# **Dalmia**BHARAT CEMENT

## **DALMIA CEMENT (B) LIMITED - Ariyalur**

#### **MECHANICAL SOP**

| Issue No. 02   | Rev. No: 00 | Effective Date:01.11.2011   | SOP/MEC/045 |  |  |
|----------------|-------------|-----------------------------|-------------|--|--|
| Issued By: M.R |             | Approved By: HOD-Mechanical |             |  |  |

## SOP FOR REPLACEMENT OF FLUID COUPLING (PEMBRIL MAKE

Scope: To replace the fluid coupling

**Responsibility:** Engineer/SH

#### PPE:

- 1. Safety helmet
- 2. Safety shoe
- 3. Safety goggles
- 4. Gloves

#### TOOLS:

- 1 Spanner set
- 2 Sling
- 3 Hand gloves
- 4 Oil can

#### **Hazard Analysis:**

<u>Risks associated:</u> <u>Mitigating Measures</u>

Fall of Coupling Use correct methods to remove

Fall of tools, Carry the tools in tool bags

## Procedure:-

- a. Take LOTO permit
- b. The LOTO Permit should be with the person who is working in the site
- c. Use PPE'S while working.
- d. Open the coupling guard.
- e. Provide the required packing support to coupling.
- f. Tie the coupling with Sling.
- g. Open the Multidisc assembly bolts.
- h. Take out the multidisc along with bushes.
- i. Open the bolts of resilient disc.
- j. Take out the fluid coupling.
- k. Lift the new coupling & fix it.



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- l. Fix the Resilient disc bolts.
- m. Fix the Multidisc along with bolts & bushes.
- n. Tighten bolts of resilient disc & Multidisc.
- o. Rotate coupling to ensure free movement.
- p. Open the oil filling plug (any one of 2nos).
- q. Fill the oil with recommended grade
- r. Check the oil level
- s. Tighten the oil filling plug with "O" ring.
- t. Fix the coupling guard & ensure guard should not touch to shafts.
- u. Return the LOTO Permit.

#### **Emergency / Emergency Shut OFF:**

If any injury takes place, provide First aid and inform to the Safety department or Call Emergency number 3108/9865152222

#### **Records/Annexure:**

Refer LOTO standards/permit & JSA is enclosed below.

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

| Job Safety Analysis                            | Job: Cooler water Date: spray nozzle cleaning 01/09/2014 |                           | Analysis by:<br>Section<br>Engineer | Analysis by:<br>Section Engineer |
|--|--|---------------------------|-------------------------------------|----------------------------------|
| Title of employee doing job : Section engineer | Supervisor:<br>Section Engineer                          | Department:<br>Mechanical | Section: All                        | Approved by:<br>HOD-Mechanical   |

Reqd./recommended PPE's: Safety Helmet, Safety shoe, Hand Gloves, Safety goggles. Nose mask.

| SI. No | Sequence of Basic<br>Job Steps | Potential<br>Hazards | Recommended Safe Job<br>Procedure          | What could go<br>wrong | Corrective action      |
|--------|--------------------------------|----------------------|--|------------------------|------------------------|
| 1      | Removal of Drive guard         | Major Injury         | Use proper PPE                             | Slip/fall of guard     | Allot trained workers  |
| 2      | Removal of Coupling            | Major Injury         | Make proper arrangement & Use proper tools | Slip/fall              | Allot trained workers. |
| 3      | Fixing of new coupling         | Major Injury         | Use proper tools                           | Slip/fall              | Allot trained workers. |



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| SL<br>No | Activity  |                                      | Tag / Name of the Equipment                    |                              |                          |                 |  |
|----------|---|--------------------------------------|--|------------------------------|--------------------------|-----------------|--|
|          |   |                                      | Isolation Type                                 |                              |                          |                 |  |
|          |   |                                      | Elec   | ctrical Er                   | nergy                    | Other<br>Energy |  |
| 1        | Fluid coupling<br>replacement -<br>SILO FEED BE | Name and<br>Tag for the<br>Equipment | BELT   | 391FN4<br>AIRSLIDE<br>BLOWER |                          |                 |  |
| 2        | Fluid coupling<br>replacement -<br>REJECT BE    | Name and Tag<br>for the<br>Equipment | 361MD1<br>REJECT<br>CHAIN<br>ELEVATOR<br>DRIVE | 361BC1 -MILL<br>REJECT BELT  | 331BC1-MILL<br>FEED BELT |                 |  |