

Specification for Fabrication and repairs of Pipelines/Equipment at Propellant Complex, Rasayani, Maharashtra.

PROPELLANT COMPLEX, RASAYANI (PCR)

Propellant complex, Rasayani (PCR) is located at Raigad District, Maharashtra state (50 KM from Mumbai). PCR is responsible for producing the Propellant to cater the launching requirements of ISRO.

1.0 INVITATION TO BID:

PCR invites bids from reputed Fabricators, for a **period of 24 months** and extendable for additional **12 months** or part thereof on mutual agreement basis. All the conditions of the tender will be applicable for the extendable period also.

Two-part bid process: Technical Bid. And Price Bid. Two separate bids shall be filled.

PART I –TECHNICAL BID

PART-II - PRICE BID

Part-II shall contain Price bid duly filled in the E-portal only. **NOWHERE PRICES SHALL BE MENTIONED IN THE TECHNICAL BID OTHERWISE THE OFFER SHALL BE REJECTED.**

This Work contract is meant for fabrication of Stainless-Steel, Carbon steel, Aluminium and Antinit piping circuits, equipment welding & qualification with associated structural works, which are to be carried-out in process systems at Propellant Complex Rasayani, (Maharashtra) in the existing facility. The works include removal of existing piping & their supports, fabrication of new piping circuits of SS/CS/Aluminium/Antinit materials, DP test, Radiography Test, Hydro test, installation of components, removal and erection of equipment / piping etc. **Since the Plant is old, it develops frequent weld joints leakage issues, these need to be attended/rectified within 24 hours, since the systems are highly critical and hazardous in nature. Hence, the contractor shall mobilize his team as and when required at PCR with prior intimation of 24 hours, for execution of required works for this contract (irrespective of quantum of work) within the contract validity period.**

2.0 Scope of the work:

- a) Fabrication of SS/CS/Aluminium/Antinit pipe lines sizes varying from ½” to 16” (inch) of different schedule and removal of old pipelines & supports **as per Annexure-II.**

- b) Removal of old pipelines & supports **as per requirement.**
- c) Edge preparation, fit up and welding of pipe lines/ tank nozzles/equipment patch welding/ equipment body repair works by TIG welding process (GTAW) by qualified welders.
- d) Dye penetrant test of root runs & final welds with 100% Radiography for all butt weld joints.
- e) Hydro/Pneumatic strength test as per standards.
- f) External and internal Pickling and Passivation of all weld joints.
- g) System commissioning activities (Purging, Leak checks and Flow components assembly etc.)

2.1 **Scope of contractor:** Supply of man power, fabrication of SS/CS/Aluminium/Antinit piping circuits, erection, supply of weld machinery and weld consumables (Welding set, grinding wheels, Filler wires, Argon gas etc.), D.P material, Radiography of weld joints, Hydro testing pump, Pipe bending machine etc., and other details as given below.

The following Manpower to be engaged for the fabrication work:

- Experienced supervisor with 5 to 10 years of experience in the piping fabrication field.
- 6G qualified TIG welders, Arc welders for pipe welding and Structural welder for MS fabrication.
- Qualified skilled fitters and grinders and un-skilled helpers.

2.1.1 Fabrication batch should consist of minimum of one welder, one fitter, and one helper. At least one fabrication batch shall be deployed at a time with required equipment, materials and also additional team to be deployed when demanded with prior intimation of one day.

2.1.2 **The contractor shall be capable of deploying one welding teams with supervisor.** However, the contractor should be in a position to mobilize one additional welding teams to cover up the delays, if any, to meet the schedule on advance intimation of one week, if need arises.

2.1.3 Site engineer / supervisor shall be deployed to site and he shall be responsible for:

- Supervision of fabrication activities and Safety of contractor's personnel
- Preparing weld joints and fabrication history sheets
- Taking clearances for hot work permits, hydro test etc from Department
- Quality related documentation
- Co-ordination with radiography team & Department representative
- Keeping custody of all Dept free issue material etc.

2.2 **Machinery:** Required machinery like TIG welding machine and welding torches with tungsten electrodes, arc welding machine, portable auto TIG machine, grinding machine, gas cutting sets including gas cylinders, bench / hand drilling machines and concrete drillers, bending machine, pipe cutting machine, hydro test pumps etc. shall be mobilized by the contractor. Adequate number of machineries in each category shall be readily available with contractor in order to meet the demand as and when required.

