

DMPLANT DESIGN

INTRODUCTORY

The design is based on Indigenous Ion Exchange Resins with Prefiltration units for Mechanical filtrations .

- [1] Mechanical filtrations are based on normal velocities with 40% free board inside the vessels. Suspended Soilds, Colloidal Silica and Iron are retained/reduced.
- [2]where as Ion exchange resin units are also based on normal velocities but with 60% free board inside the vessels.
- [3] For Cation exchange, the week and strong Cation resin combination is chosen.
- [4] Similarly, Anion resin beds are also combination of week and strong resins.
- [5] In between Cation and Anion resin beds is the Degasser tower to reduce Carbonic acid loadings which on aeration release CO₂ into the atmosphere.
- [5] Finally, Mixed Bed Resin bed is taken as a polishing bed for removal of Cations like Sodium or Potasium and Anions like Silica slipping from the previous beds.
- [6] Such Demineralised pure water is then stored into rubber lined or with protective coat Dmtank./
- [7] Care is taken to provide the make tank with breathers avoiding entry of from atmospheric/ industrial gases and floating particles present in the industrial air.
- [8] Now, the Dmwater is ready to be used as make up to Boilers or Heat Ex changers.
- [9] Incase the Dmplant is to be designed on Imported Resins then care is taken to increase the incoming water velocity as defined. It then reduces the vessel sizes.