



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



Issue No. 01	Rev. No: 00	Effective Date: 25.05.2016	SOP/INST/10
Issued By: S & P		Approved By: HOD - INSTRUMENTATION	
SOP for Calibration of Transweigh Control Bin Weighing system.			

Scope: To check the Bin weighing system.

Responsibility: Instrumentation technician.

Accountability: Instrumentation - Section Engineer.

PPE:

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

Tools required:

- Multimeter
- Tester
- Screw Driver

Hazard Analysis:

Risks associated

Electrocution

Hand/Leg injury

Mitigating Measures

Use Insulated Tools/ hand glove

Use Hand gloves and shoes



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Procedure:

1. Get work permit and line clearance if required.
2. Use PPE and hand gloves while handling the calibration weight.
3. Ensure the signal interlocks and block the interlock if necessary.
4. Use the Multimeter with insulated probes for checking the signals.
5. Check all the load cell Earthing.
6. Clean the load cells and load cell junction Box with hand blower.
7. Check the load cell connections and tightness of the terminal blocks.
8. Ensure the Bin is empty. Check all the inlet, outlet & venting flexible joints and weighing parts are physically free from stationary parts.
9. Select tare >T< and ensure the zero reading at weighing controller and CCR.
10. Apply some weight and check the repeatability by removing and placing.
11. If found any deviation in repeatability, repeat the point no.8.
12. Place the known weight and check the actual and indicated weight. Do the span calibration if any deviation in the reading otherwise go to step 17.

Span Calibration using weights

13. Select **Calibration -> Calibration using weights - > Dead load** and with a completely bin, delete the dead load with -> key.
14. Press down arrow to switch further.
15. Load a known weight and wait for steady display reading and then enter the calibration load value on the right hand side (100% bin weight = 2000 counts).
16. Conclude the calibration by pressing down arrow.



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17. After span calibration, remove the weight and ensure the zero reading. Place the known weight once again for checking the repeatability and remove weights.

18. Retrieve the blocked signals interlocks.

19. Give the clearance for operation.

Emergency / Emergency Shut OFF:

1. If any unconsciousness is there, give First aid and inform to the Safety department or Call Emergency number 222/233/9865155288

Records/Annexure:

1. JSA as enclosed below.

JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job: Checking of Bin weighing system	Date: 25.05.2016	Analysis by: Section Incharge	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. CLEAN THE LOAD CELL & JUNCTION BOX WITH HAND BLOWER.	MAY COME OUT OF THE JUNCTION BOX DUST ELECTROCUTION	WEAR GOOGLES,HAND GLOVES & NOSE MASK BEFORE BLOWERING ENSURE THE FITNESS CERTIFICATION FOR PORTABLE INSTRUMENTS	COUGHING,EYE IRRITATION MAY OCCUR RESULTING ELECTROCUTION	USE GOOGLES, DUST MASK AND HAND GLOVES CHECK THE INSTRUMENTS HEALTHINESS AND FITNESS CERTIFICATE VALIDITY
2. PLACING /REMOVING THE WEIGHT ON THE BIN	WEIGHT MAY SLIP FROM THE HAND.	WEAR HAND GLOVES	LEG INJURY	USE HAND GLOVES AND SAFETY SHOES BEFORE LIFTING THE WEIGHT