 Discovery Labs	STANDARD OPERATING PROCEDURE			
	SOP No.:	SOP-ED-016-01	Effective Date:	17.08.2017
	Supersedes :	SOP-ED-016-00	Next Review Date:	16.08.2020
	Department:	Engineering	Page:	1 of 3
TITLE: OPERATING PROCEDURE FOR TWO TON COAL FIRED BOILER				

1.0 PURPOSE:

To describe a procedure for Two ton Coal fired Boiler.

2.0 SCOPE:

This procedure is applicable to Two ton Coal Fired Boiler at Discovery Laboratories Pvt. Ltd.

3.0 RESPONSIBILITY:

3.1 Boiler Operator

Is the responsible for operation of Boiler.


4.0 DEFINITIONS: NIL

5.0 PROCEDURE :

5.1 Starting of boiler

- 5.1.1 Wear safety items like helmet, goggles, nose mask and safety shoes.
- 5.1.2 Check the water level in the pressure drum and feed tank by seeing the level indicator.
- 5.1.3 Switch ON and check the working condition of ID (Induced draft) fan and ensure that there is no abnormal sound from ID fan.
- 5.1.4 Ensure that Feed water pump is working condition.
- 5.1.5 Ensure that vent valve is open position.
- 5.1.6 Check the feed tank water level and it should maintain always 3/4 level.
- 5.1.7 Check the feed water pH and hardness once in a shift. (pH shall be 8 to 9.5 and Hardness shall be less than 50ppm)
- 5.1.8 Ensure that the water level in pressure drum should be 3/4 level
- 5.1.9 Ignite the furnace and then start the ID fan
- 5.1.10 Start cyclone separator for removing dust particles, collect the heavy particles at cyclone separator and light particles and smoke passes through stack.
- 5.1.11 Charge the coal into the furnace with shovel whenever required.

	Prepared by	Reviewed by	Approved by
Sign & Date			
Name	Ch. Shankar	M. Ramesh	Ch. Mahendar Reddy
Department	Engineering	Engineering	Quality Assurance

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	Department:	Engineering	Page:	2 of 3
TITLE: OPERATING PROCEDURE FOR TWO TON COAL FIRED BOILER				

5.1.12 Open the furnace door and give rod movement for removing un burnt coal.

5.1.13 Run the ID fan till required steam pressure is achieved.

5.1.14 When the steam pressure reaches the 7.0 Kg/ cm² pressure, stop ID fan and the steam pressure reaches the 5 Kg/ cm² pressure ON the ID fan.

5.1.15 Blow down the boiler twice in a shift by opening blow down valve.

5.1.16 Take blow down water sample and send it to QC (Quality Control) for testing of TDS, pH and Hardness.

5.1.17 Keep the boiler premises clean and dust free.

5.1.18 Record the details of water level and Coal consumption in Boiler log book for every shift

5.2 Closing down the Boiler:

5.2.1 Close steam out let valve and wait till boiler stops at full pressure. Turn the rotary switch to OFF position.

5.2.2 Open blow down valve.

5.2.3 Get the blow down water tested for TDS from QC

5.2.4 Note down the time taken in seconds for pressure to drop from 7.0 Kg/ cm² to 1 Kg/ cm² and record.

5.2.5 When the pressure is zero and emissions from the blow down pipe stop completely, close the blow down valve.


5.2.6 Allow water to flow out of By-pass line till its temperature drops to normal ambient temperature.

5.2.7 Close the water and remove the coal from the furnace.

5.2.8 Switch off the breaker to isolate power supply.

5.2.9 Make appropriate entries in the Log Book.

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	Department:	Engineering	Page:	3 of 3
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6.0 FORMATS / ANNEXURE(S): NIL

7.0 CHANGE HISTORY:

Revision No.	Effective Date	Details of Revision	Ref. CCF No.	Remarks
00	01.01.2017	New SOP	ED-CRF-006/16	---
01	17.08.2017	1. SOP format changed in line with SOP-QA-001-05.	CCF/GEN/17007	--

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Sign & Date			
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Department	Engineering	Engineering	Quality Assurance