

# **Tender Specifications for Supply, Fabrication, Inspection, Testing, Erection & Commissioning of Crude Acid tank**

## **Introduction**

This tender is meant for **Supply, Fabrication, Inspection, Testing, Erection & Commissioning of Crude Acid tank** as per required specifications and other conditions as mentioned in this Tender Specification Document. The **Crude Acid tank** shall be delivered & erected at Propellant Complex, Rasayani (PCR) - 425107, Raigad Dist., Maharashtra.

### **1. SCOPE OF WORK OF SUPPLIER:**

- i. The scope of work involves Supply, Fabrication, Inspection, Testing, Erection & Commissioning of **Crude Acid tank** and application of insulation at PCR.
- ii. Crude acid tank is a Vertical **Aluminium** storage tank and to be used for storing of **Concentrated Nitric Acid** mixed with **Di-Nitrogen Tetroxide** (N<sub>2</sub>O<sub>4</sub>).
- iii. The intended **Crude Acid tank** is proposed to be a **one - to - one replacement of existing unit** in the operational CNA / N<sub>2</sub>O<sub>4</sub> plant. Hence the new unit has to be dimensionally correct with existing tank.
- iv. Overall dimensions and nozzle details shall be as per attached drawing no. CNA/M/T/450. This drawing is only meant to indicate the dimensions of the existing unit.
- v. **The detailed fabrication drawing of new unit having outer dimensions equal to existing unit shall be proposed by the successful bidder and shall be approved by Purchaser.**
- vi. Fabrication shall be taken up only after the drawing approval from the purchaser.
- vii. The detailed specifications are as per this tender specification document for Fabrication, Inspection, Testing, Supply, Erection & Commissioning of **Crude Acid tank to Propellant complex, Rasayani, ISRO (PCR), Govt. of India, Dist.; Raigad, Maharashtra PIN-410207.**
- viii. The scope of work also includes the **removal of existing Crude Acid tank** from Plant and shift it to the nearby location as shown by our site Engineer inside PCR premises. The bidder shall arrange necessary tools, tackles, material handling equipment & resources to execute the removal of existing tank, unloading of tank and installation of new tank. **It is suggested that vendor shall visit PCR site prior** to submitting the offer for removal and erection of tank and to have clarity of the entire scope of work, which are indicated below.

### **The work scope during erection of tank at PCR involves (approx.)**

- 1) Dismantling of the flanged nozzle with connecting pipelines and spool pieces (16 nos.).
- 2) Removal of 100 mm NB valves-6 Nos, SS pipelines by cutting / Dismantling- Approx-15 mtrs.
- 3) Removal of cable trays and structures.
- 4) Re-welding and installation of all removed structure, pipelines and trays etc after installation of new tank.
- 5) Suitable size Crane is to be deployed by the supplier for unloading, dismantling and installation of tank.

**Note:** Scope at PCR site work is not ONLY limited to above, Party has to carry out all the work, whichever is required to replace the tank. The detailed day-

wise schedule of these works shall be discussed with the purchaser based on the Plant running conditions and to be finalized before dispatch of the new unit to PCR.

**2. Tank Design Input Parameters:**

- Type : Vertical tank with welded Dish Ends (2:1 Semi-ellipsoidal, as per indicative drawing)
- Design Code : ASME Sec VIII, Div-1
- Working fluid : A mixture of concentrated Nitric Acid and N2O4
- Fluid Density : 1500 kg/m<sup>3</sup>
- Working pressure : Ambient
- Design Pressure : Ambient
- Hydraulic test : Water fill test
- Design temperature :-10 to +35 Deg. C
- Operating temperature : -10 to 0 Deg.C
- Insulation : 60 mm thick cold insulation (Foam glass OR PUF)
- Volumetric capacity : 5.0 m<sup>3</sup>
- Corrosion allowance : NIL
- Radiography : 100 % for all Butt weld joints
- Wind pressure :150 kg/ m<sup>2</sup>
- Earthquake factor : 0.04
- Stress Relieving : NIL
- Welding : 100% TIG with filler wire AWS-SFA-5.10
- Welding Polarity : AC with straight polarity
- **Shell and Dish end thickness after manufacturing: 10 mm thk min**
- Overall Dimensions : As per drawing no. CNA/M/T/450
- Nozzle details : As per drawing no. CNA/M/T/450
- All flanges as per ASME B16.5 class#150 in SS304 standard including Man-hole flange
- All Nozzles to be provided with back up flanges in SS304 with PTFE gasket.