2.3 All erection tools like Chain Pulley blocks, slings, belts, necessary wooden logs, Fixtures or special tools etc. for erection/ lifting of equipment's shall also be mobilized to the site by the contractor.

2.4 **Transportation of men & Material:** The supplier has to mobilize men, materials and machinery including internal mobilization as and when required by his own arrangement irrespective of quantum of job. The Contractor's team has to report for work on the next day of intimation by the Purchaser.

2.5 All machinery required for above work like welding, grinding, drilling, cutting, etc., has to be arranged and mobilized to site by contractor along with necessary Junction boxes, fuses, cables, hoses, etc.

2.6 **Weld Consumables:**

The consumables such as SS Filler wires (ER SS 308 L / 316 L), CS filler material (F-6), Aluminium filler wire A1070 with Min. purity of 99.7%, electrodes (E 7018 / E 6013), Grinding Wheels, Industrial Gases (Oxygen / Acetylene), Gas cutting set, Argon gas, Dye-Penetrant Test Kit, Argon regulator, Flow Meters, Face shields, Gloves, SS Wire Brush, SS alignment shim plates of various sizes, Emery cloth, etc. shall be supplied and mobilized to the site by the contractor.

- **SS Wires:** Size 1.6 mm / 2.0 mm / 2.5 mm, Make (Philips / ESAB / Advani). Manufacturers material test certificates shall be submitted for review & records.
- **Electrodes for MS Structural:** Size 2.5 mm / 3.15 mm, Make (Philips / ESAB / Advani). Manufacturers material test certificates shall be submitted for review and record.
- **Argon Gas cylinder & Oxygen / Acetylene cylinders:** Grade Commercial, Purity 99.99%, Cylinder Capacity 50 Ltrs, Make (Praxair / Bhoruka / Inox / BOC). Purity certificate to be provided prior to usage.
- **Dye-Penetrant Test Kit** Containing cleaner / Penetrant / Developer, Make (Magnaflux / Check Mate)
- **Aluminium filler wire: A1070** With Minimum purity of 99.7% (M/s Hindalco, Nalco, Jindal)

Note: Contractor has to provide all the welding consumables materials TC's for department engineer's review and the material shall be used after getting the clearance only.

Note: Antinit welding filler wire will be issued by department at free of cost .

2.7 **Electrical:** Contractor has to ensure Safe distribution of electrical power from single point source identified by Department to various contractors' utility points / equipment.

2.8 **Insurance:** The contractor shall possess valid insurance policies for the persons engaged for the work related to this contract. The proof of such insurance shall be submitted immediately after awarding the contract.

2.9 **Evaluation of Machinery, Manpower and Consumables:**

- Machinery, manpower and consumable shall be subjected to technical evaluation by the Department Engineer to ascertain their complete suitability / performance for the jobs described above before commencement of the work at site.
 - Only qualified welders to a level of 6G as per ASME Sec. IX with proven track record will be permitted to carry out the welding works. However, on Purchaser's demand, qualification of welder needs to be carried out at site in the presence of Department engineer suiting to the pipe size / schedule requirements. Also, *Fitters / Fabricators / Grinders should be well experienced.* Based on this, evaluation clearance shall be given for taking up the actual job.
- 2.10 **Any welder producing beyond the acceptable no. of repair joints, shall be replaced with another welder after due qualification**
- 2.11 **Fabrication, Erection, Testing & qualification of Pipe lines:**

Welding:

- Stainless Steel (SS 304L/316L/321), CS/ Aluminium/ Antinit pipe of Size varying from ½" to 16" are planned to be welded. Piping work includes marking, cutting, profiling, aligning, fit up, Tack welding, cleaning, chipping etc. Root and final TIG welding by GTAW process shall be completed. (*GTAW welding shall be with 99.99% purity argon gas shielding & purging*). Filler wire to be used for GTAW welding shall be ER 308L & ER 316L for SS, Aluminium filler wire A1070 with purity with minimum 99.7%.

