

RO DESALINATION PLANT – 20 TPD

Production Capacity: 20 Cb.m./day

TECHNICAL SPECIFICATIONS

1. PLANT PERFORMACE

1.1 Feed water

Quality (mg/l): up to 37,500 TDS (Seawater)

Quantity: 4.2 cbm / hr.

Temperature: 25 deg C

1.2 Reject Water (Concentrate)

Quality (mg/l): 60,000 TDS

Quantity: 3.16 cbm / hr.

Operating Pressure: < 70 bar

1.3 Permeate (Product Water)

Quality (mg/l): < 500 TDS

Quantity: 0.84 cbm/hr. (15 cbm/day)

Pressure: < 2 bar

Note:

Variations in feed water TDS and/or temperature will cause variations in operating pressure and Permeate quality.

2. DETAILED EQUIPMENT SPECIFICATIONS

2.1 Filter Feed Pump

Reference Number: M2

Quantity: 01

Motor: 3.0kW

2.2 Bisulphite Dosing

Reference Number: PD-1

Quantity: 01

Dosing Tank: 100 Liters. (Polypropylene)

2.3 Media Filter

Quantity: 01

Material: GRP

Media: Graded Gravel and Sand

WP: 4 Bar

2.4 Cartridge Filter

Quantity: 01

Material: PVC

Elements: 1 nos x 20 inch length x 5 micron

Polypropylene Cartridges

2.5 High Pressure Pump

Reference Number: M3

Quantity: 01

Manufacturer: CAT / DEFOSS

Type: Positive Displacement

Materials: Stainless Steel Fluid End

Motor: 15 kW

2.6 Pressure Vessels

Reference Number: GRP Pressure Vessels

Type: 8 inch dia x 1000psi

2.7 Reverse Osmosis Elements

Type: Seawater – High Rejection

Element Size: 8 inch dia x 40 inch length

2.8 Cleaning Tank

Quantity: 01

Capacity: 150 Liters

Materials: Polypropylene

2.9 Pressure Gauges (Local Indication)

Reference Number: PI-1 to 5

Type: 100mm dial Bourdon Tube

Materials: SS Parts

Rating: Low – 0-60 psi, High 0-1500 psi

2. 10 Flow Meters (Local Indication)

Quantity: 02

Application: Reject & Product Flow Measurement

2. 12 Conductivity Meter (Digital - Panel Mounted)

Quantity: 01

Type: Digital Reading

Rating: 0-9999 MS/cm²

Accessories: In-line Type Sensor

2. 13 Control Panel

Qty: 01

Type: Manual / Automatic Operation

2. 14 PVC Piping / Fittings

Type: uPVC

Rating: PN10 / 16

2. 15 Stainless Steel Piping / Fittings

Type: 316 SS, Schedule 40 / 80

2. 16 Skid

Material: Mild Steel

Finishing: Corrosion Resistant Marine Paint

Bore Hole

Bore Hole 6" 1 Nos

(Depth: 40m with PVC Pipe, 6m with Screen Pipe)

Providing all reports for Drilling of Bore Hole 1 Lot

Bore Hole pump Davey pump PM450 (or equivalent) 1 Nos

Pump Control Board 1 Nos

Complete Sand filter 1 Nos

Settlement Tank 1500Ltr 1 Nos

Fresh Water Distribution System

Fresh Water Tank 30000Ltr (4x6000Ltr Tank) 5 Nos

Fresh Water Pump Davy XF 192 or equivalent with control board 1 Nos

Booster Davy Pump X90 or equivalent 1 Nos