



DALMIA CEMENT (B) LIMITED – DPM



MECHANICAL SOP

Issue No. 01	Rev. No: 00	Effective Date: 01.04.2016	SOP/MECH/66
Issued By: M.R		Approved By: HOD(MECH)	
REPLACEMENT OF E.S.P EMITTING RODS REPLACEMENT			

Scope:

This SOP is applicable for E.S.P EMITTING RODS replacement.

Responsibility : **Section Engineer** – Mech

Accountability : **Section head** – Mech

PPE:

1. Safety helmet
2. Safety shoe
3. Mask
4. Safety goggles
5. Gloves
6. Safety belt

TOOLS:

1. Screw driver
2. spanner set
3. Gas cutting set
4. Winch
5. Nylon Rope
6. Pulley

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	E.S.P emitting rods replacement	Name and Tag for the Equipment	E.S.P all three field	E.S.P FAN 471FN8			
			Cooler all four drives	Cooler all fans (471FN1 to 471FN7)	(441FN1) Pre heater fan	Inlet air blasters Compressor air Valve to be Closed & locked	

Procedure:

1. Take line clearance from electrical dept.
2. Ask electrical dept. to discharge the ESP by giving earthing connection
3. Main key box should be opened by electrical dept.
4. Open the required chamber using the door key in the main key box.
5. Check if any material is in hoppers, if any empty the material.
6. Use 24 v light and ensure proper illumination
7. Take confined area clearance with safety officer **and process.**
8. Take working at heights clearance from the safety officer



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9. Start cutting the top roof plate.
10. Remove all emitting rods bottom guide bolts.
11. Tie the emitting rod with the rope and start to lift the old rod's .
12. After removal of the old emitting rod's start fixing the new emitting rod without any bend.
13. After completing the job. Ask electrical dept. to remove the earthing connection.
14. Check for any unwanted tools / welding rods inside.
15. Close all the doors ensure that there are no leakages.
16. Return the line clearance to electrical dept. and safety officer.
17. Start the field once and check for any abnormality in field.
18. If everything is under control give clearance to CCR to take ESP into circuit.

Emergency Shut- off:

1. In case of belt is moving, Emergency pull chord switch should be activated by the person.
2. If body injury is there, First aid will be given and inform to the Safety department or Call Emergency number 233/555/9865125176/9865177444.

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: 01/01/2013	Analysis by: SECTION ENGINEER	Reviewed by: SECTION HEAD
Title of employee doing job: Section Engineer	Supervisor: Section Head	Department: Mech	Section: PYRO	Approved by:
Req'd/ recommended PPE: Safety helmet, Safety shoe, Gloves, Goggles, 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 E.S.P door.	Leg and 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.
Replacing the E.S.P emitting rods	Health injury, Hand & leg injury	Use goggles, nose mask & Use proper tools and tackles so that fasteners will not slip.	Dusty area (raw meal or clinker fines) may leads to suffocation & eye problem	Ensure Use of goggles & nose mask
Ensure E.S.P should discharge by earthing.	Body injury	Earthing to be checked.	Static electricity in field may resulting the injury.	Ensure nobody was inside before earthing the E.S.P
Remove the old rod's & damaged rod's with proper tools	Leg injury & 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 area where new plates are to be fixed.	Health injury & hand injury	Use goggles, nose mask & proper tools	Fines may injure the eye Sharp edges in the	Ensure Use of goggles & tools



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			fastener may injure the fingers	
Fix the new emitting rod's	Leg and 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.
Close the E.S.P door	Leg and 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.

Ensure E.S.P earthing removed.	Body injury	Earthing to be checked.	Static electricity in field may resulting the injury.	Ensure nobody was inside before earthing removed the E.S.P
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