Government of India
Bhabha Atomic Research Centre
Post Irradiation Examination Division
Radiological Laboratories Trombay, Mumbai 400 085
Tel: 25594047
Fax: 2550 5151

Ref: PIED/NHF/AB/2017/935A 03.11.2017

Sub: In-situ fabrication and installation of holdup tank and associated pumping system

Dear Sir,

Please send us your lowest quotation for the fabrication and installation of holdup tank and associated pumping system as per the scope of work given below:

Scope of work:

1. In-situ fabrication of holdup tank as per following specification

S/N.	Specification of holdup tank	
1.	Purpose of tank	For interim storage of contaminated water. Tank shall be installed inside a underground trench available at site.
2.	Capacity of tank	6.25m^3
3.	Size of tank	5m long x 1m wide x 1.25m height
4.	Material of construction	SS 304L
5.	Thickness of sheet to be used for fabrication of tank	6mm thick CR sheet with 2B finish
6.	Tank Bottom	Sloping towards one end for cleaning purpose
7.	All corner & edges	All corners and edges shall be formed with radius 75mm
8.	Facilities shall be provided in the tank	• Two stainless steel submersible pump shall be installed in the tank • Tank shall have outlets for pump discharge • Tank shall have two manhole for tank cleaning • Tank shall facility for churning the effluent • Tank shall have provision for sampling the effluent

2. Fabricator shall prepare fabrication drawings based on tender specification and site measurement indicating complete fabrication details, dimension tolerances,

weld size, bill of materials etc and submit four copies of these drawings for departments approval

3. All the components of the tank and associated pumping system shall be fabricated with AISI 304L stainless steel except fasteners. Test certificate for chemical composition and mechanical properties shall be produced.
4. The fabricator shall maintain a detailed record that lists description & marking of each piece material used in fabrication and shall correlate this with material test reports. This record shall be incorporated into the fabrication record.
5. All the sharp corners shall be ground to radius of 3mm to avoid the injury to operational persons
6. Welding processes and filler metals : Only approved procedure and qualified welders as per ASME section IX shall be permitted to carry out the welding.

   (i) Stainless steel to Stainless steel: Any inert gas shielded arc-welding process i.e. GTAW may be used with the electrodes approved by the Purchaser's representative. The electrodes to be used are E 308 type.

   (ii) Stainless steel to carbon steel: Any inert gas shielded arc- welding process i.e. GTAW may be used with the electrodes approved by the Purchaser's representative shall be used. The electrodes to be used are E 309L type.

   (iii)Carbon steel to Carbon steel: Manual arc welding process i.e. SMAW may be used with the electrodes approved by the Purchaser's representative. The electrodes to be used are ER 7018 type.
7. Welding procedure specification (WPS) & Procedure Qualification Record (PQR) as per ASME Section IX App. B QW 482 and QW 483 shall be furnished and got approved by the Purchasers' representative and forms part of the Fabrication Report.
8. All welding shall be done by approved welder. Welder Performance Qualification shall be furnished as per ASME Section IX App. B QW 484A and got approved by the Purchasers' representative.
9. Following NDT on the welding shall be carried out during and after the welding.
   - I The weld groove surfaces and heat-affected zones shall be 100% tested by D.P. test.
   - II Root run, back chipped surfaces and final run on both the sides of butt welds shall be 100% tested by D.P. test.
   - III Root pass and final run on both the sides of fillet welds and butt welds shall be 100% tested by D.P. test.
10. Buffing and polishing of outer and inner surface of the tank.
11. Installation shall be done at warm work area without the help of crane.
12. Fabrication and supply of stainless steel submersible pump Qty. 3No. as per following specification

Description	Specifications
Working orientation	Vertical / Horizontal
Medium to be pumped :	Water
Discharge capacity:	90LPM
Head	42m min
Outlet port size	32mm
Pump body	Stainless steel
Impeller housing	Stainless steel
Impeller	Stainless steel
Max outer diameter	75mm
Motor Stator	Stainless steel
Rotor shaft	Stainless steel
Bearings	Anti-friction Stainless steel bearing
Motor power	0.75kW
Power supply requirement	AC, 1Φ, 230V, 50Hz

13. Installation of two pumps in the tank.
14. Installation of OMRON make two level switch for pump control.
15. Design, fabrication and supply of suitable pump controller.
16. Discharge of pump shall be connected to active effluent drain.
17. Installation of 25NB Sch 40 SS304L discharge pipe line from pump to active effluent drain. Piping length will be 40m. Pipe and associated pipe fitting shall be arranged by the fabricator. Seamless pipe shall be used for discharge line.
18. All the joints in the discharge line shall be welded joint.

Important Note:

1. The fabricator has to arrange medical fitness certificate for all the working personnel. TLD and Dosimeter will be issued to all working personnel.
2. Since the work is in radioactive area, all working personnel shall strictly follow the instruction of health physicist and dept. supervisor.
3. Since the scope of work involves site work, you shall obtain clearance from police and CID for all staff who may be deputed for site work at PIED, RLG, BARC. This is mandatory and the responsibility of obtaining such a clearance is within your scope of work.

Terms and Conditions :

1. The work is to be completed within 30 days of receiving the firm work order from us.
2. The sealed quotations shall reach the office of the Head PIED, New Hot Cells Facility, RLG, Mumbai – 85 on or before **15.11.2017 by Speed Post of Indian postal services**.
3. Please address your offer to: **Anil Bhandekar, SO/G, Post Irradiation Examination Division, RLG, BARC, Trombay, Mumbai-400 085.**
4. The quotations are to be sent in a sealed envelope with the following information marked on top of the envelope: “Quotation for In-situ fabrication and installation of holdup tank and associated pumping system”
5. Offers sent by telegram, telex, fax or e-mail will not be considered.
6. All taxes should be mentioned clearly.
7. Quotation should be in the printed letter head /quotation format which should consist of Sales Tax Registration Number, PAN Number of the firm, Service Registration Number, etc.
8. Quotation shall be signed by proprietor or authorized person and affix company seal.
9. Computer generated quotation form will not be accepted.
10. Item is required for research purposes. Therefore, excise duty will not be applicable. The necessary excise duty exemption certificate will be issued. Supplier has to quote the price exclusive of excise duty.
11. Income Tax @2% will be deducted at source from your bill
12. Delivery period should be mentioned with all the possible consideration.
13. Payment will be made within 30 days from the date completion.

Yours sincerely,

Anil Bhandekar
SO/G, PIED