



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



Issue No. 01	Rev. No: 00	Effective Date : 25.05.2016	SOP/INST/13
Issued By: S & P		Approved By: HOD - INSTRUMENTATION	
SOP for Calibration of Schenck Weigh Feeders.			

Scope: To calibrate the Schenck make weigh feeders

Responsibility: Instrumentation – Section Engineer.

Accountability: Instrumentation - Section Manager.

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

TARING

1. Make sure the belt is empty.
2. Select the weigh feeder in **keyboard mode** from Intecont plus controller in the panel.
3. Start the weigh feeder in **volumetric mode** from with full set point.
4. Press **MENU** and go to **CALIBRATION** function and press **ENTER**.
5. Enter the password and select **TARE** function.
6. Taring will take C02 seconds and C01 cycles to complete.
7. Do the tare program two times and check the stability of tare value, if the readings are same within +/-1%, accept the tare value by pressing **ENTER**.
8. This result value will get stored in D03 and D04 parameter.
9. Change the controller to **Gravimetric mode**.

STATIC CALIBRATION

1. Get work permit and line clearance if required.
2. Use PPE and hand gloves while handling the calibration weight
3. Make sure the belt is empty.
4. Select the weigh feeder in **keyboard mode** from Intecont plus controller in the panel.
5. Hang the known test weight on both sides of the load cells freely.
6. Enter the total capacity of the test weights in **C08** in kg.



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7. Start the weigh feeder in **volumetric mode** with full setpoint.
8. Press **MENU** and go to **CALIBRATION** functions and press **ENTER**.
9. Enter the password and select **CHECK WEIGHT** function and press **ENTER**.
10. This program will take C02 seconds and C01 cycles to complete.
11. Finally it gives correction value in KOR.
12. If the KOR is in between 0.90 and 1.1, enter the value into parameter D02.

DROP TEST

1. Make the arrangements for taking the drop test.
2. Reset the totalizer Z1 before starting.
3. Start the weigh feeder with nominal setpoint and collect the material for not less than 15 mins.
4. Note down the totalizer Z1 value.
5. Weigh the collected material for True weight.
6. Calculate the correction factor (D02 value) as follows

$$\text{New factor (D02)} = \text{Old factor} \times \frac{\text{True weight}}{\text{Totalizer (Z1)}}$$

7. Enter the new factor in parameter D02.
8. Repeat the drop test trial to check the repeatability and ensure error is within +/-1%.



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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 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 – SECTION ENGINEER	Supervisor: SECTION MANAGER	Department: INSTRUMENTATION	Section: RAWMILL, COAL MILL, CEMENT MILL	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. HANGING THE WEIGHT ON THE LOAD CELL	WEIGHT MAY SLIP FROM THE HAND.	WEAR HAND GLOVES	LEG INJURY	USE HAND GLOVES AND SAFETY SHOES BEFORE LIFTING THE WEIGHT