



## DALMIA CEMENT (B) LIMITED – ARIYALUR

### MECHANICAL

Issue No. 02	Rev. No: 00	Effective Date: 01-11-2019	SOP/MEC/141
Issued By: M.R		Approved By: HOD-Mechanical	
SOP FOR ESP INSIDE CLEANING WORK			

### SCOPE: S O P FOR ESP INSIDE CLEANING WORK

**Responsibility:** Engineer/SH

**PPE:**

1. Safety helmet,
2. Safety shoe,
3. Mask,
4. Safety goggles
5. Gloves
6. Apron
7. Full body harness
8. Retractable lifeline

**TOOLS:**

1. Set of spanners
2. Rope ladder
3. Hammers

**Hazard Analysis:**

**Risks associated:**

Electrocution

Fine clinker dust may cause  
eye irritation / injury

Fall of person/material

Breathing problem

Contact with hot surface

**Mitigating Measures**

Follow Energy isolation permit  
standards & procedures

Use safety goggles & dust mask

Follow WAH procedures & standards

Follow CSE standards & procedures

Cool the ESP to atmosphere,  
temperature before entering in , &  
Follow HOT WORK standards &  
procedures while cutting & welding job.



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### **Procedure:**

Please ensure the earthing connection for discharge the electrodes for all the fields is intact during the period of the maintenance.

1. Take Energy isolation permit.
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. Take confined space Permit
6. Take working at heights Permit
7. Check if any material inside the chambers,
8. Chamber material clean by hand blower
9. If Hopper materials found ,Rotary air lock Electrical isolation cleared and empty material by hammering the Hopper.
10. After completing the job. Ask electrical dept. to remove the earthing connection.
11. Check for any unwanted tools / welding rods inside.
12. Close all the doors ensure that there are no leakages.
13. Return the energy isolation
14. Start the field once and check for any abnormality in field.
15. If everything is under control give clearance to CCR to take ESP into circuit.

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

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



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#### Records/Annexure:

1. Refer OEM manuals.
2. JSA as enclosed below

#### JOB SAFETY ANALYSIS :( JSA)

Job Safety Analysis		Job: ESP CLEANING WORK.	Date :28/09/2017	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job : Section engineer		Supervisor: Section Engineer	Department: Mechanical	Section: Pyro	Approved by: HOD-Mechanical
Reqd./recommended PPE's : Safety Helmet, Safet shoe, Hand Gloves, Safety goggles. Nose mask.					
Sl. No	Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What could go wrong	Corrective action
1	Open the required chamber door	Electrocution	Follow the Electrical energy isolation and standards & procedures	Electrical burns	Allot trained workers Use PPE
2	Open and close the required chamber door opened and closed	Hand injury	Use safety PPE	Hand Gloves	Allot trained workers Use PPE
3	Hammering in Hopper	Hand injury	Use safety PPE	Hand Gloves	Allot trained workers Use PPE
4	ESP Cleaning	Asphyxiation	Follow CSE standards & procedures	Breathing problem	O2 level check in every shift .Allot trained workers



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5	ESP Cleaning	Eye Irritation	Use Safety Goggles	Fine clinker dust may cause eye irritation / injury	Allot trained workers Use PPE
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SL No	Activity			Isolation Matrix For Cooler							
				Isolation Type							
				Electrical Energy				Other Energy			
4	Cooler ESP	Name and Tag for the Equipment	ESP Fields	ESP fan	All RALs of the ESP	Rapping Drive	Discharge Earthing Connection for all the fields.				