GOVERNMENT OF INDIA:: DEPARTMENT OF SPACE
SATISH DHAWAN SPACE CENTER SHAR:: SRIHARIKOTA – 524 124
SRI POTTI SREERAMULU, NELLORE DISTRICT (A.P)

TENDER NOTICE NO. SDSC SHAR/Sr.HPS/PT/RO/06/2020-2021

On behalf of President of India, Sr. Head Purchase and Stores, SDSC SHAR, SRIHARIKOTA invites on line quotations for the following.

<table>
<thead>
<tr>
<th>SI No</th>
<th>Ref. No.</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>SHAR VAST 2019 0 12598 E-Procurement [Public Tender - Two Part basis]</td>
<td>Supply and Installation of Articulated type Aerial working platform with EE rating for SMP&amp;S P</td>
<td>1 No.</td>
</tr>
<tr>
<td>02</td>
<td>SHAR VAST 2020 0 12842 E-Procurement [Public Tender - Two Part basis]</td>
<td>Fabrication and Supply of Fixtures for SLC</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>04</td>
<td>SHAR/SPMETF/2019 0 12825 E-Procurement [Public Tender - Two Part basis]</td>
<td>CAMC for A/C plant control (DDC) systems</td>
<td>1 Lot.</td>
</tr>
</tbody>
</table>

Last Date for downloading of tender documents : 20.04.2020 at 16:00 hrs.
Due Date for submission of bids online : 20.04.2020 at 16:00 hrs.
Due Date for Bid Sealing on : 20.04.2020 at 16:01 hrs. to 20.04.2020 at 17.30 hrs.
Due Date for Open Authorization : 20.04.2020 at 17:31 hrs. to 22.04.2020 at 17:00 hrs.
Due Date for opening of tenders : 24.04.2020 at 14:30 hrs.

Instructions to Tenderers:

Bids shall be submitted on line through EGPS only and No tender fee shall be applicable.

01. For full details/scope of work and terms and conditions etc., please see the enclosed annexures.

02. Interested tenderers can download the e-tender from ISRO e-procurement website https://eprocure.isro.gov.in and submit the offer on line in the e-procurement portal. Offers sent physically by post/courier/in person will not be considered.

03. Tender documents are also available on ISRO website www.isro.gov.in ISRO e-procurement website https://eprocure.isro.gov.in and SDSC SHAR, Sriharikota website www.shar.gov.in. The same can be down loaded and offer submitted on line in the e-procurement portal only.

04. Quotations received after the due date/time will not be considered.

05. The tender documents are available for download upto 20.04.2020 at 1600 hrs. and last date for submission of tenders on line 20.04.2020 at 1600 hrs. and Tender Opening on 24.04.2020 at 14:30 hrs.

06. Interested vendors can attend the Bid opening sessions to know the details. Presence not mandatory to consider the quote for evaluation.

07. Sr. Head, Purchase and Stores, SDSC-SHAR, Sriharikota reserves the right to accept or reject any/or all the quotations.

DT: 13.03.2020
Sr. HEAD PURCHASE AND STORES

Indian Space Research Organisation
Tender Specification Document

Design, Fabrication, Supply, Testing, Erection & Commissioning of Vertical, Cylindrical & Fixed Cone Roof Furnace Oil (FO) Storage Tanks

Propellant Complex, Rasayani, ISRO (PCR)
Introduction

Indian Space Research Organization (ISRO) Dept of Space, Govt. of India has administratively taken over the CNA Plant at Rasayani from HOCL (Hindustan Organic Chemicals Limited). The plant is renamed as Propellant Complex, Rasayani, ISRO (PCR) and is a facility of SDSC SHAR, Sriharikota.

This tender enquiry is meant for Design, Fabrication, Supply, Testing, Erection & Commissioning of Vertical, Cylindrical & Fixed Roof Furnace Oil (FO) Storage Tanks to Propellant Complex, Rasayani, ISRO (PCR) Raigad dist. Maharashtra - 410207.

