazards:

Risk Associated Electrical Shock Minor body injury Fall from height

Mitigating Measures **Electrical Safety Gloves** Safety shoes, gloves, helmet, goggles

Full body harness with double lanyard

### Training needs:

- 1. Emergency preparedness
- 2. First aid training

#### Procedure:

- 1. LOCK OUT AND TAG OUT for the lift
- 2. Take the appropriate work permit



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- 3. Remove all three phase HRC fuse from the Lift panel at the ground Floor
- 4. Barricade around the lift at ground floor, go to the Junction box floor
- 5. Fix the roller pulley in suitable place above the cable hanging
- 6. Tie the head end of rope in the fixed column and opposite end of rope with hanging cable through roller pulley and hold tightly
- 7. Disconnect the power cable from the outgoing terminals of the Junction box and remove the cable clamps.
- 8. Lose the rope slowly till cable reaches the ground floor.
- 9. Disconnect the old power cable from the incoming terminals of the Lift Cabin control panel and remove it away.
- 10. Unknot the cable from the rope and remove the cable away.
- 11. Lay the new power cable up to cabin control panel, terminate and connect it in the incoming terminal.
- 12. Knot the other end of cable with rope and pull it up to junction box. ( must have some sag)
- 13. Fix the cable in the clamp and connect it in the junction box.
- 14. Remove the pulley and ropes.
- 15. Connect the HRC fuse in mains controls panel.
- 16. Get the line clearance and Switch ON the lift feeder.
- 17. Take trail run of lift and record three phase current.
- 18. If it is found normal, surrender the work permit. Otherwise take LOTO of the feeder and cross check everything once again.
- 19. Do the house keeping and Update the maintenance record.
- 20. Close the work permit.



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## **Emergency / Emergency Shut OFF:**

1. If any injuries are there, give First aid and inform to the Safety department or Call Emergency number 3108/9865152222/9750963761.

### **Records/Annexure:**

- 1. Refer Line clearance certificates.
- **2.** JSA as enclosed below.

## **JOB SAFETY ANALYSIS: (JSA)**

Job Safety Analysis	Job: Cable replacement of lift	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electrician	Supervisor: Section Engineer	Department: Electrical	Section:	Approved by:

Reqd./recommended PPE: Nose mask, Goggles, Electrical safety Gloves, Cotton Gloves, Safety shoes, Safety helmet

Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Put on PPE, Take Permit				
Fixing the roller pulley	Tools slip	Use suitable tools	Tool may be damaged	Tool box talk Periodic replacement
	Body injury	Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Periodic replacement
Tie the rope with cable	Slip and fall from height	Use full body harness	Damaged condition	Inspect before use Periodic replacement.
Disconnection / connection the Cable from JB	Body injury	Use proper tools	Nonstandard /damaged tools	Training for tools handling/ Periodic replacement
Check the tightness of terminals	Body injury	Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Training for tools handling/ Periodic replacement