



**DALMIA CEMENT (B) LIMITED – CEMENT PLANT
ARIYALUR
SAFETY DEPARTMENT MANUAL**

Issue No. 02	Rev. No: 00	Effective Date: 01.11.2019	WI-45(PI-14; AM-8)
Issued By: M.R		Approved By: HOD -SAFETY	
FIRE HYDRANT OPERATION			

1. PURPOSE:- This SOP gives the methodology for the operation of fire hydrant system

2. RESPONSIBILITY: The responsibility is with the Personnel of DALMIA CEMENT(BHARAT) LTD, Utility-in-charge,Safety and Factory-in charge

3. PRECAUTIONS AND GENERAL CONDITIONS;

Ensure the header water pressure must be 6 Bar always.

The Main & Jockey pumps control switches always in “AUTO” mode

4. PROCEDURE

4.1 On emergency the fire hydrant valve can be opened with required hose connection or directly with water monitor system by fire fighting personnel.

4.2 Pump house maintenance procedure

4.2.1.Water Level Maintenance

4.2.1.1.Run the bore well pump (Raw mill bore well near Raw mill) and fill the water at Under ground sump (UGS)

4.2.1.2.Ensure the water level at UGS, When water is full the water overflows through the over flow line and flows in to the under ground sump again.

4.2.1.3.Fill the water level at under ground sump through the bore well and over flow line by filling the UGS. Ensure the water level by indicator provided at under ground sump.

4.2.1.4.Ensure the Main &Jockey pumps priming tank water levels are full..

4.3 Pump operation checking procedure-jockey pump:

4.3.1.Open the air release vent valve at Jockey pump and vent out all the air.

4.3.2.Start the Jockey pump at “AUTO” mode.

4.3.3.Ensure the pump operation and switches off automatically at 6.5 Bar water pressure.



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**4.3.4.If the pump is not stopping at 6.5 Bar pressure inform CCR personnel and TAKE
THE CORRECTIVE ACTION.**

4.4 Pump operation checking procedure-main pump:

4.4.1 When the system under 6 kg/cm² pressure with jockey pump on “AUTO” position at “auto’ mode open any fire hydrant valve and let out the pressure by reducing to 5.5 Bar, the main pump starts automatically.

4.4.2 At a time 4 fire hydrant valves can put into operation.

4.4.3 During the above operation the jockey pump will switch off automatically.

4.4.4 Get the key from the “ Security In charge’ or “Electrical In charge” to put the main pump in to manual mode.

4.4.5 After testing the operation check of the main pump. Close all opened fire hydrant valves and the continuous running of the main pump must be switched off manually. Then put the main pump switch to “AUTO” mode

4.5 Daily check procedure:

4.5.1.Check water level at Under Ground sump by following the procedure steps 4.2

4.5.2.Check water pressure for 6.0 -6.5 Bar at pump header.

4.6 Weekly check procedure:

4.6.1 After daily check procedure, check for main pump operation by following procedure steps from 4.2 to 4.4

**4.6.2 Before main pump starts check the 100 hp connected chiller compressor stops.
(To match the load capacity of electrical system, the pressure switch is connected to stop the existing 100 hp motor then followed operation of main pump.)**

4.7 Fire drill procedure:

4.7.1 Check for daily / weekly check procedure.

4.7.2 Select fire drill area.

4.7.3 Fix the fire hoses at fire hydrant valves with end nozzle.

4.7.4 Hold the fire fighting hose then open the fire hydrant valve.

4.7.5 After the fire drill is completed put the main pump in to “off” mode.



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4.7.6 Then put the main pump at “auto” mode.

4.7.7 Ensure both main & jockey pumps are in “AUTO“ mode.

4.7.8 Drain out the water from hoses, dry it, roll it and fix it in its place.

4.8 Procedure During Emergency Operation

4.8.1 Drain the overhead tank water by opening both butter fly valve.

4.8.2 Run the bore well and fill the water continuously in to the under ground sump.

4.9 PROCEDURE OF EXTERNAL WATER SOURCES.

4.9.1. Connect the external water sources to the Fire Brigade inlet provided at EEI point and follow the procedure steps

5. ACCEPTANCE CRITERIA:

Check for normal noise, vibration, and pump operating pressure and flow - 7kg/cm² water head pressure, both jockey and main pumps are in “AUTO” mode

6. FORMATS FOR RECORDING:

QR / SAF / 010 - Fire Hydrant System – Daily Log Sheet

FOR / SAF / 021 - Fire Drill Record

FOR / SAF / 032 - Fire Hydrant Point Checklist

F1 - Mech - 008 - WEEKLY CHECKLIST FOR FIRE HYDRANT pump