	DALMIA CEMENT (B) LIMITED – CEMENT PLANT ARIYALUR **INSTRUMENTATION MANUAL**	
Issue No. 01	**Rev. No: 02** **Effective Date: 20.09.2017**	**SOP/INST/018**
Issued By: M.R	**Approved By: HOD - INSTRUMENTATION**	
	SOP for checking of On line particle size analyser	

Scope: Checking and Maintenance of Instrumentation Online particle size analyzer.

Responsibility: Instrumentation technician.

Accountability: Instrumentation - Section Engineer.

PPE:

- Safety helmet
- Safety shoe
- Mask
- Goggles
- Hand gloves

Tools required:

- Multimeter
- Tester
- Screw Driver
- Hand Blower
- Ring spanner

Hazard Analysis:

Risks associated   Mitigating Measures

Electrocution   Use Insulated hand glove and Tools

Procedure:

1. **Use PPE's like nose mask, goggles.**

2. **Take the line clearance before starting the job.**

3. **Close the incoming compressor Air and vent the compressor from the valves by removing the outlet port.**

4. **Switch off the Isolator / MCB.**

5. **Isolate the control supply by switching off the MCB.**

6. **Check the incoming supply voltage at incomer by using multimeter.**

7. **Wait for 1 Minutes to allow the Laser beam to cutoff.**

8. **Clean the panel with hand blower and keep the hand blower one meter away during electronic boards cleaning.**
9. **Open the Transmitter /Receiver unit and clean the lens with Soft paper.**

10. **Check the tightness of the connections with proper insulated tools.**

11. **Ensure unwanted gland holes to be closed.**

12. **After the panel maintenance ensures the panel Screws and door locks are properly locked.**

13. **Switch on the Isolators /MCB and control supply MCB.**

14. **Open the compressor Air inlet valve and check any leakage.**

15. **Return the work permit after job completion.**

16. **Ensure the panel Healthiness and check the Drive status with Robolab.**

17. **Give the clearance for the operation.**

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.

JOB SAFETY ANALYSIS: (JSA)

Job Safety Analysis	Job: On line particle size analyzer	Date: 20.09.2017	Analysis by: Section Head	Reviewed by: HOD
Title of employee doing job: INST - TECHNICIAN	Supervisor: Section Engineer	Department: Instrumentation	Section: Robo lab	Approved by:
Req'd/recommended PPE: Safety helmet, Safety shoe, Mask, goggles & insulated Gloves.				

Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
1.Close the compressor air line	Possible fine material may flush out from inlet valve during ON/OFF	Wear Goggles and Necessary PPE	Eye irrigation may be occurred.	Follow the LOTO Procedure
2.Ensure the power supply switched off for the On line particle size Analyzer	Laser beam may be passed on human body during cleaning	Check the power supply voltage by multi meter	Possible for eye irritation	Follow the LOTO procedure
3.Clean the analyzer	Dust will come out from the analyzer.	Use PPE and Insulated Hand gloves	Coughing, Eye Irritation may occur	Use goggles ,nose mask and hand gloves
	Electrocution	Ensure the fitness certification for portable instruments.	Resulting electrocution	Check the instruments healthiness and fitness certificate validity