



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

Issue No:02	Rev. No: 00	Effective Date : 01.11.2019	SOP/Elect /10
Issued By:		Approved By: HOD - ELECTRICAL	
SOP For GRR Maintenance			

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

Responsibility : Section Engineer – Electrical

Accountability : Section Head-Electrical

PPE:

1. Safety helmet
2. Safety shoe
3. Rubber Gloves
4. 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

Hazard Analysis:

Risks associated

Electrical shock

Mitigating Measures

Use of insulated tools & proper discharging methods

Training needs:

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



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

Issue No:02	Rev. No: 00	Effective Date : 01.11.2019	SOP/Elect /10
Issued By:		Approved By: HOD - ELECTRICAL	
SOP For GRR Maintenance			

Procedure:

1. Take the LOTO permit of the particular Motor Feeder (11KV HT Feeder) as per ELEC/SOP/001
2. Take the LOTO permit of the GRR Power Supply as per ELEC/SOP/003.
3. Open the Doors in the GRR Control panel and Discharge the power terminals of GRR with discharge rod.
4. Open the Doors in the Resistance Panel and Clean the Complete Resistance Bank. While cleaning use PPEs like Nose mask, goggles and hand Gloves.
5. Check the Tightness of all resistance bank terminal tightness, while doing the tightening handle the tools firmly.
6. Check the Condition of all Insulators for good condition if not good, replace with new.
7. Check the condition of resistance bank if resistance plate / coil is not in good condition, replace with New one.
8. Check the Power Connection Tightness in the Power Contactor Cubicle and resistance bank. While doing the tightness, handle the proper tools firmly.
9. Open all the Power Contactors Arc Chute and Clean the Arc Chute, Fixed & Moving Contacts. while cleaning use PPEs like Nose mask, goggles and hand Gloves.
10. If the Condition of the Contact Kits is not good, replace with new Contact Kits.
11. Fix the Arc Chute and Check for Free Movement of the Moving Mechanism for all Contactors
12. Check the Control Wiring Tightness in the Resistance Panel & control panel with proper tool.
13. Check the resistance value for all resistance Banks
14. Clean the GRR Control Panel with hand blower / cloth. While cleaning use PPEs like Nose mask, goggles and hand Gloves.
15. Close the all panel doors and box up with Silicon Paste to restrict the dust entry.
16. Check the Resistance bank and control panel Body earthing.
17. Clear the LOTO permit as per ELEC/SOP/004 for the power supply of GRR.



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

Issue No:02	Rev. No: 00	Effective Date : 01.11.2019	SOP/Elect /10
Issued By:		Approved By: HOD - ELECTRICAL	
SOP For GRR Maintenance			

18. Clear the LOTO permit as per ELEC/SOP/002 for the motor feeder and check the healthiness in the CCR.

19. Take Trial if Possible and record all Check point in the concern Check list.

Emergency / Emergency Shut OFF:

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

Records/Annexure:

1. Refer LOTO permit certificates.
2. JSA as enclosed below.



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

Issue No:02	Rev. No: 00	Effective Date : 01.11.2019	SOP/Elect /10
Issued By:		Approved By: HOD - ELECTRICAL	
SOP For GRR Maintenance			

JOB SAFETY ANALYSIS: (JSA)

Job Safety Analysis	Job: Maintenance of GRR	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electrician	Supervisor: Section Supervisor	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
Put on PPE, Take Permit				
Cleaning of Panels	Eye irritation of dust.	Wear goggles	Damaged goggles/non standard goggles/ Not wearing goggle	Periodic replacement / Proper training / Follow SOP
	Respiration problem of dust	Wear Nose mask	Damaged nose mask/Not wearing Nose mask	Periodic replacement/ Proper training/ Follow SOP
	Body injury	Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job/ Proper training / Follow SOP
open the panel door,	Body injury	Use Proper PPE Use proper tools	Tools and material may slipped	Tool box talk Periodic replacement.
Discharge the panel terminals by discharge rod	Electrical shock	Use Tested Electrical Rubber Hand gloves	Damaged Gloves/ Not checked before use	Periodic replacement/ To check for Damage before use
Check condition and tightness of resisters / Power and control terminals , condition of Insulators	Body injury	Use proper tools Wear safety helmet, safety shoes , hand gloves	Nonstandard /damaged tools	Periodic replacement. Tool box training
Checked Power contactor	Body injury	Use proper tools	Tools and material may fall on human body	Periodic replacement. Tool box training
		Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job/ Proper training / Follow SOP
Measure the resistance value of resistance bank	Electric shock	Use Calibrated meters	Faulty meters	Meter shall be calibrated periodically
Check the panel earthing condition and close all panel doors	Body injury	Use proper tools	Tools and material may fall on human body	Periodic replacement. Tool box training