**3. Material of Construction (as per the drawing no: CNA/M/T/450):**

**Table - 1**

Sl. No.	Description	Material
1	Shell	Minimum 10 mm thick Aluminium 99.5 F8 as per DIN1745
2	Dish End	Minimum 10 mm Thick Aluminium 99.5 F8 as per DIN1745
3	Overall Length	3.4 mtr.
4	Shell Length	2.0 mtr.
5	Inner dia.	1.78 mtr.
6	Sleeve	SB-209-1060 as per ASTM standards
7	Stiffener	
8	Gusset	
9	Liner	

Sl. No.	Description	Material
10	Spacer strip	
11	Pipe Support	
12	Loose Flange, Cover Flange	SA -240-304 as per ASTM Standards
13	Stud with nut, Lock Nut and washers	SS 304
14	Pipe	AL 99.5 F7/ AL 99.5 F8 as per DIN1745 otherwise specified in Tender Documents Approved drawing
15	Hex. Nut	ASTM A194-B8
16	Full Thread Stud	ASTM A193-B8
17	Spacer strip	SB-209-1060
18	Fasteners	SS 304 & As per the Approved drawing
19	Gasket for nozzle (wherever applicable)	PTFE with minimum 3.00 mm thickness.
20	Packing between slip- on-flange and stub end	PTFE
21	Insulation	60mm thick cold insulation (Foam Glass or PUF) with 22 SWG Aluminium cladding sheet.
22	Gaskets	P.T.F.E with minimum 3 mm thickness
23	All other materials	As per the drawing No. CNA/M/T/450 otherwise specified in tender Documents Approved drawing

#### 4. Welding Requirements:

- i. 100% by GTAW process shall be adopted with high purity Argon gas shielding, right from root to final passes for all butt welds (Long seams, 'C' seams, nozzles, pipe to flange joints) and all internal and external welds including fillet welds. SMAW is not acceptable.
- ii. Double operating welding technique shall be employed for butt joints.
- iii. Filler wire AWS-SFA-5.10 shall be used.
- iv. To minimize the number of weld joints successful bidder shall select the minimum plate width as 1.2 to 1.5 m.
- v. Vendor has to submit TPI reviewed PQR (Procedure Qualification Record) & WPS (Welding Procedure Specifications) for purchaser approval
- vi. No welding shall be undertaken without approval of the welding procedure. Welders, before being engaged, must be qualified as per AWS. **6G qualified welder only shall be engaged.**

#### 5. Testing :

##### A. Testing of Material:

- Ultrasonic testing of the plates shall be carried out as per ASTM B 594 standard prior to tank fabrication.

- Material of construction shall be as per specified in Technical Specification
- All material used shall be tested for physical & chemical test parameters as per applicable codes in Reputed Government approved testing lab prior to fabrication.
- Material test certificate shall be furnished to Third Party Inspection (TPI) agency/purchaser as per Approved QAP for acceptance.

**B. Radiography: 100% of all butt weld joints**

- All welds shall be inspected and tested as per code and this specification.
- Radiographs have to be carried out with a sensitivity of 2-2T as per ASME sec V.
- All butt welds (Long seams & 'C' seams welds) shall be radiographed 100 % and interpreted as per code and applicable appendix.
- The successful bidder shall be responsible for taking the radiographs by his own equipment at his own cost for the entire job.
- Radiographic film length shall be 250 mm minimum, except if the weld is less than 250 mm long.
- Radiography reports as reviewed by TPI shall be submitted to Purchaser for final approval & acceptance.

**C. Pressure Tests:**

- Hydraulic Water fill test shall be carried out as per Approved QAP for the tank and also Pneumatic leak test with GN2 / Air at 0.5 bar (g).

6. Detailed QAP has to be prepared after PO placement and shall be submitted to the Purchaser for approval. All activities to be carried out as per approved QAP only. The attached proposed QAP will form the basis for the final QAP. Any improvements / modifications in the QAP shall be binding on the successful bidder. During the course of fabrication, different stages of inspection are to be identified.

7. The fabrication shall be carried out using tested and qualified materials only.

**8. Mechanical Cleaning:**

- All Metallic surfaces inside and outside having scales and foreign materials and all welded surfaces shall be cleaned. This can be done by scrubbing with metallic brush (stainless steel) followed by buffing to get a polished surface. The loose scales and powders obtained from the above process shall be cleaned by blowing, sucking or washing with water. Mechanical cleaning and buffing shall be carried out prior to Hydro test.
- The cleaning is to be carried out for both inside and outside surfaces of the tank and equipment.

**8.1 Sealing:**

- Tank shall be purged / dried by using GN2 / Air to get Dew Point (dryness level) less than - 40 ° C, i.e. 100 ppm
- Crude acid tank should be sealed with isolation valve and pressure gauge set-up so that ambient moisture never enters inside. The Crude acid tank is to be pressurized to 0.5 bar (g) with dry nitrogen / Air at the time of dispatch.

## 9. Third Party Inspection:

The supplier has to engage one of the TPI agency from DNV/LLOYDS /EIL/ TUV / BVQI. The inspection Charges for Third Party Inspection as per the scope defined in approved QAP, shall be inclusive in the offer cost and shall be paid by the vendor only. No extra cost shall be paid by the Purchaser in this regard.

## 10. Delivery

a. **Transportation, Unloading, Erection & Commissioning shall be carried out by the bidder to Propellant Complex Rasayani, A Unit of SDSC, ISRO, Tal.: Panvel, Dist.: Raigad, PIN-410207, Maharashtra.**

b. All necessary Equipment like welding machine, Gas cutting set, Grinding M/C, etc, and Consumables like Welding Electrodes, Gases, Grinding Wheels, paints, brushes, etc., including material handling equipment, skilled and semi-skilled manpower required for carrying out the above work shall be in the scope of the bidder.

