



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



Issue No. 01	Rev. No: 01	Effective Date: 07.07.2017	ELEC/SOP/059
Issued By: M.R		Approved By: HOD - ELECTRICAL	
SOP for Electrical Siren Maintenance			

Scope : 3Ph Electro mechanical Siren

Responsibility : Engineer/Electricians

Accountability : Electrical Manager

PPE:

1. Nose mask
2. Goggles
3. Safety shoes
4. Safety helmet
5. Ear plug

Tools:

1. Multimeter
2. Megger
3. Insulated tools

Hazards:

Risk Associated
Electrical Shock
Minor body injury

Mitigating Measures
Tested Electrical Rubber Hand Gloves
Safety shoes, gloves, helmet, goggles

Training needs:

1. Electrical shock recovery Training
2. Emergency preparedness
3. First aid training

Procedure:

1. Take the LOTO permit for the particular Motor as per ELEC/SOP/003 and General Work permit.
2. Clean the Siren with Wire Brush, Hand Blower & Cloth, while cleaning use PPEs like Nose mask, goggles and hand Gloves



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3. Discharge the Motor terminals after opening the terminal box Cover Check the Winding resistance of Motor by Multi-meter
4. Check the Power Cable Connection Tightness & Condition of Terminal Block with proper tools.
5. Check the Insulation Resistance, Winding Resistance and Inductance of the Motor winding. After checking the Insulation resistances again discharge the motor terminals.
6. Remove the Impeller cover / Air intake unit with suitable tools
7. Clean the Impeller & inner surface of Impeller
8. Check the impeller condition whether any crack in its surface
9. Check the tightness of Impeller in Rotor.
10. Covering the Air Intake unit/ Impeller cover
11. Close the Motor Terminal box cover and box up with Silicon Paste to restrict the dust entry
12. Check the motor Earthing condition
13. Clear the LOTO permit as per ELEC/SOP/004
14. Take the trial of Siren after Servicing

Emergency / Emergency Shut OFF:

1. If any injury or electrical shock is 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.



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JOB SAFETY ANALYSIS:(JSA)

Job Safety Analysis	Job: Siren maintenance	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				
Cleaning of Siren	Eye irritation of dust.	Wear goggles	Damaged goggles/ nonstandard 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 motor terminal box cover to discharge	Electrical shock	Use Tested Electrical Rubber Hand gloves	Damaged Gloves/ Not checked before use	Periodic replacement/ To check for Damage before use
Check the tightness of terminals	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 insulation resistance, winding resistance, inductance Again discharge the motor Close the terminal box cover	Electrical shock	Use Tested Electrical Rubber Hand gloves	Damaged Gloves / Not checked before use	Periodic replacement/ To check for Damage before use
		Use Calibrated meters	Faulty meters	Meter shall be calibrated periodically