

GOVERNMENT OF WEST BENGAL
OFFICE OF THE CHIEF ENGINEER
Municipal Engineering Directorate

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No. ME/ **634 / 45-52/98. Pt. VIII.**

Dated,08/07/2022

Draft Quotation Notice

Quotations are hereby invited for the following item through email to ce_medte@yahoo.com or may be submitted in the office of the undersigned in sealed envelope in working hours within due date & time from the reliable, resourceful and bonafide Contractor/Agencies/Suppliers with proven capability for the work of “**Design ,Supply , installation , testing and commissioning of Faecal Sludge Treatment Plant capacity 30KLD (as per attached BOQ)**”, for the purpose of formulation of DPR within different Urban Local Bodies of West Bengal.

- The quotation should be given with respect to following specification strictly.
- Last date of submission of quotation:**25/07/2022, 12:00 pm**
- The quotation should include all types of taxes, transportation and other expenditure if any. GST is to be mentioned separately also.
- Rate should be quoted in the BOQ attached as Annexure I
- The rate should be valid for at least two years

Scope of Works :-

“Design, Supply, installation, testing and commissioning of faecal sludge treatment plant total sludge handling capacity of 30 m³ per day in one module of 30 KLD. The tank shall be designed as water retaining structures in FRP Lining as required by the manufacturer's design.

The thickness of FRP tank shall be minimum 20 mm.

The Plant shall be complete with a Electrical Power and Control panel fully pre/site wired and with all power and control cables to all pumps and equipment including all instrumentation, water level controllers and other controls. All the equipment, piping, pumps, blowers and electrical are to be housed in a plant room. Puddle flange, inlet, outlet overflow, vent, drain channel with sump to house pumps will be included.

(The rates will include all pumps, piping, valves, controls, reactor and tube settler media, blowers, diffusers, Control panel with all power and control cables to all pumps and equipment including all instrumentation, water level controllers and other controls complete)

Nature of Faecal Sludge : Domestic faecal sludge from Municipality

BASIC DATA ON INFLUENT RAW FECAL SLUDGE

Total Suspended Solids (TSS) : 42120 mg/lit

BOD5 : 30000 mg/lit

COD : 65000 mg/lit

pH : 6.0 - 8.5

TREATED FAECAL SLUDGE WATER QUALITY

As stipulated by State Pollution Control Board (PCB), the treated effluent quality shall be within the following values for various parameters.

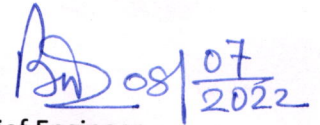
The treated water quality should be fit for Recycling in Landscaping -

Total Suspended Solids (TSS) : < 10 mg/lit pH : 6.5 - 8.3

BOD5 : < 30 mg/lit COD : < 100 mg/lit.

- The Faecal sludge treatment plant shall be designed based on the attached details and parameters.
- The Faecal sludge treatment plant should follow all the concern Indian and Local norms.
- The scope of work includes design, drawings, coordinating during construction, erection, commissioning, trial run and obtaining test results of completely faecal sludge treatment plant with electrical, mechanical, piping and controls along with submission of detailed GA drawings (Plan & Section), P & I diagram, of the plant indicating all sleeves etc. for the various component and additional component if so required for the complete working of the FSTP. The drawings will have to submit for approval before start of work.
- The work is required to be carried out on a turnkey basis covering a guarantee of satisfactory performance as per the standards laid for a minimum of Six month.
- The Total cost should be included all charges and taxes as per Govt. Norms.
- Quoted rate should be put in figures and words in Company Pad with GST no.

The undersigned is not bound to accept the lowest quotation and reserve the right to reject any or all the quotations without assigning any reason thereof.

A handwritten signature in blue ink, followed by the date '08/07/2022' written in blue ink.

Chief Engineer,

Municipal Engineering Directorate

Annexure I

BOQ for Electro-mechanical Work for FSTP of 30 KLD Capacity

Scope of Work: Design, Supply, installation, testing and commissioning of fecal sludge treatment plant total sludge handling capacity of 30 m³ per day in one modules of 30 KLD. The tank shall be designed as water retaining structures in FRP Lining as required by the manufacturer's design.

The thickness of FRP tank shall be min 20 mm .

The Plant shall be complete with a Electrical Power and Control panel fully pre/site wired and with all power and control cables to all pumps and equipment including all instrumentation, water level controllers and other controls. All the equipment, piping, pumps, blowers and electrical are to be housed in a plant room. Puddle flange, inlet, outlet overflow, vent, drain channel with sump to house pumps will be included.