### c. Delivery Schedule:

Sl.no.	Description	Timeline
1	PO release	T0
2	Submission of fabrication drawing for purchaser's approval	T1 = T0 + 2 weeks
3	Purchaser approval for proposed fabrication drawing	T2 = T1 + 2 weeks
4	Supply of tank as per this specification document	T3 = T2 + 16 weeks
5	Erection & Commissioning of new tank & removal of existing Crude Acid tank	T4 = T3 + 4 weeks (from the date of PCR site clearance)
6	Supply and application of Insulation	T5 = T4 + 2 weeks
<b>The total project nominal completion period: 26 Weeks</b>		

### d. Production Master File

The supplier along with the consignment shall supply three copies of production master files. Production master file should contain the following.

- Purchase Order
- Fabrication Drawings (As - built) 3 COPIES along with soft copies
- Bill of Materials
- Materials Test Certificates
- WPS, WPQ, PQR and Welding Layouts
- Radiographic reports & Films
- Pneumatic and Hydrostatic test certificates
- Certificates of clearance

- Third party agency report
- Name plate details.
- All the above reports / test results shall be bound neatly.
- One set of soft copy of as-built drawings shall be supplied to the purchaser
- All radiography films pertaining to the equipment shall be supplied to the Purchaser.

**Department Scope during tank erection at PCR: -**

- 1) DM water and Electricity requirements will be provided by PCR.
- 2) Compressed Air shall be provided.

**11. General Conditions:**

- a. **The attached drawing no. CNA/M/T/450 of tank with this tender specification is for indicative purpose only. Successful bidder shall prepare engineering drawings of tank fabrication meeting the requirements of this technical specification and shall submit the drawings for approval of TPI and Purchaser before commencement of fabrication.**
- b. All civil requirements are in Purchaser's scope.
- c. After receipt of order, the fabricator should prepare the detail PERT chart showing all mile stone activities of fabrication, testing, cleaning etc.
- d. The purchaser will monitor the progress of work during the course of fabrication.
- e. The tank should be fabricated under the inspection of Third-Party Inspector/Purchaser.
- f. Successful bidder shall supply 2 sets of required PTFE gaskets for all the nozzle interfaces, blind flanges for all the nozzle interfaces.
- g. Total scope of work shall be carried out by Single successful bidder only (overall L1 basis). The order splitting is not envisaged.
- h. Signed copies of the Annexure – 1,2,3& 5 shall be submitted along with the technical bid.
- i. **Payment Terms:**  
**90 % of PO cost with GST @5% after Supply & receipt of tank at Purchaser's site. Balance 10% of PO value shall be paid after Tank erection & Commissioning at site.**
- j. **GST:** At present the GST for this PO shall be considered as 5% on the tax invoice against the Exemption certificate provided by Department as per prevailing norms.
- k. **LD/ Penalty Clause:** Delivery schedule indicated in the Purchase Order is the essence of the contract and if the party fails to meet the delivery schedule, Liquidated Damages will be levied @ 0.5% per week or part thereof subject to a maximum of 10% of order value.
- l. **Performance Bank Guarantee:** Performance Bank Guarantee for 3% of the order value should be furnished in the form of Bank Guarantee from nationalized/scheduled bank or by Demand Draft valid till warranty period plus sixty days as claim period.
- m. **Security Deposit:** Security Deposit for 3% of the order value is mandatory, Party shall furnish the Security Deposit in the form of Bank Guarantee from

nationalized/scheduled bank or by Demand Draft valid till completion of the contract period plus sixty days towards claim period for faithful execution of the contract.

- n. The validity of the offers / tenders should be 120 days from the date of opening of the tenders. **Tenders with offer validity less than the period mentioned above, will not be considered for evaluation.**
- o. Guarantee/ Warranty shall be valid for a period of **18 months** from date of supply or 12 months from the date of commissioning **whichever is earlier.**
- p. **'Force Majeure'** means and includes wars, insurrections, revolution, civil disturbance, riots, terrorist acts, public strikes, hartal, bundh, fires, floods, epidemic, quarantine restrictions, freight embargoes, declared general strikes in relevant industries, Vis Major Act of Government, impeding reasonable performance of the Vendor and / or Sub-Contractor but does not include any foreseeable events, commercial considerations or those involving fault or negligence on the part of the party claiming Force Majeure. If a Force Majeure situation arises, the Bidder shall promptly notify PCR in writing of such condition and the cause thereof. Unless otherwise directed by PCR in writing, the Vendor shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- q. **Termination for Insolvency:** PCR may, at any time, terminate the Contract by giving written notice to the Vendor, if the Vendor becomes Bankrupt or insolvent or any application for bankruptcy, insolvency or winding up has been filed against it by any person. In this event, termination will be without compensation to the Vendor, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to PCR.
- r. **Applicable Law:** The contract shall be interpreted in accordance with the laws of the Union of India and shall be subjected to the exclusive jurisdiction of courts at Mumbai.
- s. **MII clause:** For this tender, bids from Class-I & class-II Local Suppliers are only admissible as per MII clause. Hence provisions contained in Public Procurement (Preference to Make in India), Order 2017 issued by Department for Promotion of Industry and Internal Trade (DIPP), Ministry of Commerce & Industries vide letter No. P-45021/2/2017-PP(BE-II) dated 04.06.2020 and subsequent amendment & directives shall be followed. Related to the above, the general terms and conditions to be followed by supplier (while submitting the offers) are given in MII clause. The suppliers shall strictly adhere to these while submitting the offer.
- t. **Arbitration:** Any dispute or difference whatsoever arising between the Parties out of the contract or the validity or breach thereof, shall first be an attempt to mutually settle the same amicably. If, however, the said settlement being not possible shall thereafter be referred to a Sole Arbitrator, which will be Head, PGA, PROPELLANT COMPLEX, RASAYANI, Raigad District, Maharashtra. The venue of the said Arbitration shall be at Panvel/Navi Mumbai, and the provision of the Arbitration and Conciliation Act, 1996 shall apply to the said proceedings. The Award of the Arbitrator shall be final and binding upon both the parties.
- u. **Termination:** PCR reserves its right to terminate the Hire agreement for any reason at its absolute discretion including but not limited to the following: If the services are

