



# PHARMA DEVILS

## ENGINEERING DEPARTMENT

### STANDARD OPERATING PROCEDURE

<b>Department:</b> Engineering	<b>SOP No.:</b>
<b>Title:</b> Preventive Maintenance of Boiler	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

#### 1.0 Revision History

Rev. No.	Details of changes	Reason for change
00	NIL	NEW SOP

#### 2.0 Objective

2.1 The Objective of this SOP is describe the procedure for preventive maintenance of Boiler

#### 3.0 Scope

3.1 This SOP is applicable for preventive maintenance of Boiler installed in utility block of

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#### 4.0 RESPONSIBILITY:

4.1 The Maintenance Operator shall be responsible:

4.1.1 To carry out preventive maintenance of equipment.

4.1.2 To report any deviation and/or deficiency observed during preventive maintenance.

4.1.3 To maintain the record of all checks.

4.2 The Maintenance Engineer shall be responsible:

4.2.1 To get the preventive maintenance done as per annual maintenance planner.

4.2.2 To check the preventive maintenance activity is carried out and devotions and/or

Deficiencies are complied as per requirement.

#### 5.0 Accountability

Head –Engineering Services



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#### 6.0 PROCEDURE:

##### 6.1 CAUTION:

**6.1.1** Before carrying out preventive maintenance, switch 'off' the mains, remove fuses and display the 'Under Maintenance' board.

##### 6.2 MONTHLY PREVENTIVE MAINTENANCE ACTIVITIES:

**6.2.1** Clean the water strainer.

**6.2.2** Clean the fuel oil strainer.

**6.2.3** Clean the burner rod and diffuser plate assembly, using sand paper and dry cotton duster.

**6.2.4** Clean the stack temperature sensor.

**6.2.5** Check the condition of 'feed water' pump. Rectify it, if required.

**6.2.6** Check all foundation bolts for any damage and tightness. Rectify it if required.

**6.2.7** Maintain the record of all checks in checklist. (Annexure-1).

##### 6.3 SIX MONTHLY PREVENTIVE MAINTENANCE ACTIVITIES:

**6.3.1** Clean the smoke tubes using tubes using wire brush.

**6.3.2** Check the safety interlock switch provided to control the steam pressure. Rectify it, if required. Set pressure is 9.5 Kg/cm<sup>2</sup>.

**6.3.3** Check 'high stack temperature' switch setting. Rectify it, if required. Set temperature is 300°C.

**6.3.4** Remove the blower cover and clean the impeller.

**6.3.5** Check the asbestos sealing rope for any damage. Replace it, if required.

**6.3.6** Maintain the record of all checks in checklist. (Annexure-2).



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#### 7.0 ANNEXURES:

Annexure-1 : Monthly Preventive Maintenance Checklist for Boiler

Annexure-2 : Six Monthly Preventive Maintenance Checklist for Boiler

#### 8.0 References (S)

NIL

#### 9.0 Glossary

SOP : Standard Operating procedure

No : Number

QA : Quality Assurance



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#### Annexure- I

#### Monthly Preventive Maintenance Checklist for Boiler

S. No.	DESCRIPTION	OBSERVATIONS/ REMARKS
1.	Clean the water strainer.	
2.	Clean the fuel oil strainer.	
3.	Clean the burner rod and diffuser plate assembly, using sand appear and dry cotton duster.	
4.	Clean the stack temperature sensor.	
5.	Check the condition of 'feed water' pump. Rectify it, if required.	
6.	Check all foundation bolts for any damage and tightness. Rectify it if required.	

<b>Done by:</b> <b>(Operator)</b>		<b>Done on:</b>	
<b>Checked by:</b> <b>(Engineer)</b>		<b>Next due on:</b>	
<b>Verified by:</b> <b>(Concerned Department)</b>			

**FREQUENCY :- MONTHLY PREVENTIVE MAINTENANCE**

**CAUTION : BEFORE CARRYING OUT PREVENTIVE MAINTENANCE, SWITCH OFF THE MAINS, REMOVE FUSE AND DISPLAY THE UNDER MAINTENANCE BOARD.**



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#### Annexure- II

#### Six Monthly Preventive Maintenance Checklist for Boiler

EQUIPMENT CODE:		LOCATION:	MONTH:
S.No.	DESCRIPTION	OBSERVATIONS/ REMARKS	
01.	Clean the smoke tubes using wire brush.		
02.	Check the safety interlock switch provided to control the steam pressure. Rectify it, if required. Set pressure is 9.5 Kg/cm <sup>2</sup> .		
03.	Check 'high stack temperature' switch setting. Rectify it, if required. Set temperature is 300°C.		
04.	Remove the blower cover and clean the impeller.		
05.	Check the asbestos sealing rope for any damage. Replace it, if required.		
<b>Done by:</b> <b>(Operator)</b>		<b>Done on:</b>	
<b>Checked by:</b> <b>(Engineer)</b>		<b>Next due on:</b>	
<b>Verified by:</b> <b>(Concerned Department)</b>			

**FREQUENCY :- SIX MONTHLY PREVENTIVE MAINTENANCE**

**CAUTION : BEFORE CARRYING OUT PREVENTIVE MAINTENANCE, SWITCH OFF THE MAINS, REMOVE FUSE AND DISPLAY THE UNDER MAINTENANCE BOARD.**