Repair Welding works of Tanks/ Equipment:

- Chipping out old welding of equipment, piping / peening of weld joints as per the requirement.
- Re-welding of chipped out weld joints of Tank and equipment irrespective of their thickness.
- Replacement / Repair of nozzles, pad plates, manhole covers etc as per requirement
- Only 6G qualified welders as per ASME Sec. IX with proven track record shall be employed to carryout welding. Qualified and certified welder should be engaged, suiting to the pipe size / schedule requirements. Fitters / Fabricators / Grinders should be well experienced. However, Purchaser reserves right to carry out welder qualification as per standard before offering the actual job.
- Cutting and edge preparation of pipelines and fittings shall be attempted only with exclusive grinders meant for austenitic Stainless-Steel material.
- All pipe welding joints shall be tested with **100%**Dye-penetrant test after root and final pass for butt welding and for final pass after fillet/socket welding as per ASME Sec.V.

2.12 **Radiography:**

- a. Butt-welds shall be subjected to **Radiographic Examinations by X-ray /Gamma-Ray** as per ASME sec. V for a sensitivity of 2-2T as per Purchaser's requirements.
- b. The penetrometer used shall confirm to ASTM E 1025/ASTM E747 (or) relevant DIN standards.

- c. Radiography shall be carried out by qualified technicians (i.e.) minimum Level-I of ISNT/ ASNT and *qualification certificates shall be produced with latest renewal to the Department before proceeding with the work.*
- d. Exclusive radiography machine / gamma ray source has to be arranged by the contractor when sufficient numbers of joints are available for examination. Accumulation of weld joints for want of radiography should not be more than 100 Nos.
- e. Films will be evaluated and IQI to be used as per ASME E 1027/ E747/equivalent standard.
- f. If any defects found during RT film evaluation process, the same shall be rectified by the Contractor without any extra cost.
 - i. Govt. Certified Radiographic Agency by BARC shall be engaged for the radiographic testing jobs. The radiography personnel shall be engaged on call basis by the contractor for the particular job and shall be released on the same day after completion of work.
 - ii. The Radioactive source (Gamma Ray/X-ray source) shall not be permitted to store inside the Propellant Complex, Rasayani.

2.13 **Piping Erection:**

- Laying of fabricated pipe lines over structural supports and clamping.
- This work includes alignment of pipes, maintenance of required slopes, proper fixing of flow components, instruments and fixing of shim plates & U clamps and tightening with nuts, fixing of studs and flange bolting, torqueing etc.
- Erection of piping includes doubling of pipes, positioning of completed pipeline segments at required locations as per the piping layouts.
- MS supports fixing and drilling of holes in MS supports, fixing of clamps shall be carried out for every 2.5 to 3.0 Meters of pipe length where ever pipe line routing is carried out.

2.14 **Testing:**

Dye-Penetrant Test:

- All welding joints shall be tested with Dye-penetrant test after root pass and final pass welding for both Butt welding and Fillet / Socket welds as per ASME Sec. V.

Pneumatic/Hydro Test:

- Hydrostatic & Pneumatic leak checks on completed piping segments as defined in the piping schedule shall be carried out and / or **as specified by the department Engineer** at defined pressure rating.

Sequence of Testing / commissioning of piping circuits:

- Flushing of piping segments with DM water.
- Hydro test as per department specified pressures.

- Replacement of test gaskets with actual gaskets (free issue by dept).
- Purging of all circuits with dry air / N₂ / He gas with requisite dew point.
- Cleanliness check of fluid circuits.
- Assembly of flow components.
- Commissioning of system including pneumatic leak test on the total integrated system.

2.15 Mechanical cleaning, pickling & passivation of SS/CS/Aluminium/Antinit pipelines:

Pickling & passivation as per Dept. approved procedure wherever necessary, by pump circulating method (or) filling method for internal welds and Swabbing method shall be used for external weld joints of pipelines.

2.16 MS Structural Fabrication works and Equipment erection:

- Fabrication of CS/MS pipe for new pipeline fitting supports shall be carried out by means SMAW welding with arc electrodes of AWS E 7018, drilling and/or bolting as defined in the approved drawings/ Dept Engineer. Drilling and anchoring of pipe supports, tightening of joints, hangers and other wall / floor / roof embedment shall be carried out wherever required even at elevated location up to 30 meters. All necessary handling, transportation, measuring, cutting, drilling, fabrication is to be carried out by the contractor. **Structural support, flange guards removed by the contractor during repairs work, to be erected again after due repairs and shall be accounted.**
- If any of the equipment/Structures gets damaged, loss during removal or erection, the cost of rectification / replacement shall be recovered from the contractor.