not adequate as follows, Breach of the contract terms & conditions and non-response of the contractor even after three notices.

**v. Risk and Cost Purchase:** Timely delivery of goods/services is of prime importance and where the vendor fails to fulfil their contractual obligations, the Procuring Entity shall be entitled, and it shall be lawful on his part, to procure Stores and/ or services similar to those ordered/cancelled, with such terms and conditions and in such manner as it deems fit at the "Risk and Cost" of the Contractor and the Contractor shall be liable to the Procuring Entity for the extra expenditure, if any, incurred or accrued by the Procuring Entity for arranging such procurement. However, the Contractor shall not be entitled to benefits if any, from such procurements.

i. Prior to resorting to risk purchase the Purchaser shall consider impact of the default by the contractor, proper notice to the contractor to invoke risk purchase clause and method of recovering the additional amount spent by the Purchaser. The cost as per risk purchase exercise may be recovered from the Earnest Money Deposit/ Security Deposit/ Performance Security of the supplier and/or bills submitted by the supplier against the same contract or any other contract. GST will be charged / levied on Risk Purchase as per the provision of GST Act Rule thereon.

ii. Risk purchase action may be initiated under any of the following conditions.

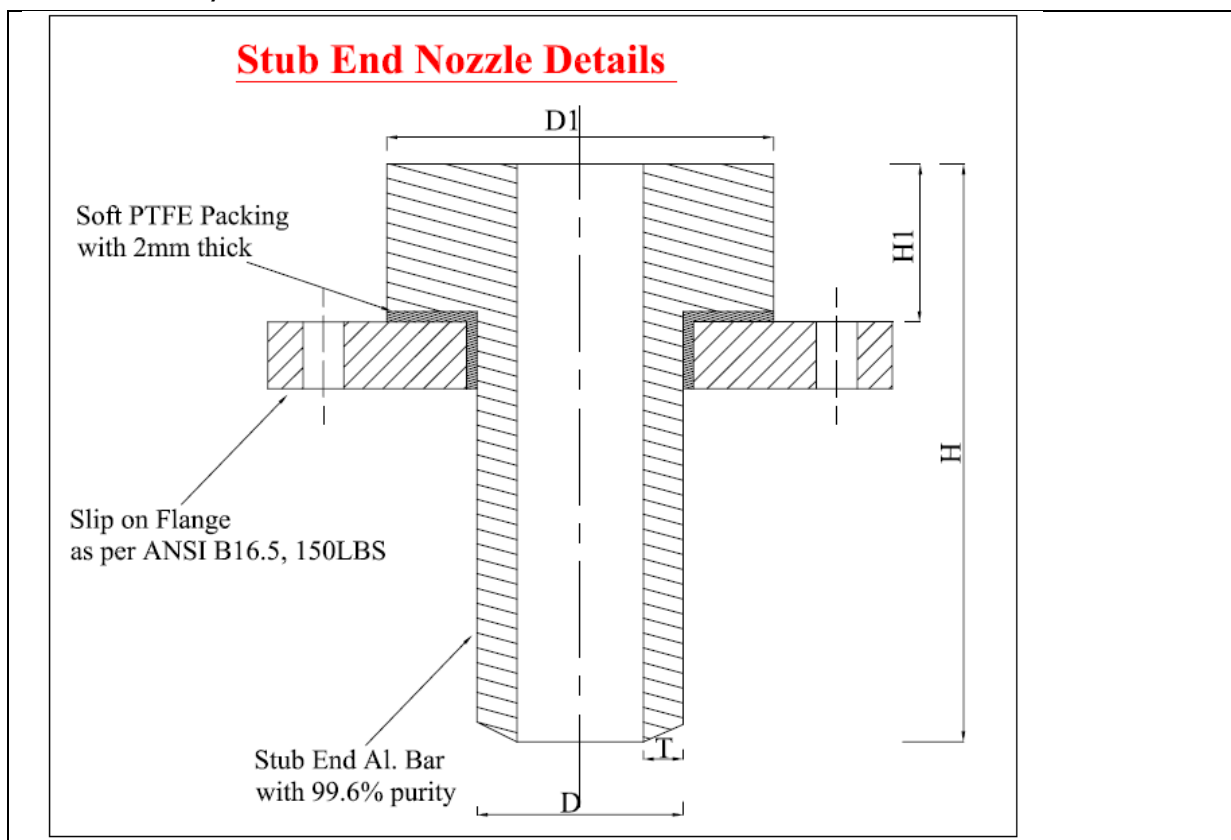
a. When the supplier fails to deliver the materials even after extending the delivery period.

b. When the supplier fails to respond to purchases request for supply of the materials and fails to provide any genuine and Bonafede reason for the delay in supply.

c. When the supplier breaches any of the terms and conditions of the supply order/ contract and as a result fails to execute the order satisfactorily.



