



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

Issue No:02	Rev. No: 00	Effective Date: 01.11.2019	ELEC/SOP/62
Issued By: M.R		Approved By: HOD - ELECTRICAL	
SOP for High Mast Tower Lighting maintenance			

Scope : High Mast Tower Lighting Maintenance

Responsibility : Electrician

Accountability : Electrical Engineer

PPE:

1. Nose mask
2. Goggles
3. Cotton Gloves/LT rubber gloves
4. Safety shoes
5. Safety helmet
6. Full body harness with double lanyard as per the requirement

Tools:

1. Test lamp/Multimeter/Clamp meter
2. Suitable spanner
3. Cutting pliers
4. Screw Driver
5. MCB Lock
6. Fiber Ladder

Hazards:

Risk Associated

1. Electrical Shock
2. Minor body injury
3. Fall from height

Mitigating Measures

1. Tested Electrical Rubber Hand Gloves
2. Safety shoes, gloves, helmet, goggles
3. FRP -A type Ladder & Full body harness

1. Emergency preparedness
2. First aid training



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Procedure:

1. Check healthiness of Power & Control supply.
2. Put Selector Switch into OFF mode.
3. Bring down the Luminary support ring up to 2.5mtr height from the ground level by Pressing Lower button continuously.
4. Switch OFF the Power & Control Supply and Put MCB Lock for Power Isolation.
5. For approaching the light fitting use FRP A-Type ladder.
6. Before using ladder Check fitness/ healthiness of the Ladder.
7. Clean all light fittings with hand blower/Cloth .
8. Check Power & Control cable tightness of Control Panel, Geared Motor .
9. While removing light fitting (If fault condition) use proper tools and PPE's like Nose mask, goggles and hand Gloves.
10. Check / replace (if necessary) the accessories like bulb, choke, Ignitor, capacitor. While doing replacement handle the accessories firmly and avoid the fall of accessories.
11. Release MCB lock & switch ON the Power & Control Supply
12. Check Healthiness of the Light fittings.
13. After checking Keep the Luminary support ring into original position by pressing the Raise button.
14. Put Selector Switch into Auto Mode.
15. Dispose all E-waste (Bulb, choke, Ignitor, capacitor) through stores with E-waste document.

Emergency / Emergency Shut OFF:

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



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Records/Annexure:

1. JSA as enclosed below.

JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job:Hight mast Lighting maintenance	Date:	Analysis by:	Reviewed by:
Title of employee doing job: Electrician	Supervisor: Section Engineer	Department: Electrical	Section: Plant	Approved by:
Reqd./recommended PPE: Nose mask, Goggles, Cotton Gloves, Safety shoes, Safety helmet, Insulated FRP A-type ladder ,Full body harness with double lanyard.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Luminary support ring	Steel Rope Damage	Check rope condition	Support ring may fall on human body & Light fitting get damage.	Periodic checking & Lubrication
Removing fitting	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
	Electrical shock	Use Insulated tools	Insulation Damaged	Inspect before use. Periodic replacement
	Fall from height	Use safety belt with double lanyard	Defective safety belt	Check the belt condition before use / Check the inspection validity
Cleaning of fitting	Irritation of eye	Wear goggles	Damaged goggles/non standard goggles/ Not wearing goggle	Periodic replacement / Proper training/ Follow SOP
	Inhalation of Dust	Wear Nose mask	Damaged nose mask/Not wearing Nose mask	Periodic replacement/ Proper training/ Fallow SOP



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Replacement of Bulb, choke, Igniter, Capacitor	Body injury	Use hand gloves	Damaged bulb can cause injury / Residual charge may be available in capacitor	Handle with care / use hand gloves without fail. / Discharge the capacitor
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
Check the termination tightness of panel ,Geared motor & MCB (Replace if required)	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