2.17 Commissioning of the system:

The purchaser will take over the respective system only after completion of final pneumatic leak test on the total integrated system by the contractor. During that time if any modification is required, it has to be carried out by the contractor and payment will be made as per prevailing contract rates. Contractor has to submit the final document including preparation of as-built drawings to the purchaser for the entire work carried out.

2.18 Inspection: Department engineer will participate and clear stage wise.

2.19 Sequence of work execution from fabrication to system commissioning:

- TIG welding and Laying of pipe lines as per the approved P&ID.
- Erection of pipe supports and fixing of pipe clamps for all the pipe lines.
- Hydro /Pneumatic test shall be carried out for the new/existing modified lines based on the operating pressure of the pipe line.
- RT, Pickling and Passivation of weld joints as applicable
- Replacement of test gaskets with actual gaskets wherever required
- Purging of the pipe lines with the dry GN2 gas.
- Fixing of flow components followed by integrated leak checks.

- 3.0 Detailed Scope of the Department: Department Scope:** Supply of free issue materials (FIM) viz. SS pipes and pipe fittings / Flanges, Studs, flow components, U-Clamps, Gaskets, paints, Electrical power (required for machine tools like grinders, welding machine etc.), supply of DM water for hydro testing & GN2 for pneumatic testing & purging. Details are given below.

The following items will be supplied by Department at free of cost

- 3.1 All materials required for execution of work such as pipes, pipe fittings like tees, elbows, flanges, gaskets, Nuts/bolts, U-clamp and other fittings will be supplied by the Department as free issue material.
- 3.2 MS structural materials such as angles, channels, clamps & shim plates for erection of pipes/tubes shall be issued by purchaser.
- 3.3 Antinit welding filler wire will be issued by department at free of cost.
- 3.4 Pneumatic supply for purging and testing activities.
- 3.5 Test gaskets and actual gaskets for equipment/piping.
- 3.6 Prior to handing over the system to contractor, Conditioning of lines and flow components will be carried out by Department.
- 3.7 Electricity, DM water & Compressed Air / Nitrogen gas will be supplied free of charge by Department at specified tapping points from where the fabricator has to extend to his machines, tools etc.

4.0 General Conditions:

- 4.1 The supplier has to quote on **“TWO-PART BID”** basis Viz: Technical bid & Price bid separately. **PART-1 Technical-Commercial bid** contains the technical information and commercial aspects and **PART-2 Price bid** should contain the prices.
- 4.2 The validity of the contract shall be for a period of **24 months** from the date of release of Purchase Order with an extension of validity (**with the same unit rates**) for one more year to complete un-utilized scope of work as mentioned in the PO. Hence the contractor willing to work for the above for **36 Months (24 months + 12 months validity extension)** only need to quote for this. If any supplier quotes for the part work, the offer will not be considered for evaluation.
- 4.3 Fabrication/erection is not continuous. Based on the site conditions/availability of the work, contractor has to mobilize the teams.
- 4.4 Job shall be carried out as & when required basis including Holidays, weekly off and after normal working hours as applicable at PCR.
- 4.5 Conveyance for contractor personnel from and to work spot has to be arranged by the contractor.
- 4.6 **Quantity variation:** As the scope of work is for fabrication of pipelines in site, **quantity variation of (+/- 10 %) has to be considered for all the line items.** Quantity break-up is given in **Annexure-II. However, payment will be allowed as per the actual quantity.**
- 4.7 **Payment terms:** As the scope of work is for fabrication of pipelines in site, payment shall be as per actual quantity laid /fabricated /erected on **Pro-rata basis** on submission of bills duly certified by the Department.
- 4.8 Site will be kept open for round the clock basis if required and the contractor shall be allowed to work in three shifts for carrying out site works to meet the schedules. Accordingly, manpower shall be planned by the contractor.

