



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

<b>Issue No:02</b>	<b>Rev. No: 00</b>	<b>Effective Date: 01.11.2019</b>	<b>SOP/Elect /052</b>
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<b>Issued By:</b>	<b>Approved By: HOD - ELECTRICAL</b>
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**SOP For Fire alarm Maintenance**

**Scope** : This Procedure to establish and ensure safe method of Fire alarm Maintenance.

**Responsibility** : Section Engineer – Electrical

**Accountability** : Section Head-Electrical

**PPE:**

1. Nose mask
2. Goggles
3. Cotton Gloves
4. Safety shoes
5. Safety helmet
6. Full body harness with double lanyard

**Tools:**

1. Insulated tools
2. FRP Ladder
3. Hot air blower
4. Agar bathi

**Hazard Analysis:**

**Risks associated**

Injury  
Electric shock  
Fall from height

**Mitigating Measures**

Use of proper Handling equipments  
Use of Proper Testing procedure & Insulated tools  
Full body harness with double lanyard

**Training needs:**

1. Emergency preparedness
2. First aid training



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**Procedure:**

1. Take Electrical and Height Work permit for Fire alarm maintenance.
2. If the detector located in confined location such as Trench, tunnel etc., Take confined space work permit.
3. Clean the Fire alarm panel with Hand Blower & Cloth, while cleaning use PPEs like Nose mask, goggles and hand Gloves.
4. Check the tightness of power & control terminals and use 440Volts Insulated Rubber hand gloves.
5. Check and ensure the panel double earthing.
6. In panel, Note down the list of troubles/ Alarms if any.
7. If there are no troubles/ alarms, then go to step no: 10, otherwise go to next step.
8. In panel check the “SHORT” LED glowing. If LED is glowing, the circuit got short circuited and the detectors in that circuit shown in trouble.
9. Check the circuit using multimeter for any short circuit and isolate the faulty detectors/ cables from the circuit. If possible replace the detectors/ rectify the faulty cable.
10. Remove the detector from its detector base, while removing handle the detector firmly and avoid the fall of detector, use FRP ladder and Full body harness.
11. Clean the detectors one by one using Hand blower and use proper PPEs like Nose mask, goggles and Rubber hand Gloves.
12. Refix the detector with its base in same location.
13. Check the healthiness of detector
  1. If it is Smoke detector, check by using Agar bathi.
  2. If it is Heat detector, check by using Hot air blower.
14. Check the healthiness of panel
15. Check the battery voltage in panel.
16. Check the healthiness of hooters.



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## 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. JSA as enclosed below.

## JOB SAFETY ANALYSIS: (JSA)

<b>Job Safety Analysis</b>	Job: Overhauling of LT Motors	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electrician	Supervisor: Section Engineer	Department: Electrical	Section: Plant	Approved by:
Reqd./recommended PPE: Safety helmet, Safety shoe, Rubber Gloves, Cotton hand gloves & Full body harness with double lanyard.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Cleaning of detectors	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
Removing the detectors	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
	Fall from height	Use safety belt with double lanyard	Defective safety belt	Check the belt condition before use / Check the inspection validity
Check the termination tightness of all accessories	Body injury	Use proper tools	Nonstandard /damaged tools	Training for tools handling/ Periodic replacement
		Wear safety helmet, safety shoes , hand gloves	Tools and material may fall on human body	Without PPE don't perform the job
	Body injury due to loose clothing	Wear cover all suit, safety goggles, cotton clothes, safety shoes, safety helmet	Loose cloth may get caught with the rotating shaft makes severe injuries	before approach the motor, make sure of proper clothing and PPE