



DALMIA CEMENT (B) LIMITED – ARIYALUR



MECHANICAL SOP

Issue No. 01	Rev. No: 02	Effective Date: 17.10.2017	SOP/MEC/096
Issued By: M.R		Approved By: HOD Mechanical	
Cooler			

Scope:

This SOP is applicable for S.F. Cooler under 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 Under Grates maintenance work	Name and Tag for the Equipment	Cooler all drives & water pump	Cooler all fans (471FN1 to 471FN7)	Hydraulic line pressure to be made zero
			(461KL1) Kiln main drive		
			(431MD1&MD2) PH bucket elevator	Pre-heater (441FN1) and ESP fan (471FN8)	Cooler water spray pump valve closing after line made zero

SOP FOR the Maintenance of Cooler under Grate

1. Take the line clearance with as per energy 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. Ensure 24 V Supply for proper lighting
5. Ensure cleanliness of the equipment around the working area.
6. Use proper personal protective equipment
7. Ensure proper tools and tackles
8. Remove all inspection doors of the under grate.
9. Ensure hydraulic grates pressure must be zero.



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10. Check all the internal fasteners of the hydraulic line fittings for proper tightening.
11. Check all hydraulic cylinders eye rod fasteners and hoses for proper condition.
12. Check lubrication cartridges for proper functioning if not replace the cartridges.
13. Check and close the chamber gaps for leakages.
14. Check and replace MFR units if not working.
15. Ensure rail magnetic sensors for proper sensing. If not adjust the sensors.
16. Check under grate plates condition and side wall plates for wear and tear.
17. Tighten all under grate fasteners for required torque.
18. Check free movement of grates if not adjust the gap.
19. Take out all unwanted material from the chamber.
20. Clean all scrap and unwanted material from the working area.
21. 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.
Inspection of the internal like hydraulic fitting, cylinder, MFR, rails, fasteners, lubrication cartridges, etc.	Health injury	Use goggles & nose mask & 24 V lights	Dusty Clinkers fine may leads to suffocation & eye problem	Ensure Use of goggles & nose mask. Use 24 V lights for working
Tightening of loosened fasteners & Closing of all 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.