



## STANDARD OPERATING PROCEDURE

**Department:** Production (External Preparation)

**SOP No.:**

**Title:** Operation, Verification and Calibration of Load cell

**Effective Date:**

**Supersedes:** Nil

**Review Date:**

**Issue Date:**

**Page No.:**

### 1.0 OBJECTIVE :

To lay down a procedure for cleaning, calibration and Operation of Load cell in External Preparation Area.

### 2.0 SCOPE :

This procedure is applicable to the Operation, cleaning and calibration of Load cell in External Preparation Area.

### 3.0 RESPONSIBILITY:

Production: Associate/Officer /Executive/Assistant Manager.

Head Production: To ensure execution & compliance.

Head QA: To ensure the compliance.

### 4.0 PROCEDURE:

#### 4.1 OPERATION

4.1.1 Switch 'ON' Panel of vessel, The load cell will start automatically.

4.1.2 The different button on the panel are as –

HOLD	NETT / GROSS	TARE	ZERO
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- HOLD :- Used to hold the present weight on display. Same key to be used again to release the HOLD operation.
- NETT / GROSS :- This command is used to change the display from showing Net weight to Gross weight and vice-versa.
- TARE:- When pressed, the displayed gross weight is stored in memory as Tare weight for net weight calculation. It is possible to tare the weight up to 100 % of the gross capacity
- ZERO:- When pressed, the displayed reading becomes zero.

4.1.3 Start operation after stabilized the reading on zero if not then set ZERO with the help of Zero Button on the panel.

4.1.4 The readings with respect to the weight are shown on the panel.

#### 4.2 Load cell weight verification



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- 4.2.1 Physically verify the vessel is empty.
- 4.2.2 Check the calibration status of the load cell.
- 4.2.3 Ensure that load cell display reading should be zero
- 4.2.4 Place 100 kg of standard weight on the load cell and verify the weight and record the observation in Annexure-I.
- 4.2.5 Reading should be in prescribed limits as per Annexure-I
- 4.2.6 If the verification is not satisfactory, then verification to be done as per bellow mention process
- 4.2.7 **Frequency:** Daily before start of the process.

### 4.3 Load cell calibration

- 4.3.1. Physically verify the vessel is cleaned.
- 4.3.2. Check the calibration status of the weighing balance, it should be calibrated.
- 4.3.3. Place the SS container on the weighing balance and tare it.
- 4.3.4. Weigh 50 kg of purified water
- 4.3.5. Manually Transfer the purified water to the tank.
- 4.3.6. Ensure that there is no loss during transfer.
- 4.3.7. Verify the weight on the load cell and record the observation in Annexure-II.
- 4.3.8. The difference between theoretical weight ( $T_w$ ) and checked weight ( $C_w$ ) should be in prescribed tolerance limits.
- 4.3.9. Repeat the step no. 4.3.3 to 4.3.8 with 50 kg purified water till required quantity of purified water is transferred to the tank i.e. 1500 kg for 1500kg capacity tank.
- 4.3.10. If the verification is satisfactory, affix the calibration label to the side of the load cell panel.
- 4.3.11. If the verification is not satisfactory, the apparatus shall be rectified & calibrated by engineering dept. Re verify the apparatus after maintenance.

**4.4 Frequency:** Once in a year or daily verification is not satisfactory.

### 5.0 ANNEXURE (S) :

ANNEXURE– I - Daily Verification Record of Load Cell.

ANNEXURE– II - Calibration Record of Load Cell.



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**6.0 REFERENCE (S):**

SOP- Preparation, approval, distribution control, revision and destruction of Standard Operating Procedure.

**7.0 ABBREVIATION (S) / DEFINITION (S):**

QA : Quality Assurance

SOP : Standard Operating Procedure

**REVISION CARD**

S.No.	REVISION No.	REVISION DATE	DETAILS OF REVISION	REASON (S) FOR REVISION	REFERENCE CHANGE CONTROL No.
1	00	---	---	New SOP	---



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**ANNEXURE I**

**DAILY VERIFICATION RECORD OF LOAD CELL**

**Department** :----- **Location** :-----  
**Month/Year** : **Vessel/Tank ID No** :-----  
**Limit** : 100 kg  $\pm$  1kg

S.No.	Standard weight	Display on Load cell	Done by	Checked By	Remark

**NOTE:-Write 'Ok' if Complies and 'Not ok' if not complies**