1. **Scope of Work**

1.1 This specification covers the general requirements for design, selection of materials, fabrication, supply, erection, inspection, testing, fitting of other attachments and appurtenances, cleaning & handling at PCR site, erection & commissioning, hydro test at PCR site, painting, calibration, handing over, commissioning, etc. for FO Tanks as mentioned in different sections of this specification and is intended to supplement the minimum requirements of the applicable codes.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>Quantity, nos.</th>
<th>Volume, m³</th>
<th>Diameter, m</th>
<th>Height, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FO Tank – 1</td>
<td>02</td>
<td>30</td>
<td>3.55</td>
<td>3.0</td>
</tr>
<tr>
<td>2</td>
<td>FO Tank – 2 with heating coil &amp; insulation</td>
<td>02</td>
<td>20</td>
<td>2.95</td>
<td>3.0</td>
</tr>
</tbody>
</table>

1.2 The bidder's scope shall also include any other services, etc. if called for in the succeeding sections of the specification. The successful bidder shall be responsible for providing all material, equipment & services, which are required to fulfil the intent of ensuring operability, maintainability, reliability and complete safety of the complete work covered under this specification, irrespective of whether it has been specifically listed herein or not. Omission of specific reference to any component / accessory necessary for proper performance of the equipment shall not relieve the bidder of the responsibility of providing such facilities to complete the supply, erection and commissioning of Furnace Oil Tanks and accessories as per this document within quoted price.

1.3 Bidder shall submit all the details of the proposed tanks, accessories, instrumentation system, etc. confirming to the specifications of this document in the technical bid itself.

2. **DESIGN DATA**

2.1 Design Codes

The following codes in their latest edition shall form the basis for design, fabrication, inspection, testing and acceptance of storage tanks.

**Design CODES & STANDARDS**
The design, fabrication & assembly, erection & performance of steel tanks shall comply with all latest statutory regulations and safety codes. The vendor shall not be construed to be relieved of his responsibility by virtue of this specification. The tanks in general shall conform to the latest editions, as applicable, out of the following standards:

(a) IS-803 Code of practice for design, fabrication and erection of vertical mild steel cylindrical welded oil storage tank.
(b) American code for oil tanks
(c) IS-816 Code of practice for metal arc welding for general construction in MS
(d) Indian Standard Specification: IS 2062, for tank roof, shell and bottom MOC.
(e) Nozzle pipe and fitting: IS 2062
(f) BS-2654 Specification for vertical steel welded storage tanks with butt welded shells for the petroleum industry
(g) Heating Coil: SA179
(h) Gaskets for manholes and nozzles fitted with blind flanges shall conform to IS: 2712
(i) Bolts and nuts for all nozzles fitted with blind flanges shall conform to IS: 1367 or ASTM A-307 Gr. B or A-193. Bolts and nuts for all structural shall conform to IS: 1363

2.2 SELECTION OF MATERIALS

i. Plate material shall confirm to IS 2062. Structural Quality Steel Plates shall conform to Latest Edition of IS 2062 Grade E250 Quality A Specifications.
ii. Manhole necks, nozzle necks 600 mm NB and above shall be fabricated from same plate material as used for shell.
iii. Heating coil pipes shall be of seamless quality.
iv. The plates used for construction of Equipment shall also be ensured free from any lamination and manufacturing defects by grid method ultrasonic testing as per IS – 4225.
v. All clips and attachments shall be fabricated from carbon steel plates of weldable quality.
vi. Hand rails of ladder of size 25 NB and tank top shall conform to IS:2062 Grade
vii. Platforms, ladder, stairways and gangways shall have gratings fabricated from flats.

2.3 DESIGN CONSIDERATIONS

a) The successful bidder shall furnish design calculations to TPI during detailed engineering stage for approval, design calculations approved by TPI and final drawing with revisions, if any, shall be submitted thereafter for approval by the purchaser.
b) Tanks shall be designed considering the operating pressure as combination of atmospheric and vacuum conditions as created during furnace oil feed to the boiler operations.
c) Bidder may propose design improvements, if any, as part of technical offer

d) Vent sizing calculation shall be done as per latest code edition.

e) Minimum 8 mm thick plates including corrosion allowance shall be provided for shell plates and minimum 6 mm for roof plates for all tanks. However, if the addition / summation of calculated value of plate thickness (excluding tolerance on plate as per relevant IS) / nominal minimum thickness specified in the relevant design code / standard and corrosion allowance of 2 mm comes out more than 8 mm then the nearest available (higher side) plate thickness in the market shall be provided for bottom, shell and roof plates without any commercial implication.

