

# DALMIA CEMENT (B) LIMITED – CEMENT PLANT ARIYALUR

### **MECHANICAL DEPARTMENT**

Issue No. 02 | Rev. No: 00 | Effective Date: 01/11/2019 | SOP/MECH/093

Issued By: M.R Approved By: HOD Mechanical

SOP FOR ASSEMBLY OF KILN BURNER PIPE

**Scope** : This SOP is applicable to Safe working for Assembly of Kiln burner pipe.

Responsibility : Section Engineer - Mech
Accountability : Section Manager - Mech

PPE:

1. Helmet,

2. Safety shoe,

3. Safety belt,

4. Safety goggles.

5. Asbestos Gloves.

#### Tools:

- 1. 10T chain block-2nos
- 2. 5T chain block -2 nos
- 3. Nylon belt slings-4Nos.
- 4. Max puller -10T
- 5. Grinding machine
- 6. Box Spanner set
- 7. Ring Spanner set

#### Hazards:

Risks associated Mitigating Measures

Body injury 1. Safe and tested tools and tackles

2. on job training

#### **Training needs:**

- 1. Fire fighting
- 2. Emergency preparedness
- 3. Max puller operation
- 4. Assembly procedure

#### **Procedure:**

1. Use Proper PPE & tools



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- 2. Take work permit from safety dept as per the work condition.
- 3. Check the tools working condition before start up the job.
- 4. Use proper deshackles before putting into operation
- 5. Ensure availability of Puller pin for locking.
- 6. Check the lubrication condition of the wire rope slings
- 7. Lock properly at both ends of the machine
- 8. Apply load equally on both ends
- 9. Ensure Push and Pull load condition
- 10. Don't stand beside the loading slings
- 11. Pull out the material carefully by applying equal load with max puller
- 12. Take out the material carefully and place on safety blocks in proper manner
- 13. Check the condition of the stoppers if requires grind and adjust the radial gap carefully.
- 14. Push the internal pipe to the required position and then check the radial gap as required.
- 15. After final check up tighten all the fasteners to the required torque.
- 16. Place the burner aside carefully and take out all chain blocks and max puller.
- 17. Ensure cleaning of working area after completion of the assembly.
- 18. Return the permits to the concern engineer.



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### **Emergency / Emergency Shut OFF:**

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

Analysis by: Section Reviewed by: Section

### **Records/Annexure:**

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

### JOB SAFETY ANALYSIS: (JSA)

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Job Safety Analysis	Job: burner pipe assembly	Date: 01 – 09 - 2014	Engineer	Head			
Title of employee doing job: Section Engineer	Supervisor: Section Engineer	Department: Mech	Section: PYRO	Approved by: HOD-Mechanical.			
Req'd/recommended PPE: Safety helmet, Safety shoe, Safety goggles & Asbestos Gloves.							
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action			
Shifting of Castable burner pipe to the assembling area	Leg and hand injury	Use trolley to shift the castable burner pipe to the working spot  2.use max puller for pulling to the assembling point	Burner pipe may rotate/unbalance and may fell down	1.Ensure Use/working condition of burner pipe shifting trolley or template supporting structure			
				2.Use max puller of 10T capacity only with suitable pin and locking system			
Position of the chain blocks to lift the burner pipe for levelling	Leg and hand injury	Use correct lifting Tackles Teflon/wire rope slings	Chain block may slip and fall while positioning	1.Check the condition of the ropes and slings 2.Check the correct size of slings to operate/actual capacity and ensure certificate of clearance.			
Grinding the stoppers and adjustment of the central body screws for radial gap	Eye and body injury	Use proper guarding/locking and tested grinding machine	1.Wheel may slip out from the machine	Check the guarding /certificate of clearance before start up the job			



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		2.Ensure life of the grinding wheel	2.Electrical shock	2.check the expiry date of the grinding wheels
Position of the Max puller to pull out the inside pipe	Body injury	Do not apply excess load when takes more load while pulling 2.Use max puller of 10T Capacity only	Wire sling may get slip/cut while load exceeds.	Check whether it is locked on both sides equally or not and also ensure fixing of pin
Position of the Max puller for pushing the pipe inside.	Body injury	Do not apply excess load when takes more load while pushing 2.Use 10T max puller only	Wire rope may get slip/cut while applying load	1.Check whether it is blocked with any foreign material 2.Check the Condition of the internal surface before assembly 3.donot stand beside the max puller
Position of the burner pipe after assembly with the proper safety blocks	Leg injury	Provide safety blocks around the support	Burner pipe may rotate and unbalance	1.Ensure suitable template blocks are available or not 2.Lock the assembled burner pipe with lifting tackles additionally