



Title: Preventive Maintenance of Fluidized Bed Dryer

SOP No.:		Revision No.:	00
Effective Date:		Supersedes No.	Nil
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1.0 OBJECTIVE

1.1 To describe a procedure for the preventive maintenance of fluidized bed dryer.

2.0 SCOPE

2.1 This procedure applies to the Engineering department.

3.0 RESPONSIBILITY

3.1 Engineering

4.0 ACCOUNTABILITY

4.1 Plant Head

5.0 REFERENCE (S)

5.1 In-house.

6.0 PROCEDURE

6.1 Procedure for mechanical work:

- 6.1.1 Switch off the power supply of the machine and put "under maintenance" label.
- 6.1.2 Check all the dampers movement, if they are not functioning smoothly, and then lubricate them. Tighten all the nuts and bolts.
- 6.1.3 Check the steam coil fins for clogging and physical damage.
- 6.1.4 Check the dutch weave mesh for any damage.
- 6.1.5 Check for the smooth operation of all the pneumatic cylinders, and check chamber-sealing gasket.
- 6.1.6 Clean and lubricate the wheels of fluidized bed dryer bowl trolley, the blower motor and check for the bolt of impellers.
- 6.1.7 Check for any abnormal sound or vibration and grease the bearings.
- 6.1.8 Check the "V" belt and motor pulley condition. If required, replace.

6.2 Procedure for electrical work:

- 6.2.1 Open the panel covers & remove the dust from the panel by compressed air.
- 6.2.2 Tight all wire connections and check the motor connections.
- 6.2.3 Check operation of pneumatically operated solenoid valves.
- 6.2.4 Check PID control valve of container seals (Up & Down bolts)
- 6.2.5 Clean all the sensors with compressed air.

6.3 Procedure for trial run:

- 6.3.1 Switch on the power supply.
- 6.3.2 Run the machine according to SOP.
- 6.3.3 Set the required air pressure.
- 6.3.4 Check the operation of electrical safety: -

6.3.4.1 Higher current



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- 6.3.4.2 Safety pneumatics
- 6.3.4.3 Torn bag detector
- 6.3.4.4 Steam coil

- 6.4.4 Check interlocking of blower with exhaust damper.
- 6.4.5 Check & record the observations.

6.5 Procedure for handover of the machines:

- 6.6.1 Remove “under maintenance” label & affix the preventive maintenance status tag and inform the concerned department.

6.7 Frequency of preventive maintenance is monthly.

7.0 HISTORY

7.1 Details are given below.

SOP No.	REASON FOR CHANGE	EFFECTIVE DATE

8.0 ABBREVIATIONS: The abbreviations used in the SOP are as follows:

- 8.1 SOP - Standard Operating Procedure
- 8.2 No. - Number
- 8.3 QA - Quality Assurance



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ANNEXURE-I

PREVENTIVE MAINTENANCE CHECK LIST FOR FLUIDIZED BED DRYER

Equipment ID No. _____

Date: _____

S.No.	Particulars	Done/Not Done	Remarks
MECHANICAL WORK			
1	Switch off the power supply of the machine and put "under maintenance" label.		
2	Check all the dampers movement		
3	Check the steam coil fins.		
4	Check all the pneumatic cylinders.		
5	Checking of 0.3 micron prefilter.		
6	Checking of limit switch.		
7	Checking of heat exchanger coils.		
8	Checking of broken bag detector.		
9	Check the "V" belt and motor pulley condition		
10	Others.		
ELECTRICAL WORKS			
1	Tight all wire connections		
2	Check the motor connections		
3	Clean all the sensors		
4	Check operation of pneumatically operated solenoid valves.		

Done by
(Sign & date)

Checked by
(Sign & date)