f) Tank seams shall be so positioned that they do not pass through vessel connections.

g) Longitudinal seams shall be offset if the tank fabrication calls for more than two sections.

h) Wherever possible, the inside seam weld shall be ground smooth, suitable for application of corrosion resistant primer.

i) Due consideration shall be given by the supplier for wind load and earthquake effect (as applicable to place of installation, i.e Rasayani, Dist.: Raigad, Maharashtra) in the design of tanks. All roofs and supporting structures shall be designed to support dead load plus a uniform live load of not less than 150 kg/m² of projected area.

j) The tank shall be designed for filled water head / atmospheric pressure and design temperature for the tank shall be 80°C and shall be designed for outdoor installation.

k) Level Control System consisting of 3 level switches for high, low and extra low level of oil in the tank shall be provided for all the tanks.

l) In addition to 3 level switches, Float and board type mechanical level indicator to be provided for each tank. Material of construction for all components for mechanical indicator should be of SS304/SS316.

m) Bidder to note that surface cleaning shall be of Blast clean type. However Grit blasting shall be decided during detail engineering for which no commercial implication shall be entertained by PCR. Bidder to note that foundation drawing along with loading data & anchor bolt details shall be provided after placement of PO

n) Specification of Furnace Oil to be Stored:
   - Acidity, inorganic: Nil
   - Ash Percentage by mass: 0.1% Max
   - Gross Calorific Value: No Limit but typical-10000
   - Relative Density at 15 / 15 Deg C: No Limit but typical-0.950
   - Flash Point (Ponsky martors closed) Min: 66 Deg C
   - Kinematic Viscosity: Above 125 & 180 Centi stokes at 50 Deg C
   - Sediment: 0.25% Max by mass
   - Sulphur total: 4% Max by mass
   - Water content: 1.0% Max by volume

2.4 WELDING

a) Root run shall be carried out by TIG process and subsequent runs by SMAW process. 100% root run DP test shall be carried out.

b) Welding sequence shall be adopted in such a way so as to minimize the distortion due to welding shrinkage.
c) Successful bidder shall indicate in drawing the sequence of welding proposed, which shall be approved by the purchaser.

2.5 General Terms & Conditions

a) Commissioning of tanks will consist of installation of all accessories of tanks as per approved drawing/specification, charging of tank, water fill test (for minimum 24 hours after complete filling of tank), satisfactory functioning of all accessories, emptying of tank, subsequent painting of complete tanks and changing of gaskets as per specification requirement.

b) All tools including welding machines, crane, hydra, fork lift, batching plant etc. and instruments as required for construction, erection and commissioning, trial run and functional demonstration test at PCR site shall be arranged by the bidder.

c) Proposed FO tanks layout is shown in enclosed sketch titled Layout of Furnace Oil Tank Farm. The tanks shall be installed as per this layout only.

2.6 DRAWINGS AND DOCUMENTS

i. All individual tank drawings with design data and material specifications are to be prepared as per design calculations approved by TPI and final drawing shall be submitted thereafter for approval by the purchaser. Successful bidder shall submit the drawings for purchaser’s approval within 15 days from the date of release of purchase order.

ii. Supplier shall prepare all fabrication drawings based on the design and shall include the following:

(a) General arrangement drawing

(b) All general information and special instructions provided in drawings.

(c) Tolerances

(d) Specification and brand names of electrodes to be used.

(e) Nozzle orientation

(f) Details of shell, roof, and bottom.

(g) Final plate cutting layout

(h) Complete bill of material.

(i) Roof structure details

(j) Ladder, platforms and handrails.

(k) Weld seams, weld joints, and weld sizes.

(l) Reinforcements.

(m) Insulation supports for shell and roof.

(n) Bracket and pipe supports, platforms, ladder / stair case, earthing connection etc.

(o) Fixtures for internals
3.0 Fabrication, Erection & Commissioning

The attached sketches of 20KL & 30KL tanks and FO tanks layout with this tender specification are for indicative purposes only. Successful bidder shall prepare engineering drawings of 20KL & 30KL tanks fabrication meeting the requirements of this technical specification and shall submit the drawings for approval before commencement of fabrication.