- 4.9 Contractor shall take enough care to ensure the progress of the work without any material and personnel damage. It is the sole responsibility of contractor to ensure all safety norms to his personnel during transportation between work spot and Department/Contractor stores, working in pre-fabrication area, in storage shed and Plant premises. Department will not hold responsibility to any mishap happened to the contractor personnel. Contractor shall adequately insure his workforce against accident/injury/including loss of life if any that may arise during work at PCR premises.
- 4.10 During the entire work necessary precautions are to be taken. Equipment's, pipes and fittings should not get damaged during execution, if any damage occurred equal cost will be recovered from the contractor.
- 4.11 For handling of pipes from storage to work spot, yard, different elevations, between two work locations and placing pipes on pipe supports after fabrication is in the scope of contractor.
- 4.12 Housekeeping of fabrication area near to work spot will be identified by the purchaser for carrying out pre-fabrication works as well as storage of Dept. free issue material to maintain neatly.
- 4.13 **Splitting of the order is not envisaged as the nature of the works are interrelated and overall technically suitable lowest offer only will be recommended.**
- 4.14 Insurance of manpower used for this contract shall be arranged by the Contractor only. The contractor has to ensure that minimum wages, EPF, ESI etc applicable as per Labour Act and Workmen compensation act for his manpower during the execution of work.
- 4.15 **Penalty: The Contractor's team has to report for work on next day of intimation by the Purchaser.** In case contractor fails to do so, **Penalty @0.5%** of the charges of that job /work may be deducted from contractor's bill on per day delay basis (after prior intimation of 24 hours) subject to maximum 10% of the charges of that Job/work.

5.0 Safety precautions:

- a) **Contractor has to give an undertaking that they will comply with prevailing safety norms at site put forth by Department. Safety officer shall have full access to contractor's storage shed at any time for inspection.**
- b) Utmost care shall be taken during removal and positioning of equipment's like heat exchangers, pumps, Pressure vessels and flow components.
- c) Nearby equipment's if any shall be protected prior to the erection of new equipment to avoid any damage.

6.0 BID qualification:

Bidders who are qualifying / meeting Technical and financial criteria are eligible to participate in the bid for execution of works. Bidder shall furnish all the information mentioned in the criteria with documentary proof and submit along with quotation otherwise the offer shall liable to be rejected.

6.1 Technical Qualification Requirements:

- The bidder shall meet all the technical specification and other requirements and shall submit relevant certificates to establish his credentials.

- The Bidder should have executed similar fabrication & erection works including MS structural works, with minimum **3 years** of experience in similar type of work.

6.2 Financial Qualification Requirements:

- The Bidder should have annual turnover of at least Rs 30 Lakhs per year during the last three financial years ending on 31 Mar 2024.
- The bidder should have executed similar type work of **Rs. 25 Lakhs** for ONE order or TWO orders of **Rs. 20 Lakhs** each or THREE orders of **Rs. 12.00 Lakhs** each during last three financial years. Documentary evidence shall be submitted along with offer.
- The bidder shall submit signed and scanned copy of PO Copies/Work order copies/ completion/ performance certificate issued by client in support of satisfactory completion of similar type of works during the last 3 years.
- The bidder shall submit signed and scanned copy of detailed profile of the Organization, (giving list of works in hand and carried out during the last 3 years, names & addresses of the clients, value of work, number of manpower deployed and such other details in respect of works, along with testimonials and other relevant documents, i.e. Proof of Organization, ESI/PF Registration Code, Company Registration No., VAT Clearance Certificate, Service Tax, TIN No., ITR, GSTIN and PAN etc.)

6.3 Bid Selection Procedure:

- Bid Short listing based on documents submitted, satisfying all the eligibility criteria given above by the firm or individual along with their Bid / application. (Non-submission of any document as given in above list within stipulated time leads to rejection of Bid).
- The supplier has to confirm his acceptance for the price bid format by signing (without prices) in the Unpriced bid (Format—II) and attach it as part of technical bid.
- Subsequently Bidder's competency, their technical achievements and financial status will be evaluated suitable for this work.
- Party evaluation:**
 - It is proposed to evaluate the bidder based on the previous experience in execution of the similar nature of works. The supplier has to furnish/confirm the details as enclosed in the **vendor evaluation format (Format-1)**.
 - It is proposed to have a visit to earlier executed sites where major piping fabricated, erected and commissioned by the party, if required to ascertain their complete suitability for the jobs described above.

