





### **MECHANICAL**

Issue No. 01	Rev. No: 00	Effe	ctive Date: 01-11-2019	SOP/MECH/191
Issued By: M.R		Approved By: HOD (Mech)		
SOP-J:	SA FOR COMPRESS	OR SE	PERATOR ELEMENT REPLAC	ING

**Scope** : This SOP is applicable to Safe working for COMPRESSOR SEPERATOR ELEMENT

replacing.

Responsibility : Section Engineer - Mech.

Accountability : Section Manager - Mech.

### PPE:

- 1. Helmet,
- 2. Safety shoe,
- 3. Ear plug,
- 4. Safety goggles.
- 5. Rubber hand Gloves.
- 6. Hand Gloves.
- 7. Nose mask.

### **Tools:**

- 1. Box Spanner set.
- 2. Ring Spanner set.
- 3. Steel rod.
- 4. Drain tray.
- 5. Waste cloth.







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#### Hazards:

### Risks associated

### **Mitigating Measures**

Electrical shock

1. Safe and tested tools and tackles

2. on job training

3. LOTO for motor.

Pressurized air release

1. Mechanical LOTO for outlet valves.

2. Release the air through drain valve and kept it open till the job done.

Hot oil spillage

1. Proper draining of oil.

### **Training needs:**

- 1. Fire fighting
- 2. Emergency preparedness
- 3. Electrical prevention training
- 4. Assembly procedure
- 5. Lubricant handling.







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6. Lifting of objects.

#### **Procedure:**

- 1. Take the LOTO for compressor and outlet valves.
- 2. The LOTO and permit paper should be with the person who is working in the site.
- 3. Release the pressure through drain valve and kept it open till the job completed.
- 4. Remove the separator inlet and outlet pipeline flanges.
- 5. Loosen the separator door bolts and the jack bolt on the door.
- 6. Drain the lubricant on the separator.
- 7. Remove the separator element.
- 8. Replace with new separator element.







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- 9. Check the door 0-ring condition if not ok replace with new one,
- 10. Close the separator door and tighten the bolts.
- 11. Refill the lubricant and check the level.
- 12. Clear the electrical and mechanical LOTO.
- **13.** Take the trial by checking oil spillage and vibration reading.

### **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. JSA is enclosed below.
- 2. Isolation Matrix.

### **JOB SAFETY ANALYSIS: (JSA)**







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SOP-JSA FOR COMPRESSOR SEPERATOR ELEMENT REPLACING				

Job Safety Analysis	Job: COMPRESSOR SEPARATOR ELEMENT REPLACING	Date: 04- 05 - 2020	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job: Section Engineer	Supervisor: Section Engineer	Department: Mech.	Section: UTILITY	Approved by: HOD Machanical

Req'd/recommended PPE: Safety helmet, Safety shoe, Safety goggles, Ear plug, nose mask & Rubber hand Gloves.

Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Valve operation	Hand injury / Fatal	Closed the out let valve and open the drain (manual) valve	System will be pressure raised it will blasting the system	Ensure valve condition before start the work
Separator door opening	Hand injury	Proper holding of door	May be the slip of door	Proper handling of door
Hot lubricant handling	Resource usage/hand injury	Rubber hand glove usage/Usage of proper tools.	May be a injury/burn/land contamination.	Proper lubricant handling.







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# **Isolation Matrix:**

SL No	Activity		Isolation Matrix for Utility & General Equipment.  Isolation Type		
			Electrical Energy	Other Energy	
1	COMPRESOR SPIDER replacing	Pyro and dense phase compressor-441CP1-4, 421CP1	Isolate the Related other energy	Isolate or closed the valves	



# DALMIA CEMENT (B) LIMITED ARIYALUR



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Cement mill and Fly ash unloading compressor- K21CP1-2 ,k21CP3-5  Packing plant compressor- 621CP 2-4	isolatio n
N2 COMPRESSO R AND ROBO LAB COMPRESSO R	