



**Title:** Preventive Maintenance of Boiler

<b>SOP No.:</b>		<b>Revision No.:</b>	00
<b>Effective Date:</b>		<b>Supersedes No.</b>	Nil
<b>Review Date:</b>		<b>Page No.</b>	1 of 3

**1.0 OBJECTIVE**

- 1.1 To describe a procedure for the preventive maintenance of Boiler (Thermax make RXD-850).

**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 machine and put "under maintenance" label.
  - 6.1.2 Clean the nozzle, diffuser plate and electrode by means of hard metallic brush and wash it by kerosene.
  - 6.1.3 Clean photocell by clean lint free cloth.
  - 6.1.4 Clean oil in-line filter by flushing the oil and compressed air.
  - 6.1.5 Tighten the bolts of all the accessories.
  - 6.1.6 Clean the economizer.
  - 6.1.7 Clean the water strainer of boiler feed water.
  - 6.1.8 Clean the site glass.
  - 6.1.9 Clean the sensor probe by kerosene.
  - 6.1.10 Check 'V' belt tension, if required then tighten.
  - 6.1.11 Check the alignment of the feed water and oil pump and check the conspider of feed water pump. Direction of spider and coupling.
  - 6.1.12 Check feed water flow rate, oil flow rate (water shall be between 10.5 ltrs to 11.5 ltrs/min and oil flow shall be between 0.55 to 0.65 ltrs /min)
  - 6.1.13 Check steam pressure and safety valve setting (range for operation shall be 9.0 to 10.5 Kg/cm<sup>2</sup>) blow down time (7 to 10 sec.)
  - 6.1.14 Chemical cleaning of water tubes will be done after every week.
- 6.2 Procedure for electrical work:
- 6.2.1 Clean the panel by blower.
  - 6.2.2 Check the terminal connection.
- 6.3 Procedure for trial run:
- 6.3.1 Switch on the power supply.
  - 6.3.2 Start the boiler as per the SOP.
  - 6.3.3 Check & record the observations as per Annexure-1.
- 6.4 Procedure for handover of the machines:



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6.4.1 Remove under maintenance label & affix preventive maintenance status tag and inform the concerned department.

6.5 Frequency of preventive maintenance of boiler is every week.

**7.0 HISTORY**

7.1 Details are given below.

<b>SOP No.</b>	<b>REASON FOR CHANGE</b>	<b>EFFECTIVE DATE</b>

**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 BOILER.**

Equipment ID No. \_\_\_\_\_

Date: \_\_\_\_\_

S.No.	Particulars	Done/Not Done	Remarks
1	Check fuel tank level.		
2	Check any visible leakages in steam or water lines.		
3	Check reciprocating water pump for 'O' ring damage & leakage.		
4	Check diffuser plate.		
5	Check electrodes & photocell.		
6	Check steam valve for steam leakages, if found replace the glands.		
7	Descaling of water tubes by sulphonic acid.		

\_\_\_\_\_  
Done by  
(Sign & date)

\_\_\_\_\_  
Checked by  
(sign & date)