7 Documents Submission relating to bidder's eligibility criteria

Agency is requested to fill this check list and ensure that all details/ documents have been furnished along with his offer

No	Eligibility Criteria	Copies of Documents to be submitted in the tender document	Yes/ No
1	As part of Technical requirement , the bidder must have executed at least one contract	Previous work order with satisfactory work execution certificate/ Inspection reports	

	of similar nature works in a Process Industry within last 3 years.	from Client for the same shall be submitted. Work completion certificate in a process industry is a mandatory document for technical evaluation.	
2	Since the nature of work is critical and not-continuous type , bidder has to mobilize his team for attending the weld repairs/rectification of system at PCR within next day of intimation by Department Engineer for both TIG / Arc welding process or both welding at a time as per site requirements.	Self-declaration by the bidder confirming the same shall be submitted in the technical Bid.	
3	The bidder shall have a valid Service Tax / GST number and registered in EPF & ESI & MSME/NSIC registration if any.	Copy of documents are to be submitted.	
4	The bidder should not have been blacklisted by any Govt. / PSU for corrupt or fraudulent practices or non-delivery or non-performance during last 3 years	Undertaking on company's letter head that it has not been blacklisted by any PSU/ Govt/ Private sector.	
5	Annual Turnover statements of last 3 financial years ending with 31.03.2024.	CA Verified Actual turn-over Documents to be submitted	
6	Contractor has to give an undertaking that they will comply with prevailing safety norms and instructions by Engineer at site put forth by Department	Self-declaration by the bidder confirming the same shall be submitted in the technical Bid.	
7	Purchaser will not be held responsible for any kind of accident or loss during this contract or any other reason.	Self-declaration by the bidder confirming the same shall be submitted in the technical Bid.	
8	Insurance of manpower used for this contract shall be arranged by the Contractor only. The contractor shall abide all the prevailing rules like workmen compensation act, labor rules including minimum wages criteria etc.	Self-declaration by the bidder confirming the same shall be submitted.	
9	Documentary proof shall be submitted for: <ul style="list-style-type: none"> One similar completed work order not less than Rs. 25 Lakhs Or Two similar completed work orders each not less than Rs. 20 Lakhs Or 	Previous work order copies shall be submitted along with work completion certificates.	

	<ul style="list-style-type: none"> Three similar completed work orders not less than Rs. 12 Lakhs 		
10	Quantity variation: As the scope of work is for fabrication of pipelines in site, quantity variation of (+/- 10 %) has to be considered for all the line items. Quantity break-up is given in Annexure-II. However, payment will be allowed as per the actual quantity.	Self-declaration by the bidder confirming the same shall be submitted.	
11	The validity of the contract shall be for a period of 24 months from the date of release of Purchase Order with an extension of validity (with the same unit rates) for one more year to complete un-utilized scope of work as mentioned in the PO. Hence the contractor willing to work for the above for 36 Months (24 months + 12 months validity extension) only need to quote for this. If any supplier quotes for the part work, the offer will not be considered for evaluation.	Self-declaration by the bidder confirming the same shall be submitted.	
12	Agreeing to all the terms and conditions of this tender specification as per Annexure-I	Stamped and Signed in each page of this document	

Note: Documentary evidence like certificates etc. must be furnished against each of the above criteria along with an index. All documents must be signed by the authorized signatory of the bidder. Relevant portions, in the documents submitted in pursuance of eligibility criteria, should be highlighted. Any missing technical detail is presumed to be accepted for evaluation of the tender and order placement.

Quantum of Work – Table-A

S N	Description	Quantity (No. of joints)
SS Pipe Joints		
1	SS Pipe Butt welding of ½”	50
2	SS Pipe Butt welding of 1”	60
3	SS Pipe Butt welding of 1.5”	30
4	SS Pipe Butt welding of 2”	30
5	SS Pipe Butt welding of 3”	40
6	SS Pipe Butt welding of 4”	30
7	SS Pipe Butt welding of 6”	20
8	SS Pipe Butt welding of 8”	15
9	SS Pipe Butt welding of 1” with RT	20
10	SS Pipe Butt welding of 2” with RT	20
11	SS Pipe Butt welding of 3” with RT	20
Aluminium Joints		
12	Aluminium Pipe Butt welding of ½”	50
13	Aluminium Pipe Butt welding of 1”	50
14	Aluminium Pipe Butt welding of 1.5”	60
15	Aluminium Pipe Butt welding of 2”	60
16	Aluminium Pipe Butt welding of 3”	50
17	Aluminium Pipe Butt welding of 4”	60
18	Aluminium Pipe Butt welding of 6”	30
19	Aluminium Pipe Butt welding of 8” and above	20
20	Aluminium Pipe Butt welding of 1” with RT	20
21	Aluminium Pipe Butt welding of 2” with RT	20
22	Aluminium Pipe Butt welding of 3” with RT	20
Antinit Joints		
23	Antinit Pipe Butt welding of ½”	10
24	Antinit Pipe Butt welding of 1”	10
25	Antinit Pipe Butt welding of 1.5”	10
26	Antinit Pipe Butt welding of 2”	20
27	Antinit Pipe Butt welding of 3”	20
28	Antinit Pipe Butt welding of 4”	20
29	Antinit Pipe Butt welding of 1” with RT	10
30	Antinit Pipe Butt welding of 2” with RT	10
31	Antinit Pipe Butt welding of 3” with RT	10
CS Joints		
32	C.S Pipe Butt welding of ½”	80
33	CS Pipe Butt welding of 1”	100
34	CS Pipe Butt welding of 1.5”	50