## 12. Stub End / Nozzle details



All stub ends shall be fabricated from bars by machining without any welding.

**Table 2: Stub End / Nozzle Dimensions**

Sl.no.	Nozzle designation	Size	D mm	D1 mm	T mm	H1 mm	H mm	MOC
1	All nozzles except specially specified	1"	32	60	4	24	165	ASTM B-211 -1060
2		1 <sup>1/2</sup> "	45	80	5	28	165	
3		2"	56	100	5	28	165	
4		3"	90	130	5	32	165	
5	Others	As per indicative drawing no. CNA/M/T/450						

**13.0 TWO PART BID:** Bidders shall quote the tender in two-part bid basis. Technical bid shall be evaluated first, only technically suitable bidders shall be allowed for price bid. **The price bid will be evaluated based on overall single lowest offer.**

### **Technical BID QUALIFICATION CRITERIA**

Bidders who are qualifying / meeting following Technical and financial criteria are eligible to participate in the bid for supply of items. Bidder shall furnish all the information mentioned in the criteria with documentary proof and submit along with quotation. Bids of the parties which are not meeting the following criteria will not be considered for evaluation and will be rejected without seeking any further clarifications.

#### **13.1.1. Minimum Technical Qualification Requirements:**

- a. Bids from manufacturers / fabricators alone will be considered for evaluation. Bids from agents / traders / distributors / dealers, etc. will not be considered for evaluation.
- b. Firm establishment / MSME / MSE certificate indicating nature of work shall be submitted with the technical bid. In case of MSME / MSE bidders, certificate mentioning Activity as "Manufacturing" under National Industrial Classification is mandatory.
- c. **Raw material availability/ source of raw materials shall be indicated in the technical offer to avoid delay in the equipment fabrication after placement of PO. Towards this, necessary documentary evidence indicating the availability & conformance/commitment of raw material supply shall be submitted as a mandatory requirement for technical bid evaluation.**
- d. **Bidder shall submit the documentary evidence for minimum 2 tanks fabrication work of similar capacity (5 m<sup>3</sup> or higher) made up of Aluminium material executed during previous 5 years period. Bidder shall also submit corresponding work completion certificates / Inspection Release Note (by TPI agency) of Aluminium material from the respective purchasers. Work completion certificate of material other than Aluminium will not be considered.**
- e. **The scope of work also includes the removal of existing Crude Acid tank. The bidder shall arrange necessary material handling equipment & resources to execute the entire site works. This work involves as specified in scope of work Sr. No- 1(viii), It is suggested that vendor shall visit site prior to submitting offer for removal and erection of tanks.**
- f. **The bidder must agree to take the entire scope of work which broadly include manufacture & supply of new tank, removal of existing tank and erection of the new tank in the existing location at PCR with required fabrication works as required. Otherwise, the offer will not be considered.**
- g. Considering the need for precision fabrication, bidder shall necessarily possess in-house machinery like Plasma cutting machine, plate rolling machine, welding machine capable of Aluminum welding, etc. and all other machinery required to complete the job. Bidder shall submit required documentary evidence in this regard.
- h. Towards Quality requirements, Bidder's organization / company / firm shall be ISO 9001 certified in the area of manufacturing activities. Bidder shall submit documentary evidence duly endorsed by TPI agency either by DNV/LLOYDS / TUV / EIL / BVQI or equivalent agency in this regard.

### **13.1.2. Financial Qualification Requirements:**

- a. IT/ TDS certificate shall be submitted for preceding three financial years ending with 31.03.2024.
- b. Bidder shall submit CA certified audited statement of financial status and Profit & Loss statement for preceding three years.
- c. **Bidder shall submit latest solvency certificate issued during ongoing financial year of minimum value of Rs. 10 lakhs from scheduled / nationalized bank.**

### **Bid Selection Procedure and Process of Pre-Qualification**

- a. Short listing based on documents submitted, satisfying all the eligibility criteria given above by the firm along with their Bid. (Non-submission of any document as given in above list within stipulated time may lead to rejection of Bid).
- b. Subsequently Bidder's competency, their technical achievements and financial status will be evaluated suitable for this work. Feedbacks from Bidder's clients will be verified, if required.

