



DALMIA CEMENT (B) LIMITED – ARIYALUR



MECHANICAL

Issue No. 02	Rev. No: 00	Effective Date: 01.11.2019	SOP/MEC/182
Issued By: M.R		Approved By: HOD-Mechanical	
SOP FOR NORMAL START-UP AND SHUT-DOWN START-UP OF N2 PLANT			

Scope : This SOP is applicable to NORMAL START-UP AND SHUT-DOWN START-UP of N2 plant

Responsibility : Section Engineer – Mech

Accountability : Section Manager – Mech

PPE:

1. Safety Helmet,
2. Safety steel toe shoe,
3. Hand Gloves Cotton/Leather
4. Safety goggles.
5. Nose mask.

NORMAL START-UP AND SHUT-DOWN START-UP PROCEDURE :

START-UP PROCEDURE :

1. The area near the unit should be kept clean.
2. Check that all Electricals are o.k. Control panel is getting power supply.
3. Ensure that drain valves of all equipments closed.
4. Open cooling water supply and return valves and check pressure.
5. Switch ON control supply switch and accept 'hooter'.
6. Start Air Compressor and maintain Air Receiver pressure around 9.5 kg/cm²g.
7. When the air receiver pressure will go above 7kg/cm²g , PSA sequence will 5-minutes and ensure that the PSA unit is working all right. PSA tower pressure goes up to 9.5 kg/cm²g.
8. Switch 'ON' the Oxygen analyzer. Check O₂ content on N₂ gas surge vessel
9. Normally vent valve closed switch should be in "ON position. Vent valve will close when O₂ percentage in N₂ become ok
10. Now Nitrogen gas will start going to the storage tank.

SHUT-DOWN PROCEDURE :

- 1) Switch off the Oxygen Analyzer.
- 2) Switch off Air compressor
- 3) Switch off Control supply
- 4) Switch off Main power supply from your MCC.



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Emergency / Emergency Shut OFF:

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)

Job Safety Analysis	Job: Primary crusher In-situ casting repairing	Date: 08 – 04 - 2020	Analysis by Section Engineer	Reviewed by: Section Head
Title of employee doing job : Section engineer	Supervisor: Section Engineer	Department: Mech	Section: LS CRUSHER	Approved by: HOD-Mechanical
Reqd./recommended PPE's : Safety Helmet, Safety shoe, Hand Gloves, Safety goggles. Nose mask.				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Open the inspection door	Body injury	Use only proper spanners to avoid slip / shear of bolt and nut during un	Spanners may slip and hit hands while un screwing. Bolt may	Check the condition of the bolt / nut and spanners.



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		screwing.	shear/cut due to load	
Caught in between	Leg injury	First lock the two rotors with stoppers	Stoppers may be in damage condition.	Check the condition of stoppers
			Leg can caught in between	Check whether stopper was fixed properly
Struck up of drill bit while cleaning the sticky material.	Body injury	Use only certified drilling machines to avoid slip / shear of drill bit during cleaning.	Drill bit may struck up and hit hands while cleaning. Drill bit may shear / cut during load	Check the condition of the drill bit / handle.
Hand Blower operation	Eye injury & Dust inhalation	Use only certified Hand blowers.	Power Cable damage	Check the condition of cable and certification to use.
Using the Cutting machine	Hand injury	Use only certified cutting sets	Cutting set fail	Check the condition of Hoses, cutting torch, Flash back arrester, Blankets, Pressure Quage
Using the Welding machine	Hand injury (electric Shock)	Use proper Earth connection	Use proper Earth connection	Check the earth connection before doing the welding
Close the inspection door	Body injury	Use only proper spanners to avoid slip / shear of bolt and nut during screwing.	Spanners may slip and hit hands while screwing. Bolt may shear/cut due to load	



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