

**Scope** : This SOP is applicable to Safe working for Hot air Generator(HAG)- 1 &2

Coal and Diesel/Pyrolysis oil Nozzle maintenance work

Responsibility: Section Engineer.

Accountability : Section Head - Mills

PPE:

1. Safety helmet

2. Safety shoe

3. Dust Mask,

4. Gloves.

Cotton knitted

Leather

5. Safety belt

6. Goggles

7. Welding Shield

#### Tools:

- 1. 2MT chain block-1nos
- 2. Nylon belt slings- 2Nos.
- 3. Pipe Wrench
- 4. Screw Spanner
- 5. Ring and DE Spanner set

### **Auxiliaries**

1. Welding Set

**2.** Cutting Set

#### **Hazards:**

**Risks associated** 

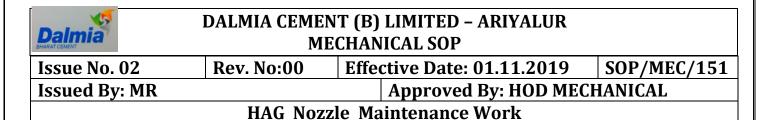
## **Mitigating Measures**

Body injury 1.Safe and tested tools and tackles

2. on job training

## **Training needs:**

- 1. Emergency preparedness
- 2. On job training
- 3. Assembly procedure



## LOTO required for:

- 1. HAG
- 2. Blowers
- 3. Fans

#### **Procedure:**

- 1. Make the coal and Diesel Line Empty before take job.
- 2. Take electrical isolation permit (EIP)of HAG ,blowers , Fans and Dampers with LOTO system.refer Enclosed isolation matrix
- 3. The Permit Paper should be with the person who is responsible for the job.
- 4. Trained Worker will be engaged for working with related PPE's.
- 5. Take Height work permit and hot work permit to perform the job.
- 6. Loosen the bolts/Hose and connectors before remove the the coal or oil nozzle
- 7. Use certified chain block to hold the Coal Nozzle taking out
- 8. Clean the Accumulated Coal above the Nozzle and in case of Diesel/pyrolysis inside oil collect in bin then clean
- 9. Replace /Repair the damage part or wear part
- 10. While doing the welding care to be taken. No flammable material surrounding of work area
- 11. Always Keep ABC Fire extinguisher near to work area
- 12. After changing/done the repair work tighten the bolt, Hose & Connectors
- 13. Remove the Chain block.
- 14. Tight Properly and Check the Leakages before starting the HAG
- 15. Get clear the EIP and Work permits and informed to CCR person.

DALMIA CEMENT (B) LIMITED – ARIYALUR MECHANICAL SOP					
Issue No. 02	Rev. No:00	Effe	ctive Date: 01.11.2019	SOP/MEC/151	
Issued By: MR			Approved By: HOD MEC	HANICAL	
HAG Nozzle Maintenance Work					

# **Emergency / Emergency Shut OFF:**

If any injury takes place, provide First aid and inform to the Safety department or Call Emergency number 3108/9865152222

# Records/Annexure:

- 1. Refer Line clearance/permit in mechanical department.
- 2. JSA is enclosed below.

# **JOB SAFETY ANALYSIS: (JSA)**

Job Safety Analysis	Job: HAG- 1 & 2 Coal And Diesel/Pyrolysis oil Nozzle maintenance work	Date: 06.04.18	Analysis by; Section Engineer	Reviewed by: Section Head
Title of employee doing job: Section Engineer	Supervisor: Section Head, Out Sourcing Supply Supervisor	Department: Mechanical	Section: Mills	Approved by: HOD
eq'd/recommended PPE: He	elmet, Shoe, Nose mask,	Cotton Gloves, Leather glo	ves, Ear plug, Safety	belt, Goggles, Shield
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Nozzle flange bolt or Connections loosening/tightening	Hand injury	Use proper tools and tackles with certification	Spanner slip /Broken	Check the condition of spanner
Nozzle holding clamp cutting	Body injury	Use proper cutting set with flash back arrester	Hose pipe damage	Check the condition of hose pipe. Periodical replacement is
			Fire in pipe	recommended Ensure empty out the material before carry out the work
Grinding	Eye and body injury	1.Use proper guard/locking and tested grinding machine 2.Ensure life of the grinding wheel	Wheel may slip out from the machine 2.wheel broken	To cross check the tightness of wheel     check the expiry date of the grinding wheels.



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**HAG Nozzle Maintenance Work** 

Spare Nozzle Replacement	Hand injury	1. Use proper tools and tackles with certification	Chain block may slip from its lifting position	Check the condition of lifting equipments.  1. Lifting Belts 2. Chain block	
				Periodical replacement is recommended for belts and ropes.  Periodical servicing required for Chain blocks.	
Welding operation	Hand and Eye injury	Use proper leather hand gloves and welding shield	Damage the welding shield glass and hand glove	Cross check the Periodical replacement of PPE	

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ISOIALIOII I	Isolation Type		
Electrical Energy	Other Energy		

1	HAG- 1 Maintenance	Name and Tag for the Equipment	371FN1 / CA Fan & 371FN2 / DA Fan	371BL1 / Blower	371SD 1 (close)	371LD1 &LD 2 (Close)	
2	HAG-2 Maintenance	Name and Tag for the Equipment	381FN1 / CA Fan & 381FN2 / DA Fan	371BL1 / Blower	381SD 1 (close)	381LD1 &LD 2 (Close)	