(The rates will include all pumps, piping, valves, controls, reactor and tube settler media, blowers, diffusers, Control panel with all power and control cables to all pumps and equipment including all instrumentation, water level controllers and other controls.)

Nature of Fecal Sludge : Domestic fecal sludge from Municipality

BASIC DATA ON INFLUENT RAW FECAL SLUDGE

Total Suspended Solids (TSS) : 42120 mg/lit

BOD5 : 30000 mg/lit

COD : 65000 mg/lit

pH : 6.0 - 8.5

TREATED FECAL SLUDGE WATER QUALITY

As stipulated by State Pollution Control Board (PCB), the treated effluent quality shall be within the following values for various parameters.

The treated water quality should be fit for Recycling in Landscaping -

Total Suspended Solids (TSS) : < 10 mg/lit pH : 6.5 - 8.3

BOD5 : < 30 mg/lit COD : < 100 mg/lit.

*The Fecal sludge treatment plant shall be designed based on the attached details and parameters.

*The Fecal sludge treatment plant should follow all the concern Indian and Local norms.

*The Contractor shall have to submit detailed GA drawings (Plan & Section), P & I diagram, of the plant indicating all sleeves etc for the various component and additional component if so required for the complete working of the FSTP.

*The drawings will have to submit for approval before start of work. *The scope of work includes design, drawings, coordinating during construction, erection, commissioning, trial run and obtaining test results of completely fecal sludge treatment plant with electrical, mechanical, piping and controls.

(*The scope of work includes design, drawings, coordinating during construction, erection, commissioning, trial run and obtaining test results of completely fecal sludge treatment plant with electrical, mechanical, piping and controls.)

(*The work is required to be carried out on a turnkey basis covering a guarantee of satisfactory performance as per the standards laid for a minimum of Six month.)

The Fecal sludge treatment plant shall consist of following units but not limited to these unit as may be required by the manufacturer's design to achieve the desired quality parameters in treated effluent.

SI No	Item Description	Quantity	Unit	Rate (Rate inclusive of all taxes,GST etc.)	Amount in Rs.
1	The Tank made out of Fibre-reinforced plastic (FRP) in one modules at least 20 mm thick with all required inlet,outlet, manhole with inbuilt integrated 4 numbers stiffener, the size of the stiffener is 150mm (width), 35mm (Height) and 20mm thickness. Size of tank - 2.0 mtr. (dia) x 4 mtr. (L)- 2 nos including following Zone (Make JRMS) : (i) Equalization zone (ii) Aeration (iii) MBBR Zone 1 (iv) MBBR Zone 2 (v) Sedimentation Zone	1	set		
2	Bar Screen(Coarse) As per site layout in SS304 Gap: 8-10mm Size: 0.6 m(l) 0.25(w) as per invert (h) QUANTITY:1 NO. MOC : SS304. Make : JESS/JRMS/S.K.Ent or Equivalent	1	Nos		
3	Bar Screen(Fine) As per site layout in SS304 Gap: 6-8mm Size: 0.6 m(l) 0.25(w) as per invert (h) QUANTITY:1 NO. MOC : SS304. Make : JESS/JRMS/S.K.Ent or Equivalent	1	Nos		
4	Manhole Size :0.45 DIA Moc : FRP+UPVC QUANTITY: 15 Nos. Make : JESS/JRMS/S.K.Ent or Equivalent	15	Nos		

SI No	Item Description	Quantity	Unit	Rate (Rate inclusive of all taxes,GST etc.)	Amount in Rs.
5	Supply, Installation & Commissioning 10 m3/hr Raw Fecal sludge transfer Submersible pump with level controller. Type : Sewage Dewatering submersible Pump. Submersible Pump Capacity- 10 m3/hr Head : 12 mtr. Power: 1 HP Maximum Density: 1050 kg /m3 Make: Kirloskar/KSB/MBH	2	Nos		
6	Supply, Installation & Commissioning 8.28 m3/hr sludge transfer pump with level controller. Type : Monoblock self priming Sewage Dewatering Non Clog Pump. Submersible Pump Capacity- 8.28m3/hr Head : 12 mtr. Power: 1 HP Solid Handeling :Up to 50 mm Make: Kirloskar/KSB/MBH	2	Nos		
7	Supply installation and commissioning of 40 m3/hrTwinlobe Air blower with 0.3kg/sqcm pressure. Twin Lobe Roots Blowers: Blower Make- Airvak/Akash/KAY/Everest Working pressure-0.3 kg/cm2 MOTOR :1.5 HP: Blower Speed :1409 RPM QUANTITY:2 NO (1 Working + 1 Standby)	2	Nos		
8	Supply, Installation & Commissioning 2 m3/hr Filter Feed Pump. Type : OpenwellSubmercible Pump. Capacity- 2 m3/hr Head : 30 mtr. Power: 1.5 HP Make: Kirloskar/KSB/MBH.	2	Nos		

