



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



Issue No. 01	Rev. No: 00	Effective Date: 25.05.2016	SOP/INST/20
Issued By: S & P		Approved By: HOD - INSTRUMENTATION	
SOP for Calibration of RTD Transmitter			

**Scope:** To Calibrate the RTD Transmitter of Pyrotech make.

**Responsibility:** Instrumentation technician.

**Accountability:** Instrumentation - Section Engineer.

**PPE:**

- Safety helmet
- Safety shoe
- Mask
- Goggles
- Hand gloves (Heat Resistance)

**Tools required:**

- Multimeter
- Tester
- Screw Driver

**Hazard Analysis:**

**Risks associated**

Electrocution

Hand/Leg injury

**Mitigating Measures**

Use Insulated Tools/ hand gloves

Use Hand gloves and shoes



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



Issue No. 01	Rev. No: 00	Effective Date: 25.05.2016	SOP/INST/20
Issued By: S & P		Approved By: HOD - INSTRUMENTATION	
SOP for Calibration of RTD Transmitter			

**Procedure:**

**Get required work permit and line clearance from CCR.**

1. Remove the RTD cable connected to the input terminals of the transmitter and connect the RTD simulator.
2. Connect the multimeter to the output of the transmitter.
3. Simulate the input as per the log sheet with the RTD simulator and check the mA output.
4. Note down the readings and if the error is more than  $\pm 0.5\%$  then go to step 5 else step 9.
5. Simulate zero degree with RTD simulator and adjust the output to 4 mA by zero potentiometer.
6. Simulate 150 degree with RTD simulator and adjust the output to 20 mA by span potentiometer.
7. Repeat the steps 5 & 6 until the error comes within  $\pm 0.5\%$ .
8. Simulate the intermediate inputs as indicated in the log sheet and note down the readings.
9. Remove the RTD simulator and restore the connections.
10. Inform CCR about the completion of work and close the work permit.

**Emergency / Emergency Shut OFF:**

1. If any unconsciousness is there, give First aid and inform to the Safety department or Call Emergency number 222/233/986515288

**Records/Annexure:**

1. JSA as enclosed below.



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



Issue No. 01	Rev. No: 00	Effective Date: 25.05.2016	SOP/INST/20
Issued By: S & P		Approved By: HOD - INSTRUMENTATION	
SOP for Calibration of RTD Transmitter			

**JOB SAFETY ANALYSIS :( JSA)**

<b>Job Safety Analysis</b>	Job: Calibration of RTD transmitter	Date: 25.05.2016	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job: INST - TECHNICIAN	Supervisor: SECTION ENGINEER	Department: INSTRUMENTATION	Section: RAWMILL, PYRO , CEMENT MILL & PACKING PLANT	Approved by: HOD INSTRUMENTATION
Req'd/recommended PPE: SAFETY HELMET, SAFETY SHOES, GOGGLES, DUST MASK, HAND GLOVES				
SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED SAFE JOB PROCEDURE	WHAT COULD GO WRONG	CORRECTIVE ACTION
1. REMOVE TRANSMITTER CONNECTION	HEAT BURNS DUE TO NEAR BY HOT ZONE OR WHILE HANDLING HOT EQUIPMENTS	SWITCH OFF THE BLASTERS AND KEEP ALL OPENINGS CLOSED NEAR BY TO AVOID HOT MATERIAL COMING OUT ,USE HEAT RESITANT HAND GLOVES FOR HANDLING HOT PARTS	USE HEAT RESITANT HAND GLOWS IF	USE GOOGLES, DUST MASK AND HAND GLOVES -HEAT RESITANT AND OTHER PPE