

DALMIA CEMENT (B) LIMITED - ARIYALUR

MECHANICAL SOP

Issue No. 02 | Rev. No: 00 | Effective Date: 1.11.2019 | SOP/MEC/021

Issued By: M.R Approved By: HOD-Mechanical

WTP WATER PUMPS

Scope: Maintenance of water pump

Responsibility: Engineer/SH

PPE:

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

TOOLS:

- 1. Screw driver
- 2. spanner set
- 3. Pipe Wrench

Hazard Analysis:

Risks associated: Mitigating Measures

Pressurized water. Isolate all the relative valves with LOTO.

Procedure:

SOP FOR MAINTENANCE OF WATER PUMP AT WTP.

- 1. Pump delivery wall is to be fully closed and suction wall to be closed.
- 2. LOTO has to be taken from CCR and electrical departments.
- 3. Motor connection and earthling tables to be disconnected
- 4. Motor base bolts has to be removed and coupling spider to be removed.
- 5. Pump shaft coupling hub to be removed.
- 6. Pump suction and delivery line flange bolts to be removed and pump to be taken out from dismantling and inspection.

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- 7. Remove drive end bearing, housing end covers.
- 8. Inspect bearings and oil seal.
- 9. Remove impeller lock nut, take out impeller and inspect and clean impeller for coatings /scale and also inspect the spacer and shaft seal for any damage.
- 10. Remove non drive bearing housing end cover and inspect seal and bearing.
- 11. Replace bearings, seals etc. if found defective of work out.
- 12. Re-assemble pump elements in reverse sequence and tightened all mounting bolts.
- 13. Do the correct alignment and inspect coupling spider, tighten all base bolts of motor.
- 14. Clear the LOTO.
- 15. open suction valve and take trail run of pump and slowly open delivery valve

Emergency / Emergency Shut OFF:

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

Annexure:

JSA is enclosed below / Isolation Matrix

SL N o	Activity		Isolation Matrix for Utility & General Equipment. Isolation Type									
			Electrical Energy					Other Energy				
8	Maintenance of Water Pump	Name and Tag for the Equipmen t	Drive for the PUMP					Close, Drain & put LOTO for all the inlet & outlet		Priming Line		



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					valves			
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JOB SAFETY ANALYSIS: (JSA)

Job Safety Analysis	Job: Cooler water spray nozzle cleaning	Date: 01 – 09 - 2012	Analysis by: Section Engineer	Reviewed by: Section Head	
Title of employee doing job: Water Pump Maintenance.	Supervisor: Section Engineer	Department: Mechanical	Section: Utility	Approved by: HOD Mech.	

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

SI. No	Sequence of Basic Potential Hazards		Recommended Safe Job Procedure	What could go wrong	Corrective action	
1	Drain The water in the lines	Slippery	Use Gum Shoes during working at water	Water pressure	Drain slowly.	
2	Pump & Motor handling	Injury during handling the Equipment	Use proper tools & Lifting tackles	Failure of lifting tackles	Check thoroughly once again just before use also	