



## DALMIA CEMENT (B) LIMITED – ARIYALUR

### MECHANICAL SOP

Issue No. 02	Rev. No: 00	Effective Date: 01.11.2019	SOP/MEC/113
Issued By: M.R		Approved By: HOD Mechanical	
REJECT WATER PUMPS			

### SOP FOR MAINTENANCE OF REJECT WATER PUMPS

**PURPOSE:** To lay down a procedure to describe the steps to be followed and persons involved in the maintenance of pumps.

**RESPONSIBILITY:** Mechanical section head, section engineer and supervisor.

#### **PROCEDURE:**

1. Take the electrical permit for pump and remove the electrical connection.
2. Fix the LOTO
3. Take the General work permit
4. Insure for proper PPE (PVC hand glouse / others)
5. Clean the outer surface thoroughly.
6. Remove the motor from base frame.
7. Remove the pump casing by unscrewing the casing nut and bolts.
8. Remove the coupling with hydraulic puller.
9. Remove impeller by unscrew the impeller nut.
10. Remove the gland / mechanical seal.
11. Remove the shaft sleeve by using brass rod and hammer.
12. Remove the circlip provided to the shaft at the pump side.
- 13 .Remove the bearing and shaft assembly by unscrewing the bolts provided to the bearing housing.
14. Remove the external circlip provided to the bearing housing.
15. Remove the bearings from the bearing housing and shaft by means of hammer and brass rod.
16. Remove the oil seals from bearing housing.



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17. Check the pump casing visually for any holes/damages.
18. Check the impeller, shaft and sleeve if any cracks or damage replace with new one.
19. Check the shaft at bearing steps by pressing the bearing, if the bearing is loosely fitted to the shaft do knurling to the shaft.
20. Check the shaft for bend, if any bends is observed replace the shaft.
21. Clean all parts thoroughly with diesel.
22. Replace with all new gaskets and oil seals.
23. Fit the bearings to the shaft with the help of brass rod and hammer or bearing heater.
24. Fit the bearing housing to the drive end bearing shaft.
25. Fit circlip to the bearing housing with the help of circlip player.
26. Insert the bearing housing and shaft assembly in bearing frame.
27. Fit oil seal to the bearing housing.
28. Fit the pump side circlip of the shaft by means of circlip plyer.
29. Fit the shaft sleeve, gland follower / mechanical seal to the shaft.
30. Tight the impeller to shaft.
31. Fit the pump casing to the bearing frame.
32. Fit the coupling for pump shaft.
33. Fit the motor at base and do the realignment of motor and pump.
34. Give the electrical connection and clear the line clearance.
35. Open the pump inlet and out let valves.