### **Evaluation criteria for bidders:**

- a. After receipt of bids from the bidders, their credentials will be evaluated by the purchaser and their offers will be considered only after evaluation.
- b. Purchaser reserves right to visit to earlier executed work sites, if required, where similar works have been carried out, erected and commissioned by the bidder, to ascertain their complete suitability for the jobs described above.
- c. Purchaser reserves the right to reject the offers not complying to conditions mentioned in this tender specification document. No communication from the rejected parties / bidders will be entertained by the purchaser.
- d. Technical bids submitted by the bidder will be opened first and evaluated for fulfilling the Pre-qualification criteria and other conditions in NIT/Tender documents, based on documentary evidences submitted along with the offer.
- e. **Visit to vendor's premises/ workshop by our technical team for assessing the technical capabilities of bidder, physical verification of machinery, etc. may be carried out as part of technical bid evaluation.**
- f. The documents listed in Sl. No. 13.1.1 to 13.1.2 of this section will be reviewed by the purchaser during factory visit, if required.
- g. It is proposed to evaluate the bidders based on the previous experience in execution of the similar nature of works. The bidder has to confirm the details as enclosed in the **vendor evaluation format as per Annexure – 1.**
- h. Financial bids of shortlisted bidders (qualified in technical bid) shall only be opened.
- i. Financial bids of unqualified bidders shall not be opened.
- j. Conditional bids may be rejected by PCR. The technical evaluation shall be made strictly on the basis of the documents submitted by the bidders in support of the eligibility, the technical and commercial response. All the required information shall be furnished strictly in prescribed schedules/Annexure only. Any information indicated other than prescribed schedules/Annexure shall not be entertained. The financial evaluation shall be made on the basis of the total price/charges as indicated in the schedule of rates. Conditions, if any, on any document enclosed with financial Bid shall not be considered. Decision by Purchaser in this regard shall be final and binding.

**Annexure - 1**

**VENDOR EVALUATION FORMAT**

The Bidder must submit the following table with documentary proof to confirm his acceptance to meet the requirements detailed above, without which the offer will not be considered.

<b>SR. NO.</b>	<b>DESCRIPTION</b>	<b>To be filled / confirmed by the bidder</b>
1.	Name of Company	
2.	Address of Company	
3.	Type of Company (Proprietary/Private Ltd /Public Ltd/Joint Venture/Consortium)	
4.	Registration number	
5.	Year of inception of the company	
6.	Registered address	
7.	Name & address of the office of the Chief Executive of the company	
8.	Name & Designation of the officer of the Bidder to whom all correspondence shall be made for expeditious technical/ commercial co-ordination.	
	Telephone number	
	Fax number	
	E-mail address	
9.	Bidder's previous track record: The Manufacturer shall be a Company/Society/Firm registered since last 5 (five) years or more.	
10.	Locations of the Branches of Company (if any)	
11.	Annual turn-over of the company for the last three years	
12.	IT returns for the last 3 years	
13.	Enclose copies of the similar Purchase Orders executed in last five years	

SR. NO.	DESCRIPTION	To be filled / confirmed by the bidder
14.	Customers feedback on the services which is in writing (Pl. enclose copies)	
15.	Quality certification of the company, Documentary proof to be attached	
16.	PAN Card Copy	
17.	Acceptance for Scope of work as detailed in tender specification document	
18.	Acceptance of QAP & Inspection Clauses as detailed in tender specification document	
19.	Acceptance for Sequence of Fabrication, Inspection, Testing, Supply, Erection & Commissioning of one number of Crude Acid Tank at Propellant Complex, Rasayani, ISRO, Raigad District, Maharashtra as mentioned in the tender specification document	
20.	The bidder shall not have been blacklisted / debarred by Central Government or any State Government organization / department / PSUs in India at the time of submission of the Bid (Self-declaration has to be attached)	
21.	Confirm acceptance of the Delivery schedule as detailed in tender specification document	
22.	<b>Visit by Purchaser:</b> During the Technical evaluation of the Tender, if required the purchaser has right to visit the bidder's facilities to Clarify / confirm the documents /claims submitted in the offer. It is the responsibility of the bidder to submit necessary supporting documents to evaluate technical competency to meet the specifications of this document	
23.	Bidder shall agree to all the terms and conditions of the tender specifications	
24.	TWO PART BID: Bidders shall quote the tender in two-part bid basis. Technical bid shall be evaluated first, only technically suitable bidders shall be allowed for price bid.	

**Annexure 2**

**EXCEPTIONS AND DEVIATIONS** In line with Proposal Document, Bidder may stipulate Exceptions and deviations to the Proposal conditions if considered unavoidable.

<b>SL. NO</b>	<b>Reference Specification</b>	<b>in</b>	<b>Purchaser's Specifications</b>	<b>Offered Specifications</b>	<b>DEVIATION</b>
	<b>PAGE NO</b>	<b>CLAUSE NO</b>			

**NOTE:**

Only deviations are to be written in this Annexure.

Any deviations taken by the Bidder to the stipulations of the Proposal document shall be brought out strictly as per this format and enclosed along with the bid.

Any deviations not brought out as per this Proforma and written elsewhere in the Proposal document shall not be recognized and the same is treated as null and void.

Any wilful attempt by the Bidder to camouflage the deviations by giving them in the covering letter or in any other documents that are enclosed may render the Bid itself non-responsive.

(SIGNATURE OF BIDDER)

**TENDER ACCEPTANCE LETTER**

**(To be given on Company Letter Head)**

Date:

To,

SPSO, PCR, ISRO

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: \_\_\_\_\_

Name of Tender / Work: - .

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:..... as per advertisement, given in the above-mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents of all pages (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by department/ organization too has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking/Private organization.
6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit /Security deposit or both absolutely.