3.1 Plates

i. Plate edges shall preferably be sheared or machine cut as per Code. All machined parts shall be suitably protected before assembly.

ii. All formed plates shall be match marked with paint on the concave side with numbers as shown on erection drawings.

iii. To minimize the number of weld joints successful bidder shall select the minimum plate width as 1.5 m

3.2 Structure

i. Structural steel fabrication shall be carried out to the required shapes for making the structure.

ii. A pre-assembly of a sufficient part of roof structure may be called for by the TPI / Purchaser to assess the correct workmanship.

3.2 Bottom

i. Bottom slope shall be indicated in the respective tank drawings.

ii. Overlaps shall be properly cleaned with steel wire brush before welding.

iii. Annular plates shall be provided if specified on tank drawings and shall be assembled by butt welding with backing strips and be lap welded to the sketch plates.

iv. Datum plate shall be welded to tank bottom vertically below the gauge hatch, after calibration of the tank.

3.3 Shell

i. All vertical and horizontal shell joints shall be full penetration and full fusion welds using any one of the edge preparations permitted by the Code. Single side butt welds are not permitted.

ii. Top curb angle shall be lap / butt welded to the top course with flange turned outside.

iii. Curb angle shall not coincide with the vertical shell plate welds.

iv. Vertical joints should preferably be off set.

v. First shell course plates shall be arranged so that the vertical joints clear the annular ring welds or sketch plate welds by at least 300 mm.

vi. Holes shall not be made in shell plates for erection purposes.

3.4 Fixed Roof

i. The roofs shall be supported by structure as per standard.
ii. All supporting structures shall be designed to carry the minimum loads as specified in codes. While designing, supplier shall also consider lateral loads also.

iii. Roof laps shall be minimum 25 mm laps and shall be arranged with the lower edge of the upper plate underneath the upper edge of the lower plate.

iv. On fixed roof tanks, planks/grating, long enough to cover at least two roof rafters as bottom support shall be laid and used as walkways for safety reasons.

3.5 Top platform

- A raised platform as per size indicated in the standard shall be provided at the top of the ladder stairs and shall be extended suitably to permit easy access to the accessories (gauge well, level indicator, etc.)

3.6 Vents

- Vents on peripheral spacing (minimum two nos.) shall be provided for venting the dead space between stored liquid and seal. They shall be provided with a galvanized iron rain hood and 2 mesh screen each.

3.7 Appurtenances: Nozzles & Accessories: 11 Number of nozzles for each tank as per indicative drawing under Fig. 1 & 2

i. All appurtenances and accessories as approved in the respective tank drawings shall be supplied by the supplier.

ii. Nozzle lengths shall be as per code.

iii. Nozzle reinforcing plates shall be provided with ¼” threaded tell tale hole for test purposes.

iv. Nozzle shall be welded to shell and roof with the same quality of electrodes as used for welding shell / roof plates.

v. Manholes and nozzles with blind flanges shall be provided with gaskets and bolting.

vi. Nozzles and manholes shall be shop assembled.

vii. All nozzles and accessories shall be prefabricated and attached to the shell plate. The prefabricated assembly shall be stress relieved properly prior to installation, wherever required as per code and applicable appendices.

viii. Details of Nozzles to be provided for each tank

<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Size, mm NB</th>
<th>Flange</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>80</td>
<td>ANSI B 16.5, 150#</td>
<td>OIL INLET</td>
</tr>
<tr>
<td>N2</td>
<td>80</td>
<td>ANSI B 16.5, 150#</td>
<td>OIL OUTLET</td>
</tr>
<tr>
<td>N3</td>
<td>40</td>
<td>ANSI B 16.5, 150#</td>
<td>RETURN OIL INLET</td>
</tr>
<tr>
<td>N4</td>
<td>50</td>
<td>ANSI B 16.5, 150#</td>
<td>DEEP NOZZLE</td>
</tr>
<tr>
<td>N5</td>
<td>50</td>
<td>ANSI B 16.5, 150#</td>
<td>SPARE WITH B/F</td>
</tr>
<tr>
<td>N6</td>
<td>50</td>
<td>ANSI B 16.5, 150#</td>
<td>VENT</td>
</tr>
<tr>
<td>N7</td>
<td>600</td>
<td>--</td>
<td>Roof manhole, as per standard Practice</td>
</tr>
<tr>
<td>N8</td>
<td>600</td>
<td>--</td>
<td>Shell manhole, as per standard Practice</td>
</tr>
<tr>
<td>N9</td>
<td>50</td>
<td>ANSI B 16.5, 150#</td>
<td>Drain</td>
</tr>
<tr>
<td>N10</td>
<td>80</td>
<td>ANSI B 16.5, 150#</td>
<td>SPARE WITH B/F</td>
</tr>
<tr>
<td>N11</td>
<td>¾” NPT Socket</td>
<td>--</td>
<td>Temp indicator</td>
</tr>
</tbody>
</table>
3.8 Heating Coils

