

Annexure - C to Tender BAP/CAP/2013-14/OT-20

SPECIFICATION FOR THE RO PLANT FOR DRINKING WATER

Design Basis: Following is the Raw Water Quality which shall be considered for the design of RO plant.

S.No	PARAMETERS	RESULT
1	Appearance	Clear
2	Colour Hazen Units	15
3	PH @ 25 Deg.C	~8.50
4	Conductivity Micromhos/cm	~2100
5	Turbidity in NTU	~7.0
6	Total Dissolved Solids in ppm	~1500
7	Total Hardness as CaCO ₃ in ppm	~700

Note: The water analysis furnished above is tentative only. However during execution, Vendor shall carryout the water analysis before finalizing the design of the RO Plant.

Output Water Quality :

The desired water quality supplied from the plant shall meet the Drinking water standard stipulated by BIS / WHO and shall be ensured by submitting the test certificate furnished by Govt approved laboratory.

Supply and Installation of Reverse Osmosis Plant . Raw Water from the Raw water tank shall be passed through a Dual Media Filter to reduce the suspended solids, Organics, Colour, Odour & Free Chlorine.. The filtered water shall be passed through the set of Cartridge Filters to guard the membranes from suspended matter getting into feed stream. The filtered water shall flow in to the Reverse Osmosis (RO) block through a High Pressure Pump at the required pressure for reverse osmosis to takes place. The permeate (Product) water from the RO plant shall be passed through the Ultra Violet Systems (UV System) for post treatment as a polishing unit. The product (Drinking) water from the plant to be stored in a potable water storage tank. pH booster dosing system will enhance the pH of the RO permeate suitable for drinking.


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Technical Specification:

Reverse Osmosis Plant capacity:	500 LPH
Raw Water Pump	: 1 No @ 3.5 Kg/cm ² Pressure
Pump Flow Rate	: 1200 liters/hr CRI/Texmo or equivalent
Dual Media Filter vessel	: DMF1054 (Make :Aventura /Pentair)
Vessel Specification	: 10" Dia x 54" HOS
Filter Medias	: Pebbles, Sand, Silex & Activated Carbon
Activated Carbon Filter vessel	: ACF1054 (Make :Aventura /Pentair)
Multi Port Valve	: 25 NB - Fully Automatic
Cartridge Filters	: 2 Nos (5 & 10 Micron) PP - Jumbo Wound
High Pressure Pump-	: 1200Liters/hr (Nanfang or Equivalent)-SS304
RO Skid	: 1 No (MS Powder Coated)
Interconnecting Pipes	: 1 Lot (CPVC & SS304)
Flow meter	: 2 Nos
Pressure gauges	: 3 Nos
Electrical Cables	: 1 Lot
Control Panel	: 1 No - Auto Panel with low pressure switch
RO Membrane	: 2 Nos -4" (Hydraunatics /Filmtec)
Membrane housing	: 1x2 -1 No
RO Pressure vessel	: 400 PSI - Advance Composite
Float Switch (Low & High)	: 1 No
Dosing Systems	: 2 Nos - Anti Scalent & pH Booster Dosing
UV Systems	: 1 No - 500 liters/hour

Customer scope :

1. All Civil works like Collection tank, Plant Room, Foundation & Drains etc.,,
2. 230V, 1ph. 50Hz, Electrical supply at 1 point near the RO plant,
3. Raw Water pipe lines up to the incoming of the plant
4. Reject / Back wash effluent / Plant drains will be disposed off by Customer
5. All Storage Tanks & Treated water transfer pumps.

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