



DALMIA CEMENT (B) LIMITED – ARIYALUR

MECHANICAL SOP

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|------------------------------------|-------------|------------------------------|-------------|
| Issue No. 02 | Rev. No: 00 | Effective Date: 01.11.2019 | SOP/MEC/149 |
| Issued By: M.R | | Approved By: HOD -Mechanical | |
| SOP FOR PIPE LINE REPLACEMENT WORK | | | |

SCOPE:PIPE LINE REPLACEMENT WORK (AIR & WATER)

Responsibility: Mechanical-Section Engineer

Accountability: Mechanical-Section Head

PPE:

1. Safety helmet.
2. Safety shoe.
3. PPE kit.

TOOLS:

1. Ring & DE spanner set.
2. Pipe wrench.
3. Chain block.
4. Manila / Nylon rope.
5. Pipe
6. Ball pin Hammer
7. Chipping Hammer

Hazard Analysis:

Risks associated:

Mitigating Measures

Heavy Material

: Use of Chain blocks & Ropes

PURPOSE: To lay down a procedure to describe the stops to be followed and persons involved in the maintenance of water & air line replacement work.

PROCEDURE:

1. Take the electrical permit for respective pipe line pumps and compressor.
2. Take the isolation valves LOTO permit & fixed the LOTO lock & Tag
3. Drain the all pressure in that line.
4. Take the General work permit & Hot work permit, if required take the Height work permit
5. Insure for proper PPE (PVC hand glouse / others)
6. Insure the cutting set and welding machines.



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7. Insure the proper holding arrangement for old pipe lines and existing lines.
8. Cut and remove the which pipe line potion to be removed.
9. Existing pipe line surface to be cleaned and grinding to be done .
10. Proper tools & tackles to be using for re erected the new pipe lines (if required use the chain block or crane) .
11. check the straight line and alignment of pipe line and take the stitch welding for different places.
12. Full welding to be done.
13. After welding temperature gone to normal we can take the welding inspection.
14. Checking purpose to take the temporarily energization & re-isolation removal take the permission from section Head.
15. After taking of energization to start the pumps/compressor/valve to be open
16. Check all the welding points and threading points if any leakages is there.
17. If any leakages is there take the re-isolation and leakages to be arrested.
18. If no leakages to take the re-isolation and close the work permit.
19. After closing the work permit Energy isolation permit to be closed.
20. And inform to control room operator/ system put in to operation.

Job Safety Analysis:

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|---|---|---------------------------------------|---------------------------------------|---------------------------------------|
| Job Safety Analysis | Job: Pipe line modification | Date: 01/04/2018 | Analysis by: A.Narendhra babu. | Reviewed by: K. Sathish Kumar. |
| Title of employee doing job: Fitter | Supervisor: Section Engineer (Mech.) | Department: Mechanical | Section: Utility | Approved by: G.Shankarappa |
| Required /recommended PPE: Safety Helmet, Safety shoe, Hand Gloves, Safety goggles and Nose mask. | | | | |
| Sequence of Basic Job Steps | Potential Hazards | Recommended Safe Job Procedure | What Could Go Wrong | Corrective Action |



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|------------------------|------------------------------------|--|--|--|
| Depressurization | Material damaged or person injured | Depressurized the pipe line first by using the vent valve open condition | Without depressurized pipe line cutting it will make harmful to the equipment as well as person also | Use the drain valve to be open condition |
| Old pipe line removal | Material fall down | Provide the necessary lifting/ holding arrangement for the pipe line | Manually holding the pipes it may fall down and damaged material & injured the person | Put chain block or other lifting devices to be used. |
| New pipe line erection | Material fall down | Provide the necessary lifting/ holding arrangement for the pipe line | Manually holding the pipes it may fall down and damaged material & injured the person | Put chain block or other lifting devices to be used. |