



DALMIA CEMENT (B) LIMITED



ARIYALUR

MECHANICAL

| | | | |
|---|-------------|----------------------------|--------------|
| Issue No. 01 | Rev. No: 00 | Effective Date: 01-11-2019 | SOP/MECH/201 |
| Issued By: M.R | | Approved By: HOD (Mech) | |
| SOP-JSA FOR STP SCREW PUMP AND FILTER PRESS MAINTANANCE | | | |

Scope : This SOP is applicable to Safe working for STP SCREW PUMP AND FILTER PRESS maintenance.

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. Grease gun.
4. Steel rod.
5. Belt sling.
6. Nylon rope.
7. Waste cloth.



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Hazards:

Risks associated

Electrical shock

Pressurized water release/

Rotating parts.

Fall of objects

Mitigating Measures

1.Safe and tested tools and tackles

2. on job training

1. Safe pressure release on pipeline.

1. Usage of certified lifting tools.

Training needs:

1. Fire fighting.
2. Emergency preparedness.
3. Electrical prevention training.
4. Assembly procedure.
5. Safe lifting procedure of equipment's.



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Procedure:

1. Take the Mechanical LOTO for pump or valves.
2. The LOTO and permit paper should be with the person who is working in the site.
3. Depressurized the water or liquids in the pump.
4. Loosen the base bolts in a cycle manner.
5. Remove the stater front cover.
6. Fix the belt sling on the stater and rotate with the steel rod to remove it.
7. Check the stater and rotor condition and for any jam inside.
8. If cleared re fix the stater and rotor then tighten the front cover .
9. Check the motor to pump pulley play and belt condition.
10. Lubricate the bearings through lubricant nipple until the old lube flush out.



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11. Loose the filter press jacking bolt.

12. Check the filter press cloth and plates for any possible damage,if any replace it with new one.

13. Clear the electrical and mechanical LOTO.

14. Take the trial note the current of motor 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.



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JOB SAFETY ANALYSIS :(JSA)

| Job Safety Analysis | Job: Sludge screw pump and filter press maintenance. | 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 Mechanical |
| 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 |
| Rotating parts | Major injury/Fatal | Proper guard fixing | Rotation may cause hand injury Tools will be slip | Not removing of guards while running. |
| Jack releasing of cloths | Hand injury / Fatal /fall | Proper tools usage while jacking | Slip,trip,and injury may occur. | Proper and firm usage of jack bolt. |
| Lifting of stater. | Hand injury/slip and fall | Proper lifting of heavy objects. | Slip,trip,and injury may occur. | Proper lifting procedure. |



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Isolation Matrix:

| SL No | Activity | | | Isolation Matrix for Utility & General Equipment. | | | | | | | |
|-------|---|--|-----------------|---|--|--|--|---------------------|-------------------------------------|--|--|
| | | | | Isolation Type | | | | | | | |
| | | | | Electrical Energy | | | | Other Energy | | | |
| 1 | STP SLUDGE SCREW PUMP AND FILTER PRESS MAINTANANCE | | 750 FP 1 | Isolate the Related other energy isolation | | | | | Isolate or closed the valves | | |