35	CS Pipe Butt welding of 2"	100
36	CS Pipe Butt welding of 3"	70
37	CS Pipe Butt welding of 4"	70
38	CS Pipe Butt welding of 6"	60
39	CS Pipe Butt welding of 8"	45
40	CS Pipe Butt welding of 10"	35
41	CS Pipe Butt welding of 12"	25
42	CS Pipe Butt welding of 14"	25
43	CS Pipe Butt welding of 16"	25
44	CS Pipe Butt welding of ½ " & 1" with RT	15
45	CS Pipe Butt welding of 2" with RT	15
46	CS Pipe Butt welding of 3" with RT	10
Repair welding of Tanks and Equipment		
Sr.No	Description	Qty in Mtrs
47	Repair welding to various Aluminium tanks such as Product acid tank/Raw acid tanks/Main storage tanks/N2O4 Crude tank/Absorption tower/ Bleaching column/ Acid cooler/ Columns/ condensers/ liquefiers etc	200
48	Repairs welding to S.S Equipment such as N2O4 tanks/DNA tanks/DM water tanks/columns and others equipment	40
49	Repair welding to M.S Equipment such as heat exchangers/tanks and other equipment.	50
Erection and commissioning of pipelines and equipment		
Sr.No	Description	Qty in Mtrs
50	Erection, & commissioning of SS /CS/Antinit/Aluminium pipes like Hydro / pneumatic testing and assembly to the lines, cleanliness checks (1/2" to 2")	250
51	Erection, commissioning of CS/SS/Antinit/Aluminium pipes like Hydro / pneumatic testing and assembly to the lines, cleanliness checks (3" to 6")	250
52	Erection, commissioning of CS/SS/Antinit/Aluminium pipes like Hydro / pneumatic testing and assembly to the lines, cleanliness checks (8" to 10")	150
53	Erection, commissioning of CS/SS/Antinit/Aluminium pipes like Hydro / pneumatic testing and assembly to the lines, cleanliness checks (12" and above)	100
54	Cutting/removal and shifting of SS /CS/Antinit/Aluminium pipes lines, size (1/2" to 2")	300
55	Cutting/removal and shifting of SS CS/SS/Antinit/Aluminium pipes size (3" to 6")	250

56	Cutting/removal and shifting of SS CS/SS/Antinit/Aluminium pipes size (8" to 10")	175
57	Cutting/removal and shifting of SS CS/SS/Antinit/Aluminium pipes size (12" and above)	50
Sr.No	Description – MS Structural	Qty in kg
58	Cutting & Removal of existing M.S. Structural supports and platforms Channels, angles, Plates and handrails.	7300
59	Fabrication & erection of structural steel by SMAW process	7000

Note: Break-up cost shall be uploaded in the Price Bid only. Nowhere Prices shall be uploaded in the Technical bid. The offer will be REJECTED if prices are loaded in the Technical Bid.

Format-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.**

SR. NO.	DESCRIPTION	To be filled / confirmed by the bidder
1.	Name of Company	
2.	Address of Company	
3.	Type of Company (Proprietary/Pvt.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.	

SR. NO.	DESCRIPTION	To be filled / confirmed by the bidder
	Telephone number Fax number E-mail address	
9.	<u>Bidder's previous track record</u> : The Manufacturer should be a Company/Society/Firm registered since last 3 (three) 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 three years	
14.	Quality certification of the company	
15.	PAN Card Copy	
16.	The Profit & Loss Account details for the last 3 years which is duly audited and Submitted as part of the Annual Report	
17.	Supplier shall mention their personnel No. of Supervisors No. of welders No. of Fitters No. of Helpers	

SIGNATURE : _____

NAME : _____

DESIGNATION: _____

SEAL OF THE COMPANY DATE : _____