



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



Issue No. 01	Rev. No: 02	Effective Date: 20.09.2017	INST/SOP/55
Issued By: M.R		Approved By: HOD - INSTRUMENTATION	
SOP for Maintenance of Cassette A/C			

Scope : This SOP is applicable for Maintenance of Cassette A/C.

Responsibility : AC Technician.

Accountability : Instrument -Section Engineer.

PPE:

1. Safety helmet.
2. Safety shoe.
3. Mask.
4. Cotton Gloves.
5. Rubber Gloves.
6. Insulated Gloves.
7. Safety goggles.

Tools:

- Multimeter
- Tester
- Insulated Screw Driver sets
- Ring spanner sets
- A Type Ladder

Hazards:

Risks associated

Skin Allergy (Contact with Soft water)

Condensate water Spillage to Eye

Fall from Ladder

Dust from Fan Blades and Cooling Coils

Electrocution

Mitigating Measures

Use Rubber Hand Gloves

Use Goggle

Hold the ladder by second person

Use Goggle, Nose Mask and Cotton Gloves

Use Insulated Hand Gloves and Tools



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Training needs:

1. Knowledge to work in Cassette A/C.
2. Emergency procedure.
- 3.

Cassette A/C :

- 1 Switch off the System by pressing the Off Button in remote.
- 2 Ensure the System off Condition by seeing Red Light indication in Controller.
- 3 Take the Line clearance.
- 4 Use proper PPE and Tools.
- 5 Ensure non availability of Electric supply by using Multimeter at power input terminal.
- 6 Close Inlet and Outlet valve of Chiller water line.
- 7 Remove the covers.
- 8 Clean the fan blades & Cooling Coil Fills by using cloth and brush.
- 9 Clean & Check the terminals tightness in the control board.
- 10 Open the inlet and outlet valve of chiller water line.
- 11 Ensure the water flow is proper through Cooling coils and remove air blocks by opening the bypass valve.
- 12 Normalize the Line Clearance.
- 13 Switch ON the System by pressing the ON button in remote control.
- 14 Update PM Check list No: INST/PM/58 for Cassette A/C.



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Emergency / Emergency Shut OFF:

1. If any unconsciousness 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.
3. Check List.

JOB SAFETY ANALYSIS (JSA) FOR CASSETTE A/C:

Job Safety Analysis	Job: Cassette A/C	Date: 20.09.2017	Analysis by: Section Head	Reviewed by: HOD
Title of employee doing job: AC - Technician	Supervisor: Section Engineer	Department: Instrumentation	Section: AC	Approved by: HOD

Req'd/recommended PPE: Safety helmet, Safety shoe, Mask, Goggles & Hand Gloves.

Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
1.Take the line clearance & switch off the isolator	Live supply 3 phase is exposed at the panel side	Ensure the isolation of power supply at the incoming side & check the incoming supply with Multimeter.	Result in electrocuted & flashing.	Check the incoming supply with Multimeter.
2.Open and Close the inlet and outlet valve of chiller water line	Soft water flow in Water line	Wear Goggles and Rubber Gloves.	Soft water may fall on our Hand and it will give the skin allergy.	If the Valve condition is not good, stop the respective water pump and change the valve.

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3.Clean the Fan Blades and Cooling Coils.	Fine dust will come out.	Wear Goggles, Nose mask and Gloves.	Coughing, Eye irritation may occur	Wear Goggles, Nose mask and Gloves.
	Condensate water spillage	Wear goggles and Rubber Gloves.	Eye irritation and Skin allergy may occur	Wear goggles and Rubber Gloves.
4.Cleaning of Electrical Board	Fine dust will come out.	Wear Goggles, Nose Mask and Cotton Gloves.	Coughing, Eye irritation may occur	Wear Goggles, Nose Mask and Cotton Gloves.
5.Check the tightness of power and control cable tightness	Chances for Terminal block damages.	Use proper tools based on the types of terminal blocks	Terminals may get damage and nuisance operation during panel startup	Select the proper tools.
6.Standing on Ladder	Fall down	Use 3 Point Contacts and Keep the second person to hold the ladder	Body Injury	Use 3 Point Contacts and Keep second person to hold the ladder.