Date:

Signature of authorized person

Place:

Full Name & Designation:

Company's Seal

**Proposed Quality Assurance Plan (to be updated and finalised after placement of P.O)****QUALITY ASSURANCE PLAN (QAP)**

Sl. No.	Characteristics / type of check	Ref. Document	Method of check	Quantum of check		
				Supplier QC	Third party (TPI)	ISRO
1	Identification of materials, ultrasonic & mechanical testing of plates	As per PO	Visual	100% H	100% R	R & A
2	Identification of material & mechanical testing for nozzles, fittings, gaskets, etc.,	As per PO	Visual	100% H	100% R	R
3	Review of fabrication drawings	As per PO/ drawing	Material / design adequacy	100% H	100% R	R & A
4	Review of welding procedure & Qualification	AWS	Review	100% H	100% R	R & A
5	Checking of root run & final weld by dye Penetrant test (butt welds)	As per PO	Visual	100% W	100% R	R
6	Marking of nozzle orientation	As per drawing	Location of nozzle	100% W	100% W	R
7	Dye Penetrant test on all fillet welds.	As per PO	Visual	100% W	100% R	R
8	Visual & Dimensional inspection	As per approved drawing	Dimension	100% W	100% W	R
9	Forming of ends	As per std	Visual	100% W	100% W	R
10	Fit up of nozzles, saddles and supports and welding	As per std	Visual	100% W	100% W	R
11	Evaluation of radiography films of all butt welds	As per PO	Film evaluation	100% W	100% R	R & A



Tender Specifications for supply of Crude Acid Tank at PCR

Sl. No.	Characteristics / type of check	Ref. Document	Method of check	Quantum of check		
				Supplier QC	Third party (TPI)	ISRO
12	Mechanical cleaning and buffing at accessible places.	As per PO	Visual	100% W	100% R	R
13	Hydraulic / Water fill test of tank at Supplier's premises	As per PO / Applicable standard	Pressure hold method	100% W	100% W	W
14	Pneumatic leak test prior to dispatch	As per PO / Applicable standard	Pressure hold method	100% W	100% W	W
15	Stamping of the vessel and issue of certificates	As per PO	Visual	100% R	100% W	R
16	Production master file	As per PO	Document	100% R	--	R
17	Removal of existing Crude tank at PCR	As per PO	Document	100% W	--	W
18	Erection and insulation of new Crude Tank at PCR	As per PO	Document	100% W	--	W

Legend: R – Review, W – Witness, H – Hold, A - Approval

**Note:** The purchaser reserves right to participate in the Inspection and review any documents related to job at any stage of fabrication & the supplier has to intimate the work progress periodically.

**Bidder's Compliance matrix:**

Sl.no.	Tender Specification	Compliance by the bidder
1	The scope of work involves Fabrication, Inspection, Testing, Supply, Erection & Commissioning of <b>Crude Acid tank</b>	
2	The intended <b>Crude Acid tank</b> is proposed to be a one – to – one replacement of existing unit in the operational CNA / N2O4 plant. Hence the new unit has to be dimensionally correct.	
3	The detailed fabrication drawing of new tank and having outer dimensions equal to existing unit shall be proposed by the successful bidder and shall be approved by Purchaser.	
4	The scope of work also includes the removal of existing Crude Acid tank. The bidder shall arrange necessary material handling equipment & resources to execute the entire site works. This work involves as specified in scope of work Sr. No- 1(viii), It is suggested that vendor shall visit site prior to submitting offer for removal and erection of tanks. The day-wise schedule of the site works based on the Plant running status, shall be discussed with the purchaser and to be finalized before dispatch of the new unit to PCR.	
5	Material of Construction as per Table – 01 under clause 3 of this Tender Specification Document	
6	Welding by 100% GTAW process shall be adopted with high purity Argon gas shielding, right from root to final passes for all butt welds (Long seams, 'C' seams, nozzles, pipe to flange joints) and all internal and external welds including fillet welds	
7	Double operating welding technique shall be employed for butt joints	
8	Filler wire of AWS-SFA-5.10 shall be used	
9	To minimize the number of weld joints successful bidder shall select the minimum plate width as 1.2 to 1.5 m	
10	<ul style="list-style-type: none"> <li>i. Vendor has to submit PQR (Procedure Qualification Record) &amp; WPS (Welding Procedure Specifications) for purchaser approval</li> <li>ii. No welding shall be undertaken without approval of the welding procedure. Welders, before being engaged, must be qualified as per AWS. <b>6G qualified welder only shall be engaged.</b></li> </ul>	
11	Ultrasonic testing of the plates shall be carried out as per ASTM B 594 standard.	
12	All materials shall be tested for physical & chemical test parameters as per applicable codes in Reputed Government approved testing lab prior to fabrication.	

