



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT
ARIYALUR**



ELECTRICAL MANUAL

Issue No. 00	Rev. No: 01	Effective Date: 07.07.2017	SOP/ELE/042
Issued By:		Approved By: HOD - ELECTRICAL	
SOP FOR LOCKING THE COUPLING of RM and CM MAIN MOTORS			

Scope : Locking the coupling after alignment of RM and CM main motors

Responsibility : Electrical/Mechanical Engineer

Accountability : Electrical/Mechanical Section Head

PPE:

1. Safety Helmet,
2. Safety Shoe,
3. Safety Hand Gloves.

TOOLS:

1. Spanners,
2. Hand Blower,
3. Waste Cloth,
4. Venire caliper
5. Filler gauge

Hazard Analysis:

Risk associated:

Effect of Eye Irritation
Dust inhalation

Mitigation Measures

Use of Google
Use of Nose mask

Procedure:

A) When motor base bolt not disturbed.

1. Measure the gap between both sides coupling before removing the coupling pins.
2. Measure the coupling locking plate float gap both side before removing the coupling pins.
3. Check and note down the bearing positioning pointer.
4. Inspect the bearing as required.
5. Assemble the bearing housing and recheck the bearing positioning pointer and set as before opening the coupling pin.
6. Maintain the coupling gap as measured before opening.



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7. Lock the coupling and maintain the both side float gap as before opening of coupling pin.

B) When motor base bolt disturbed.

1. After alignment of motor and gear box, open the drive end motor bearing housing cover.
2. Measure the clearance between shaft collar and bearing thrust pad (motor and coupling both side.)
3. Adjust the rotor shaft (by taking in or out) and maintain clearance between shaft collar and bearing thrust pad both side equal.
4. Assemble the bearing housing and set the bearing positioning pointer center of mark given on motor shaft for future reference.
5. Lock the coupling and maintain the both side float gap ± 0.75 mm.
6. While load trial, Magnetic center to be checked by pointer

Emergency / Emergency Shut OFF:

1. If any injury is there, give First aid and inform to the Safety department or Call Emergency number 3108/9865152222/9750963761.

Records/Annexure:

1. LOTO permit.
2. JSA as enclosed below.
3. Isolation Matrix



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JOB SAFETY ANALYSIS: (JSA)

Job Safety Analysis	Job: coupling locking after alignment	Date:	Analysis by: section Engineer	Reviewed by: Section Head
Title of employee doing job: Technician/fitter	Supervisor: Section engineer	Department: Electrical	Section: Plant	Approved by: HOD Electrical
Reqd./recommended PPE:				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action
Cleaning HT Motor Bearing Housing	Injury to head due to striking against some solid object or due to impact with something falling on head from height	Use Helmet	Walking around the motor without seeing the floor, Projecting materials, power cables, portable equipments which lead to Slip, Trip, Fall / Falling from height objects Impact to body.	Educating importance of PPE through pep talk. (Always wear Helmet, Safety shoe, Hand Gloves, Nose mask)
	Eye irritation of dust.	Wear goggles	Damaged goggles/non standard goggles/ Not wearing goggle	Periodic replacement / Proper training / Follow SOP
Removing/Fixing of bearing housing top cover	Body injury	Use proper and correct size of lifting tools	Holding mechanism of lifting tools may break	Check the holding mechanism before use. Tool box training before start the job.
		Use the hand gloves	Damaged hand gloves	To be replaced periodically.



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Isolation Matrix

Activity	Isolation Type	Tag /Name of the Equipment							
		Electrical Energy					Other Energy		
Inspection of bearing and locking of coupling	<i>Name and Tag for the Equipment</i>	1.Mill Main Motor Breaker out	2.Mill Aux. Drive(if chain is connected)	GB lubrication pumps LOTO	Tension hydraulic pump LOTO	nil	Ensure Mill aux. drive chain in remove condition	Ensure to No maintenance job in EOT crane	nil