SOP for Calibration of Coriolis Flow Feeder.

Scope: To calibrate the Schenck make Coriolis Flow meter

Responsibility: Instrumentation – Shift Engineer.

Accountability: Instrumentation - Section Engineer.

PPE:

- Safety helmet
- Safety shoe

Tools required:

- Calculator

Hazard Analysis:

Risks associated	NA
Electrocution	NA
Hand/Leg injury	Use shoes

Procedure:

STATIC CALIBRATION

⇨ Feeder must be **Stopped condition**
⇨ Ensure necessary work permit and CCR clearance
⇨ Multi Cor Impeller should be Empty and totally cleaned condition.

1. Press login
2. Type password 7353 and press enter.
3. Press setup

4. Press calibration
5. Press tare and start (multicor drive will run)
6. Calibration starts and residual run time shows 100% to 0%.
7. After completing 0% result (for example tare = 0.36% and deviation 0.01%) will show.
8. Then press apply to save calibration.

Note: *log values of material load in kg before and after calibration.*

DYNAMIC CALIBRATION

1. Ensure level in the bin is not less than 75% of its full capacity.
2. Stop the bin loading system and ensure respective control system loop is set to manual mode.
3. Ensure no fluctuation in the extraction system by observing the process variable.
4. Keep a constant Feed rate set point.
5. Note down the initial bin weight and counter value from the HMI panel.
6. After half an hour note down the final bin weight and counter value.
7. Calculate the % Error = $\dfrac{\text{(Final Bin weight – Initial bin weight) - (Final counter – Initial Counter)}}{\text{(Final Bin weight – Initial bin weight)}}$
8. If the error is within +/-1%, take one more reading and check for repeatability.
9. If the error is more than +/-1%, then adjust the error.
10. New factor = Old factor x $\dfrac{\text{(Final Bin weight – Initial bin weight)}}{\text{(Final counter – Initial Counter)}}$
11. Enter the new factor in HMI panel in parameter P10.1 (correction factor).

12. Repeat the steps 1 to 8 until error comes within +/-1%.

13. If the error % is not consistent contact OEM (M/s. Schenck process) for suggestions.

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: Calibration of Coriolis Flow Feeder	Date: 25.05.2016	Analysis by: Section Incharge	Reviewed by: Section Head
Title of employee doing job: INST – SHIFT ENGINEER	Supervisor: SECTION ENGINEER	Department: INSTRUMENTATION	Section: COAL MILL, PYRO	Approved by: HOD INSTRUMENTATION
Req'd/recommended PPE: SAFETY HELMET, SAFETY SHOES,				
SEQUENCE OF BASIC JOB STEPS	**POTENTIAL HAZARDS**	**RECOMMENDED SAFE JOB PROCEDURE**	**WHAT COULD GO WRONG**	**CORRECTIVE ACTION**
Multi Cor impeller empty condition . Ensure agitation system and air purging systems are working all right.	While ensuring impeller empty dust may come out with positive draught While ensuring the connections may open	Use nose mask and glass goggles Use nose mask and glass goggles	Air could blow dust in eye Air could blow dust in eye	If dust particles enter the eyes ,splash eyes with cold water If dust particles entre eye ,wash eye with cold water