



Title: Operation of Demineralise Water Plant

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| SOP No.: | | Revision No.: | 00 |
| Effective Date: | | Supersedes No. | Nil |
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1.0 OBJECTIVE

1.1 To describe a procedure for the operation of Demineralization water plant.

2.0 SCOPE

2.1 This procedure applies to the Engineering department.

3.0 RESPONSIBILITY

3.1 Project Executive - Engineering
3.2 Coordinator - Engineering

4.0 ACCOUNTABILITY

4.1 General Manager-Projects & Engineering

5.0 REFERENCE (S)

5.1 In-house.

6.0 PROCEDURE

6.1 Procedure of DM water plant.

- 6.1.1 Before the operation of the demineralised water plant ensures that the chlorine content of raw water is between 0.2 to 0.5 ppm.
- 6.1.2 Open the raw water valve RWV-1 and check the pressure at the inlet of sand filter.
- 6.1.3 SET the MPV of the sand filter on "back wash position".
- 6.1.4 Start the raw water pump ENG/DM/P-1 by pressing the GREEN push button and carry out the back wash operation for 10 minutes and STOP the pump.
- 6.1.5 SET the MPV on "Rinse" position.
- 6.1.6 Start the raw water pump ENG/DM/P-1 by pressing the GREEN push button and carry out the rinsing operation for 15-20 minutes and STOP the pump.
- 6.1.7 Start the raw water pump ENG/DM/P-1 by pressing the GREEN push button and carry out the back wash operation of the carbon filter for 10 minutes and STOP the pump.
- 6.1.8 Now SET the MPV of the carbon filter on the "Rinse" position and start the raw Water pump and carry out the rinsing operation for 15-20 minutes and Stop the Pump. Now SET the MPV at the "filter" position.
- 6.1.9 Open the valve DM-1, DM-2, drain valve D-1. and close the valve DM-3.
- 6.1.10 Set the MPV of both Cation and Anion bed on service position and start the pump ENG/DM/P-1 and drain the water for 10-15 min.
- 6.1.11 Check the conductivity of the water after cation and anion from the conductivity meter C-1. it should be less than 30µs/cm. Also check the pressure at the inlet of cation and note the reading.
- 6.1.12 If the conductivity of DM water is less than 30µs/cm, open the valve DM-3, MB-1 and MB-11 and close valve D-1.
- 6.1.13 Drain off the DM water for the first 10-15 min.
- 6.1.13 Check the conductivity of the water from the conductivity meter C-2. it should be less than 1µs/cm.
- 6.1.14 If the conductivity is less than 1µs/cm, close the valve no MB-11, and open the valve no MB-12 for DM water. Check the pressure at the outlet of the mixed bed.
- 6.1.15 Fill the details as per Annexure -1 of Sop after every 2 hours.



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7.0 HISTORY

7.1 Details are given below.

| SOP No. | REASON FOR CHANGE | EFFECTIVE DATE |
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8.0 ABBREVIATIONS: The abbreviations used in the SOP are:

- 8.1 SOP - Standard Operating Procedure
- 8.2 No. - Number
- 8.3 MPV - Multipurpose valve
- 8.4 DM -Demineralise Water