SI No	Item Description	Quantity	Unit	Rate (Rate inclusive of all taxes,GST etc.)	Amount in Rs.
9	Supply installation and fitting fixing of air diffuser in Equalization tank, MBBR tank(Aeration Tank) Size - 65mm dia x 500mm Length(Tubular type) Moc -UPVC- Make :JRMS or equivalent	1	Nos		
10	Supply installation and commissioning of MBBR Media Type : Poll ring. MOC : PP Make : JESS/JRMS or Equivalent	1	Nos		
11	Supply installation and commissioning of Tube Settler Media Capacity :400 sqm / m3 Moc : PP: Make : JESS/JRMS or Equivalent	1	lot		
12	Supply installation testing & commissioning of electrical control panel with cabales Size : 1 m x1.2 x0.3 mtr MOC :MS Instrument panel make : L & T /ABB/CIMENS/SeiWin/RNR/PCE	1	Nos		
13	Providing, fixing, testing & commissioning of Pressure sand filter (suitable for 3.5 Kg/Sqcm working pressure) complete with initial charge with sand/gravels/pebbles media,UPVC Frontal pipe work with back wash system, pressure gauge at inlet, outlet and back wash,mpv valves, fittings associated works with MS EPOXY COATED SIZE: 600 DIA X 1800 MM HOS Flow Rate : 2 m3/Hr. at 20 hrs. operation. Working pressure : 3.5 kg/sq.cm MOC- Msep Make :JESS/JRMS or Equivalent QUANTITY: 1 Set	1	Nos		
14	Providing, fixing, testing & commissioning of ACTIVATED CARBON FILTER (suitable for 3.5 Kg/Sqcm working pressure) complete with initial charge with carbon/gravels/pebbles media,UPVC fontal pipe work with back wash system, pressure gauge at inlet, outlet and back wash,mpv valves, fittings associated works with MS EPOXY COATED SIZE: 600 DIA X 1800 MM HOS Flow Rate : 2 m3/Hr. at 20 hrs. operation. Working pressure : 3.5 kg/sq.cm MOC- Msep	1	Nos		

SI No	Item Description	Quantity	Unit	Rate (Rate inclusive of all taxes,GST etc.)	Amount in Rs.
	Make : JESS/JRMS or Equivalent QUANTITY: 1 Set				
15	Supply installation and commissioning Hypochlorite Dosing System Dosing Pump Type - Electronic Metering Capacity: 0-6LPH Dosing Pump Make: E-does/Swellore Dosing Tank- 100 Ltrs MOC-HDPE Make : Patton or equivalent	1	Nos		
16	Supply installation and commissioning of Flowmeter Capacity- 0-1.5cum/hrMoc-PP Make :UKL/ASTER	1	Nos		
17	Supply installation and commissioning of Agitator Power : 1 hp Rotation Speed: 60RPM Base frame Size :75x75x6 Shaft Size : 1.5 mtr Blade 2 stage (Between Two tage blade gaping 600 mm) Make : JESS/JRMS or Equivalent Motor make ABB/Crompton Greaves/ siemens /Marathon	2	Nos		
18	Supplying, installation of UPVC schedule 40/ MS pipe line Qty : As per requierment-Make: Astral /Supreme	1	Lot		
19	Supplying, installation, testing and commissioning of anarobic Bio Digester completely above ground with total fecal sludge handling capacity of 30 m3 per day. JrmsTank made out of Fiber-glass Reinforced thermosetting Polymer (FRP) atleast 20 mm thick with all required inlet,outlet, manhole with inbuilt integrated 4numbers stiffener, the size of the stiffener is 150mm (width),	5	Nos		

SI No	Item Description	Quantity	Unit	Rate (Rate inclusive of all taxes, GST etc.)	Amount in Rs.
	35mm (Height) and 20mm thickness of minimum size - 2.0 mtr. (dia) x 3.0 mtr. (H) (Model JBTD-10KLD) (Make JESS/JRMS or Equivalent)				
20	Operation & Maintenance Cost with Detailed Break Up	5	Yrs		
	Total in Rs. =				
Total amount in words =					

Authorized Signatory with Designation and Date