

SONI ENTERPRISES

4/8 INDUSTRIAL AREA METRO STATION DADA
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SE/ALFA/05

M/S ALFA INGET
INDUSTRIAL AREA LUXOR -UK

Kind Attn : MR -MD SIR

Dear Sir,

Subject : Proposal for Reverse Osmosis Plant Capacity of 6000LPH

This has reference to the discussion had with your good self regarding the above captioned subject for which we are enclosing our techno commercial offer for R O Plant capacity of 6000 LPH .

We are submitting our offer is with following annexure's.

ANNEXURE I	DESIGN BASIS
ANNEXURE II	PROCESS DESCRIPTION
ANNEXURE III	SCOPE OF SUPPLY
ANNEXURE IV & IV A	TECHNICAL SPECIFICATIONS
ANNEXURE V	SCHEDULE OF EXCLUSIONS
ANNEXURE VI	TERMS & CONDITIONS

We hope that you will find the above in line with your requirement, if any further clarification is required, Please feel free to contact us.



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Thanking you & assuring you our best services at all times.

For SONI ENTERPRISES

RAJESH CHOUHAN

Mob.:9839625357,9336198190

ANNEXURE - I

DESIGN BASIS

REQUIREMENT

You have indicated your RO treated water requirement of 6000 Liters / hour

DESIGN RAW WATER ANALYSIS

The system has been designed based on the following raw water characteristics

Parameters	Results
Total Dissolved Solids mg/l	500 ppm
Total Hardness as CaCO ₃	310 ppm
Free Chlorine	NIL
Oil & Grease	NIL
BOD	NIL
COD	NIL
Bacteria	NIL

Water Quality after R O Plant

Total Dissolved Solids mg/l	< 50
Total Hardness as CaCO ₃	< 5



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ANNEXURE - II

PROCESS DESCRIPTION

FLOW DIAGRAM:

RAW WATER FEED PUMP > DMF > ANTISCALENT DOSING SYSTEM > MCF > HPP > RO > P H CORRECTION SYSTEM — TREATED WATER TANK BY CLIENT

PROCESS DESCRIPTION

1. **MULTI GRADE FILTER** The raw water shall be pass through coarse filtration on being passed through Multigrade sand filter, so as to get outlet water quality of <5 NTU.
2. **ANTISCALANT DOSING** Antiscalent shall be dosed in order to avoid any scale formation on RO membrane, thereby leading to longer membrane life and avoid fouling problems, which may arise due to scaling. This is a special type of serquestant which avoids any acid or softening in pre-treatment.
3. **MICRON FILTRATION** The water from the above unit shall be passed through a Cartridge filter assembly with cartridges of 10 microns nominal rating. This has been incorporated to carry on fine filtration before subjecting the water to RO Membranes. This will avoid choking of the membranes.
4. **R.O. FEED WATER PRESSURISATION** Since the RO plant works on higher pressures because of the osmotic pressures, therefore, the feed water to RO is first pressurized by pumping it through a High pressure pump.
5. **DESALINATION BY REVERSE OSMOSIS SYSTEM** The pressurized water from the high pressure pump shall be fed to the RO Membranes held in RO Pressure Tubes, wherein there will be a rejection of the dissolved solids and the permeate you will get with reduced dissolved solids.



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6. **pH CORRECTION SYSTEM** – The R O water shall be pass through the pH correction system by dosing pH booster to increase the pH.

ANNEXURE - III

MECHANICAL SCOPE OF SUPPLY

ONE Nos.	Raw water Pumps
One No.	Multi grade Filter along with all required accessories.
One No.	Antiscalent dosing system, comprising of dosing pump and tank for antiscalent dosing.
One Set	R.O. skid in mild steel frame painted with one coat of primer and two finishing coats, consisting of: <ul style="list-style-type: none">One No. Cartridge pre-filter in PP construction.One No.. High pressure pumps along with drive motor.cri/lubiOne Set SS 304 high pressure piping.One Set UPVC low pressure piping.One Set Valves for permeate, reject and inlet lines.One Set FRP pressure tubes with end caps.One Set RO membranes.One No. Control panel fitted with conductivity meter.One No. Wet panel, consisting of two nos. pressure gauges and two nos. rate of flow indicators.One No. Low pressure switch for pump suction.
	One lot interconnecting pipe work.
03 No.	Micron Cartridge with Housing for blending line to blend water .
One No.	pH correction system
One Set	Complete Set of interconnecting pipe work.



ANNEXURE - IV

TECHNICAL SPECIFICATIONS OF RO CAPACITY 6000LPH

Raw water Pump

Nos. : 5HP 2900rpm KIRLOSKER
MOC : CI

Flow rate : 12000LPH

Dual Media Filter&corbanfilter

Nos. off : One MS 6MM
Dia : 600mm
height : 1800mm
Flow rate (m3/hr) : 12
Max .working pressure (kg/cm2) : 3.5
Min. working pressure (kg/cm2) : 2.0
PIPE LINE : 2.0"
VALVE : Diaforme valve 2"

Chemical Dosing System for Antiscalant Dosing & pH correction system

Model : CDS-1
Nos. : Two
Pump type : Electronic metering
Pump capacity : 6.00 LPH
Tank MOC : HDPE
Tank capacity : 100 liters

Reverse Osmosis System : 3set

(a) Cartridge Filter

Rating : 10 Micron
Flow : 12 m3/hr

(b) High Pressure pump

Make : CNP/CRI/NUTON.10HP
Type : Multistage Centrifugal
Feed Flow & Pressure : S SMAKE Suitable capacity

(c) RO Skid

Permeate flow rate (m3/hr) : 6.0
Raw water flow (m3/hr) : 12
Reject flow (m3/hr) : 6.0
Total system recovery (%) : 50
Membrane type : CPA2/BW400



No. of membranes	:	6
No. of Vessels	:	2
Size of Membrane	:	8040Make(DAU/HYDRONATICS)

ANNEXURE V

SCHEDULE OF EXCLUSIONS

The following equipment/work are excluded from our scope :

1. All civil works such as equipment foundations, drain sumps and drain channels, supporting structures and platforms and shade is required. .
2. Storage Treated water.
3. All pipe-work beyond termination points.
4. Unloading, storage, erection and commissioning of equipment at site.

TERMINATION POINTS

- Inlet flange Multigrade Sand Filter.
- Outlet flange of RO reject header.
- Outlet flange of RO product header.
- Backwash outlet/drain outlet/air vent/sampling valves, wherever applicable.
- In comer to MC



ANNEXURE VI

COMMERCIAL TERMS & CONDITIONS
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PRICES

Our prices for design, engineering and supply of Reverse Osmosis Plant Capacity of 6.0 m³/ hr as detailed in our Annexure - II & III shall be

Rs.6 ,25,000.00

(Rupees Six lacs Twenty IFive Thousand Only)

BASIS OF PRICES

The prices indicated above are on knp, GST 18% Extra

TERMS OF PAYMENT

50% As advance along with order remaining 50% against proforma invoice / proof of dispatch documents

DELIVERY SCHEDULE

Within 15 -20 days from the date of receipt of your commercially clear and confirmed order along with necessary advance payment.

ENGINEERS SERVICES

Supervision for Erection and commissioning charges shall be included

WARRANTY

All equipments are warranted for one year against any manufacturing defects.

VALIDITY

This offer is valid for 30 days from the date here of.

TRANSPORT CHARGES - INCLUDING

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FOR
SONI ENTERPRISES
KANPUR
Rajesh Singh Chauhan
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