Steam at 3.5 ksc pressure will be used as heating source. Coils shall be designed to meet this requirement and shall be welded to tank from outside to circumference of the tank. Heating coil meeting SA 179 material specification requirements of seamless tube, 0.75 inch OD x 14 SWG to be provided from outside upto 1 m height from bottom at the pitch of 150 mm shall be provided. Flattening due to bending shall be as per ANSI B 31.3. Number of joints to be radiographed shall be 25% and interpretation of radiography shall be as per ANSI B 31.3. Heating coil shall also be pressure tested. Approval, from IBR, wherever required shall be supplier’s responsibility.

3.9 Insulation: Insulation throughout the tank surface for 2 numbers of 20 m³ Day oil tanks shall meet following specifications

   a. Rockwool mattress/slabs as per IS-8183-Gr 3
   b. Density-100 Kg/m³ minimum & minimum 75 mm thickness
   c. Aluminium corrugated cladding sheet to be used as per IS-1254.
   d. Screws used with aluminium cladding sheet shall be of self-tapping type at interval of 150 mm approximately.
   e. Application of hot insulation shall be as per IS-14164-2008 and as per TS-6701 Codes.

3.10 Tank Earthing

Adequate number of earthing shunt shall be provided on the body of the tank for proper earthing

4. INSPECTION AND TESTING:

Inspection shall be as per pre-approved QAP at all stages. Supplier shall propose QAP for approval by purchaser. Successful bidder shall agree to additional QAP clauses proposed by purchaser.

4.1 Inspection:

   i. All tanks shall be offered for inspection at all stages, as desired by TPI / Purchaser.
   ii. The supplier shall provide all facilities, such as access ladder lighting, tools and tackles, instruments, etc. and personnel to inspectors, for proper execution of their inspection.
   iii. All the inspection shall be carried out in accordance with the relevant codes and requirements of drawings and specifications.
   iv. Approval of the inspector shall in no way relieve the supplier of his responsibilities for proper execution of work.

4.2 Welding Procedure:

   i. Prior approval towards welding procedure and welder qualification test by TPI & Purchaser shall be obtained.
   ii. Welding joint efficiency: 0.85
4.3 Welder / Operator-Qualification:

Welders, before being engaged, must be qualified as per AWS. The supplier shall make arrangements of such test at his own cost in the presence of TPI / Purchaser.

4.4 Radiography and Inspection of Welds:

i. All welds shall be inspected and tested as per code and this specification.

ii. Radiographs have to be carried out using x-ray Source with a sensitivity of 2-2T as per ASME sec V.

iii. All safety precautions shall be followed and clearance from Safety Officer / PCR shall be obtained.

iv. Tank welds shall be radiographed and interpreted as per code and applicable appendix.

v. The supplier shall be responsible for taking the radiographs by his own equipment at his own cost for the entire job.

vi. Radiographs shall be taken as soon as welding of the joint is completed. If repairs are required, these shall be carried out before starting other welds. New Radiographic examination of such repairs shall also be carried out by the Supplier at his own cost.

vii. Radiographic film length shall be 250 mm min, except if the weld is less than 250 mm long.

4.5 Liquid penetrant / magnetic particle examination:

i. Whenever specified in drawing / code, liquid penetrant / magnetic particle examination shall be carried out.

ii. 100% Root DP of all weld joints shall be carried out.

4.6 Testing:

i. All equipments required for testing shall be supplied by the supplier.

ii. Openings other than those used for hydrostatic test or any other test shall be closed by plugs and blind flanges supplied by the supplier.

