



DALMIA CEMENT (B) LIMITED – ARIYALUR



MECHANICAL SOP

Issue No. 01	Rev. No: 02	Effective Date: 17.10.2017	SOP/MEC/095
Issued By: M.R		Approved By: HOD Mechanical	
Cooler			

Scope:

This SOP is applicable for S.F. Cooler upper grate maintenance work.

Responsibility : Section Engineer – Mech

Accountability : Section head – Mech

PPE:

1. Helmet,
2. Safety shoe,
3. Goggles
4. Gloves.
5. Nose mask
6. Full body harness

Tools:

1. Spanner set
2. Hammer

Hazards:

Risks associated

1. Body injury
2. Leg injury
3. Hand injury

Mitigating Measures

1. Safe and tested tools and tackles
2. On job training



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Isolation matrix:

Sl: No	Activity	Description	Electrical Energy			Other Energy	
1	SF Cooler Upper Grates maintenance work	Name and Tag for the Equipment	Cooler all four drives & water pump	Cooler all fans (471FN1 to 471FN7)	(471CC1) Hammer crusher & Cooler water spray pump (471WP1)	Inlet air blasters Compressor air Valve to be Closed & locked	Air in the Header to be released
			Primary Air fan 481FN2& 3	(461KL1) Kiln main drive	(461AD1) Kiln aux	Hydraulic line pressure to be made zero	
			(431MD1 & MD2) Ph bucket elevator	Kiln (481BL1) and pc (451BL1) & Standby blowers	Pre-heater (441FN1) and ESP fan (471FN8)	Cooler water spray pump valve closing after line made zero	

SOP FOR the Maintenance of Cooler upper Grate

1. Take the energy isolation permit as per the isolation matrix.
2. The line clearance paper should be with the people who is working in the site
3. Take confined area permit and keep the permit to the persons who are on job.
4. Remove all inspection doors of the upper grate.
5. Ensure 24 V Supply for proper lighting.
6. Ensure coating in the side walls if so remove and then take the job.
7. Ensure cleanliness of the equipment around the working area.
8. Use proper personal protective equipments
9. Ensure proper tools and tackles.



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10. Ensure hydraulic grates pressure must be zero.
11. Check all the fasteners of the upper grate accessories.
12. Check the condition of the cross bars and u profiles for wear and tear.
13. Check all the nozzles of the blasters at stationery grate area.
14. Check and adjust the gap of u profiles and retainer brackets.
15. Check and replace chain curtains if need.
16. Ensure water spray nozzle condition for any jamming if so clean the nozzles.
17. Check side wall plates condition as well as the condition of the castables.
18. Check roof brick line and cast able condition if not replace the brick lining and castables.
19. Check Cooler outlet duct condition for wear and tear
20. Take out all unwanted material from the chamber.
21. Close all the inspection doors.
22. Clear all scrap and spillage material from the working area.
23. Cancel the line clearance for operation.

Emergency / Emergency Shut OFF:

1. If body injury is there, First aid will be given and inform to the Safety department or Call Emergency number 3108/9865152222.

Records/Annexure:

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



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JOB SAFETY ANALYSIS :(JSA)

Job Safety Analysis	Job:	Date: 01/09/2014	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job: Section Engineer	Supervisor: Section Head	Department: Mech	Section: PYRO	Approved by: HOD Mechanical
Req'd/ recommended PPE: Safety helmet, Safety shoe, Gloves, Goggles, Gloves, Nose mask & Full body harness				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Opening of the cooler doors	hand injury	Use proper tools and tackles so that fasteners will not slip	Fasteners may slip and tools may hit to the hand and leg	Ensure Use/working condition of TOOLS AND TACKLES.
Clean the clinker bed & check the condition	Health injury	Use goggles & nose mask & 24 V lights	Dusty area (Clinkers fines) may leads to suffocation & eye problem	Ensure Use of goggles & nose mask. Use 24 V lights for working
Removing of locking wedges, spring pins & retainer bracket	Leg and hand injury	Use proper tools and tackles for safe removing	Fasteners may slip and tools may hit to the hand and leg.	Ensure Use/working condition of TOOLS AND TACKLES.
Replacement of U-profile	hand injury	Use hand gloves	Worn out profile sharp edges may injure the fingers	Ensure Use of hand gloves
Fixing of retainer bracket, locking wedges, spring pins	Leg and hand injury	Use proper tools and tackles for safe fixing of	Fasteners may slip and tools may hit to the hand and leg.	Ensure Use/working condition of TOOLS AND TACKLES.
Closing of the door	hand injury	Use proper tools and tackles so that fasteners will not slip	Fasteners may slip and tools may hit to the hand and leg	Ensure nobody inside & remove all tools & tackles & Scraps from inside and Use/working condition of TOOLS AND TACKLES.