	<b>VEDANTA LIMITED – VALUE ADDED BUSINESS</b>	<b>Format No.:</b>	<b>VL/IMS/PP2/MECH/WI/23</b>
	<b>INTEGRATED MANAGEMENT SYSTEM</b>	<b>Revision Date:</b>	<b>05.04.2021</b>
	<b><u>Work instruction for activity in cooling tower</u></b>	<b>Revision No.:</b>	<b>02</b>
		<b>Page No.:</b>	<b>1 of 3</b>

### **1. Work instructions Gas cutting & welding work in the BF Gas system**

Objective	Gas cutting & welding work in the BF Gas system
Responsibility	Mechanical Engineer in charge
PPEs to be used	Helmet, Safety shoes, safety hand gloves, ear plugs and nose mask

#### **Aspect-Impact**

Oil Spillage	Land contamination, RESOURCE DEPLETION
Oil traced waste generation	Land contamination & Resource Depletion
Generation of waste oil	Generation of hazardous waste, resource depletion
Dust generation	Air Pollution
Waste water	Resource Depletion

#### **Hazards Identified**

Mechanical Hazard	Slip, fall and trap
Physical hazard	Noise,
Human behavior	improper housekeeping, Non PPEs, Alcoholism, Violation system
Chemical hazards	CO gas poisoning


#### **PRECHECKS**

Take/ensure the work permit and electrical shut down of the blower.  
 Ensure both suction & discharge 'U' seal is filled from operation department.  
 Ensure multi isolation in BFG system.  
 Complete BFG gas line isolation and complete air purging through boiler ID fan.

#### **PROCEDURE.**

Take clearance from production department for working on the Gas system.  
 Cutting/welding operation can be carried out on Gas system only during complete BFG shutdown and after complete purging through Boiler ID fan and after purging blower inspection doors should be kept open.  
 Workmen and engineer concern should ensure the Co level at the work place and proper circulation of fresh air at the work place.  
 Carry out the cutting/welding operation as per work procedure SP 44 WI/MAINT/07, WI/MAINT/09.  
 After completion of job close all manholes, take trials and give clearance to the production department.

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	VEDANTA LIMITED – VALUE ADDED BUSINESS	Format No.:	VL/IMS/PP2/MECH/WI/23
	INTEGRATED MANAGEMENT SYSTEM	Revision Date:	05.04.2021
	<u>Work instruction for activity in cooling tower</u>	Revision No.:	02
		Page No.:	2 of 3

## 2. Work instructions air leak test in the BF Gas system

Objective : Procedure to carry out air leak off test  
 Scope: : Air leak test.  
 Responsibility : Mechanical Engineer In charge  
 PPEs to be used : Helmet, Safety shoes, safety hand gloves, safety belt, CO monitor

**Aspect impact**  
 CO gas Health Impact


### Hazards identified

Mechanical Hazard - Falling  
 Physical hazard – Air pressure  
 Chemical Hazard – BF Gas  
 Human Behavior--- improper housekeeping, Non PPEs, Alcoholism, system Violation.

### Procedure

- Ensure complete BFG isolation in blower system.
- After completion of box up commence to air fill test.
- Close all vent, drain line valve which was provided in system.
- Charge entire line by slowly filling of air and hold the line pressure 500 mmwc
- Check the any leakage in each joint by putting soap solution.
- Attend the leakage portion and try the repeats the same exercise.

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	<b>VEDANTA LIMITED – VALUE ADDED BUSINESS</b>	<b>Format No.:</b>	<b>VL/IMS/PP2/MECH/WI/23</b>
	<b>INTEGRATED MANAGEMENT SYSTEM</b>	<b>Revision Date:</b>	<b>05.04.2021</b>
	<b><u>Work instruction for activity in cooling tower</u></b>	<b>Revision No.:</b>	<b>02</b>
		<b>Page No.:</b>	<b>3 of 3</b>

### 3. **Work instructions for bfg U seal drain valve replacement and drip pot cleaning**

Objective	U seal drain valve replacement and drip pot cleaning
Responsibility	Mechanical Engineer in charge
PPEs to be used	Helmet, Safety shoes, safety hand gloves, ear plugs and nose mask

#### **Aspect-Impact**

Oil Spillage	Land contamination, RESOURCE DEPLETION
Oil traced waste generation	Land contamination & Resource Depletion
Generation of waste oil	Generation of hazardous waste, resource depletion
Dust generation	Air Pollution
Waste water	Resource Depletion

#### **Hazards Identified**

Mechanical Hazard	Slip, fall and trap
Physical hazard	Noise,
Human behavior	improper housekeeping, Non PPEs, Alcoholism, Violation system
Chemical hazards	CO gas poisoning

#### **PRECHECKS**

Take/ensure the work permit and electrical shut down of the blower.  
 Ensure both suction & discharge 'U' seal is filled from operation department.  
 Complete BFG gas line isolation and complete air purging from boiler ID fan.

#### **PROCEDURE;**

After getting all clearance from operation department start to start the drip pot filling valve opening.  
 Check the line got chocked, if chocked try to hit pipe line manually by gun hammer.  
 If chock got not cleared close the close the drip pot filling line.  
 Start remove the drip pot bottom dummy and clean the entire wet dust or hard mud particle.  
 Flush the line completely by 10 to 15 min by opening water filling line.  
 After entire line flushing again put the dummy on drip pot bottom flange.  
 Fill the drip pots and overflow the same and give clearance to operation department.

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