4.6.1 Bottom Test

i. A detailed description of the proposed test method shall be first submitted for approval to the TPI / Purchaser.

ii. Vacuum box testing shall be carried out for detection of leaks in the bottom.

iii. The weld joints under the shell periphery shall be tested before erection and welding of first shell course.

iv. Supplier shall test the tank bottom for the entire weld length in the presence of the TPI / Purchaser and test reports shall be issued accordingly.
4.6.2 Shell Test:

a) **Bottom to shell joints shall be tested as follows:**
   
i. Inner fillet weld shall be inspected and tested prior to welding the outside fillet weld. Leak test shall be performed with penetrating oil after removal of slag. Oil shall be removed before welding the outer fillet.
   
   ii. Examination for inner fillet to detect cracks shall be performed using either the liquid penetrant or magnetic particle method.

b) All welded lugs and brackets used for erection process shall be carefully removed from inside and outside surface of the tank to the satisfaction of the TPI / Purchaser.

c) Supplier shall perform the hydrostatic test in the presence of TPI / Purchaser on each tank after complete erection. Any defects observed during the test shall be repaired by the Supplier.

d) The filling height shall be up to the curb angle and shall be restricted to the maximum height so that weather shield does not go beyond curb angle.

e) Filling of the tank may be restricted by the TPI / Purchaser for preloading of foundation and hydrostatic test may be extended over a period of 4 weeks or more to ensure proper settlement of the tanks.

f) On completion of tank and after cleaning, the tank shall be filled with water in 4 stages, 25%, 50%, 75% and 100%. After each stage a load stabilization period of 12 hours between each stage shall be observed.

h) When the tank is full all the welded joints shall be hammered by supplier in the presence of TPI / Purchaser. In case of any defect it shall be repaired and retested by the supplier as per instructions of TPI / Purchaser.

i) All weld repairs shall be done with water level minimum 300 mm below the joint being repaired.

4.6.3 Fixed Roof Test

i. After filling the tank up to curb angle, all openings in the roof shall be closed and internal air pressure shall be applied equivalent to the weight of roof plates. All welded joints in roof shall be checked with soap solution for detection of leaks.

ii. For vacuum test the tank shall be emptied up to 1 meter level from the bottom. The openings shall be closed and draining continued with care until the vacuum of 25 mm water column is obtained and checked by vacuum gauge. All associated equipment for conducting the test shall be in the scope of successful bidder.

4.6.4 Heating Coils Testing:

Heating coils shall be pressure tested as per approved drawing.

4.6.5 Nozzle Reinforcing Plates:

Nozzle reinforcing plates shall be pneumatically tested at 1.5 kg / cm² g with soap solution. This test shall be carried out before filling the tank for hydrostatic testing.
4.7 CALIBRATION:
Strapping and calibration of all tanks shall be done in accordance with IS: 2007 & 2008 (Latest editions)

4.8 PAINTING REQUIREMENT
All surfaces shall be cleaned of loose substances and foreign materials, such as dirt, rust, scale, oil, grease, welding flux etc. in order that the prime coat is rigidly anchored to virgin metal surface.

All tanks shall be painted as per following requirements:

<table>
<thead>
<tr>
<th>Surface Preparation</th>
<th>Tank inside surface</th>
<th>Tank outside surface</th>
<th>Tank underneath surface</th>
<th>Structural steel work, piping, steel Floors, &amp; Stairways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blast clean to SA 2.5</td>
<td>Blasting cleaning to SA 2.5</td>
<td>Wire Brushing/hand tool cleaning to ST-2</td>
<td>Abrasive blasted to SA 2 ½.</td>
<td></td>
</tr>
<tr>
<td>Primer</td>
<td>Two (2) Layers of zinc phosphate epoxy Primer, total DFT of 75 micron</td>
<td>Two (2) Layers of zinc phosphate Epoxy, total dry film thickness 75 micron each</td>
<td>2 coats of high build Coal tar epoxy suitably pigmented (2 pack), DFT: 80-100 Microns each coat.</td>
<td>2 coat of Primer paint shall be Zinc Silicate of approved brand. Dry film thickness of each Primer shall be 60 microns.</td>
</tr>
<tr>
<td>Intermediate coat</td>
<td>2 pack high build epoxy, DFT 80 micron</td>
<td>One(1) layer 2 pack high build epoxy polyamide MIO, DFT 100micron one layer, 2 packs of zinc phosphate Epoxy, total DFT 100 microns.</td>
<td>N.A</td>
<td>Two Intermediate MIO Epoxy paint, and one top polyurethane coating shall be applied. Dry film thickness of each intermediate coat shall be 90 microns</td>
</tr>
<tr>
<td>Finish</td>
<td>Two pack silicon acrylic DFT 150 micron</td>
<td>Two (2) finishing coats of chlorinated rubber paint</td>
<td>N.A.</td>
<td>Polyurethane coating shall be 30 microns. The under coat and finish coat shall be of different tint to</td>
</tr>
<tr>
<td>Description</td>
<td>COLOUR</td>
<td>IS 5</td>
<td>COLOUR (BAND)</td>
<td>IS 5</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------</td>
<td>------</td>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td>FO Tanks</td>
<td>Light brown</td>
<td>410</td>
<td>Brilliant green</td>
<td>221</td>
</tr>
</tbody>
</table>

