



DALMIA CEMENT (B) LIMITED – ARIYALUR

MECHANICAL

| | | | |
|---|-------------|------------------------------|-------------|
| Issue No. 020 | Rev. No: 00 | Effective Date: 01.11.2019 | SOP/MEC/152 |
| Issued By: M.R | | Approved By: HOD -Mechanical | |
| SOP-Mobile Crane (ALPHA) rope replacement | | | |

Scope: ALPHA crane rope replacement work

Responsibility: Section Engineer

Accountability: Mechanical-Section Incharge

PPE:

1. Safety helmet.
2. Safety shoe.
3. Hand gloves.
4. Nose Mask.
5. Safety goggles.

TOOLS:

1. Box spanner set.
2. Ring spanner set.
3. Hammer.

Hazard Analysis:

Risks associated: **: Mitigating Measures**

Body injury **: Safe and health tools and tackles**

Cut injury **: Safe and health tools and tackles**



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SOP FOR ALPHA crane rope replacement work

1. Lifting hook position should be Approximately 2 Meters down and near the Joint of the Jib.
2. Change the Drum: Disengage the Hoist drum and lock it. Then Engage the Telescopic Drum.
3. Raise the Inner mast by pressing up button. Open the Mast lock by pulling the lock rope by hand and lock it.
4. Open the Master locking screw on both sides.
5. Now lower the crane by pressing down button on the remote.
6. While lowering the crane the following movements are to be observed.
 - a) Inner mast will go inside of Outer mast.
 - b) Counter weight will move towards Hoist drum
 - c) Jib will come on the spacing arm.
 - d) Spacing arm movement should be on forward direction.
7. Continue the procedure Till Crane resting position.
8. Take trolley to the inner position of jib.
9. Remove the damaged wire rope.
10. Tighten the trolley wire rope.
11. Raise the crane by pressing up button on the remote control.
12. Watch all the wire rope and cables for any struck.
13. While raising the crane the following movements are to be observed.
 - a) Counter weight goes back side.
 - b) Jib goes 1.5 Meter down and goes up.
 - c) The inner mast comes out of outer mast.
14. After position of outer mast vertically lock the same with both esid screws.



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15. Release the wire rope of outer mast lock and press the down button on the remote.

16. Rest the inner mast on the lock.

17. Disengage the telescopic drum and engage the hoist rope drum.

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. Refer Line clearance in Process department.
2. JSA is enclosed below.

Emergency / Emergency Shut OFF:

| SL No | Activity | | | Isolation Matrix for Utility & General Equipment. | | | | | | | |
|-------|-------------|--------------------------------|-------------------------|---|--|--|--|--------------|--|--|--|
| | | | | Isolation Type | | | | | | | |
| | | | | Electrical Energy | | | | Other Energy | | | |
| 1 | ALPHA Crane | Name and Tag for the Equipment | Drive for the Equipment | Adjacent Belt conveyor | | | | | | | |



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| Job Safety Analysis | Job: | Date: 6.04.2018 | Analysis by: Section Engineer | Reviewed by : Section Head |
|---|---------------------------------|--|---|--|
| Title of employee doing job: Engineer | Supervisor: Section Incharge | Department: Mechanical. | Section: RMH | Approved by: HOD Mech. |
| Req'd/recommended PPE: | | | | |
| Sequence of Basic Job Steps | Potential Hazards | Recommended Safe Job Procedure | What Could Go Wrong | Corrective Action |
| Removal of locking bolt while Changing the Drum | Body injury | Use proper spanners only to avoid slip | Spanners may slip and chance to fall | Use correct size and condition of spanner |
| Removing the old wire rope | Eye irritation | Use goggles to avoid the dust entry | Due to coal handling, chance of more fine dust particles | Use Correct PPE'S |
| Fixing the locking bolt while Changing the Drum | Body injury | Use proper spanners only to avoid slip | Spanners may slip and chance to fall | Use correct size and condition of spanner |
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