Sl.no.	Tender Specification	Compliance by the bidder
13	<p><b>Radiography: <u>100% of all butt weld joints</u></b></p> <ul style="list-style-type: none"> <li>• All welds shall be inspected and tested as per code and this specification.</li> <li>• Radiographs have to be carried out with a sensitivity of 2-2T as per ASME sec V.</li> <li>• All butt welds (Long seam &amp;'C' seam welds) shall be radiographed 100 % and interpreted as per code and applicable appendix.</li> <li>• The successful bidder shall be responsible for taking the radiographs by his own equipment at his own cost for the entire job.</li> <li>• Radiographic film length shall be 250 mm minimum, except if the weld is less than 250 mm long.</li> <li>• Radiography reports as reviewed by TPI shall be submitted to Purchaser for final approval &amp; acceptance.</li> </ul>	
14	Material test certificate shall be furnished to Third Party Inspection (TPI) agency for review and then to purchaser for approval	
15	Hydraulic Water fill test shall be carried out as per Approved QAP for the tank and also Pneumatic leak test with GN2 / Air at 0.5 bar (g).	
16	QAP to be prepared after PO placement and shall be submitted to the Purchaser for approval. All activities to be carried out as per approved QAP only. The attached proposed QAP will form the basis for the final QAP. Any improvements / modifications in the QAP shall be binding on the successful bidder.	
17	<b>Successful bidder shall submit TPI approved fabrication drawings within 1 month from PO release date for purchaser's approval.</b>	
18	Mechanical Cleaning as per Tender Specification Document	
19	Tank sealing as per this Tender Specification Document	
20	<b>The supplier has to engage one of the TPI agency from among DNV/LLOYDS/TUV/EIL/BVQI. The Inspection Charges for Third Party Inspection as per the approved QAP plan shall be paid by Vendor only.</b>	
21	<b>Transportation, Unloading, Erection &amp; Commissioning shall be carried out by the bidder at Propellant Complex Rasayani, A Unit of SDSC, ISRO, Tal.: Panvel, Dist.: Raigad, PIN-410207, Maharashtra</b>	
22	All necessary Equipment like welding machine, Gas cutting set, Grinding M/C, etc, and Consumables like Welding Electrodes, Gases, Grinding Wheels, paints, brushes, etc., including material handling support, skilled and semi-	

Sl.no.	Tender Specification	Compliance by the bidder
	skilled manpower required for carrying out the above work shall be in the scope of the bidder.	
23	The supplier along with the consignment shall supply three copies of production master files as per this Tender Specification Document along with soft copies of drawings	
24	Total scope of work shall be carried out by Single successful bidder overall L1 basis and the order splitting will not be envisaged.	
25	<b>All stub ends shall be fabricated from bars by machining without any welding</b> as per clause no. 12 and Table no. - 02 of this Tender Specification Document	
26	Firm establishment / MSME / MSE certificate indicating nature of work as Manufacturing / Fabrication or equivalent shall be submitted with the technical bid. In case of MSME / MSE bidders, certificate mentioning Activity as "Manufacturing" under National Industrial Classification is mandatory	
27	<b>Bidder shall submit the documentary evidence for minimum 2 tanks fabrication work of capacity 5 m<sup>3</sup> or higher made up of Aluminium material executed during previous 5 years period. Bidder shall also submit corresponding work completion certificates / Inspection Release Note (by TPI agency) of Aluminium material from the respective purchasers. Work completion certificate of material other than Aluminium will not be considered.</b>	
28	<b>The bidder must agree to take the entire scope of work which broadly include manufacture &amp; supply of new tank, removal of existing tank and erection of the new tank in the existing location at PCR with required fabrication works as required. Otherwise, the offer will not be considered.</b>	
29	<b>Raw material availability / source of raw materials shall be indicated in the technical offer to avoid delay in the equipment fabrication after placement of PO. Towards this, necessary documentary evidence indicating the availability &amp; conformance/commitment of raw material supply by the bidder shall be submitted as a mandatory requirement for technical bid evaluation.</b>	
30	IT/ TDS certificate shall be submitted for preceding three financial years ending with 31.03.2024	
31	Bidder shall submit CA certified audited statement of financial status and Profit & Loss statement for preceding three years ending with 31.03.2024.	
32	Bidder shall submit latest solvency certificate issued during ongoing financial year of minimum value of Rs. 10 lakhs from scheduled / nationalized bank.	

Sl.no.	Tender Specification	Compliance by the bidder
33	Submission of signed Annexure - 1	
34	Submission of signed Annexure – 2	
35	Submission of signed Annexure – 3	
36	Compliance to QAP as per Annexure – 4 and confirmation for updation after placement of PO	
37	Submission of signed Annexure – 5	

**Annexure-6**

**Price Bid Format**

**(To be submitted ONLY in Financial Bid ON-LINE, Don't Quote any prices here)**

**Schedule of Prices**

Sl. No	Item Brief Description	Quantity	Unit Rate in Rs.	Total cost in Rs
1	Supply & Installation of Crude Acid Tank at Propellant Complex, Rasayani, ISRO (PCR)	1 No	Unpriced	Unpriced
	<b>GST @ 5%</b>		Unpriced	Unpriced
	<b>Total Cost</b>		Unpriced	Unpriced

**Note:**

**1. Scope of work includes:**

- Fabrication, Inspection, Testing, supply & Unloading of Crude Acid Tank at PCR.
- Removal of existing tank, Installation of new Crude Acid Tank along-with all loading/unloading of tank works, commissioning works at Propellant Complex, Rasayani, ISRO (PCR).
- Supply and Application of Insulation at PCR site.

**2. This format shall be submitted along with the Price bid only in the E-tendering portal.**

**3. NO PRICE IS TO BE INDICATED IN THE TECHNICAL BID otherwise the bid will be rejected.**