**SUGGESTED COLOUR CODES FOR PAINTING**

<table>
<thead>
<tr>
<th>Description</th>
<th>Tank inside surface</th>
<th>Tank outside surface</th>
<th>Tank underneath surface</th>
<th>Structural steel work, piping, steel Floors, &amp; Stairways</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in approved shades at 50 microns DFT each coat in approved shades.</td>
<td></td>
<td>distinguish the same from finish paint.</td>
<td></td>
</tr>
<tr>
<td><strong>Total DFT</strong></td>
<td>305 microns</td>
<td>275 microns</td>
<td>160-200 microns</td>
<td>330</td>
</tr>
</tbody>
</table>

Note: - Handrail shall be hot dip galvanizing as per IS 4736.

5. **Third Party Inspection:**

The supplier has to engage DNV/LLOYDS / TUV / EIL / BVQI as a THIRD-PARTY Inspection agency. The inspection Charges for Third Party Inspection shall be paid against submission of documentary proof. However, the approximate third-party inspection charges shall be quoted separately in price bid. Approximate third-party Inspection charges for both at Manufacture’s site as well as purchaser’s erection site shall be quoted in the price bid. Charges will be paid against documentary evidence “on actuals” or quoted cost, whichever is lower.

**Purchaser reserves the right to include third party inspection requirement or delete the same, while releasing the purchase order**

6. **SCOPE OF SERVICES**

A. Preparation of all necessary drawings/data/ documents for obtaining necessary Approval of statutory authorities like PESO, IBR, Weight & Measures Department and any other agency/ competent authority related to installation of Fuel Oil Handling System on behalf of the PCR. All expenses required to obtain the approval shall also be borne by the successful bidder. Successful bidder shall inform PCR well in advance requirement of authority letter along with format for the same. After issuance of authority letter by PCR, it will be vendor’s responsibility to regularly
follow up with the concerned authorities to obtain timely approval from these authorities
B. Layout drawing to be prepared for statutory approval (if required) apart from showing the technical requirements shall necessarily show key plan showing approach to PCR site with milestone, Survey No., Plot No. etc.
C. Supply of temporary equipment and services for chemical cleaning, testing etc. as applicable.
D. Any other service required for making the installation complete in all respects as per attached indicative drawing and for satisfactory erection & commissioning of the system as well as to meet any statutory requirement relevant to this work, unless specifically EXCLUDED from scope of services.
E. The offer shall indicate necessary PCR site preparation works to be ensured for installation & commissioning of the tanks.

7. Delivery
   a. **Transportation, Erection and 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. All necessary Equipments 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-skilled manpower required for carrying out the above work shall be in the scope of the bidder.
   c. Successful bidder shall submit design calculations & proposed drawing within 2 weeks after release of PO for purchaser’s approval. The supply scope of work as per this specification document shall be completed within maximum period of 3 months from the date of drawing approval. Erection and commissioning within maximum period of 20 days from the date of PCR site clearance.
   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
      - Bill of Materials
      - Materials Test Certificates
      - WPS, WPQ, PQR and Welding Layouts
      - Radiographic reports with sketch
      - Pneumatic and Hydrostatic test certificates
      - Certificates of clearance
      - 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.

8. Mandatory Documents to be submitted along with offer:

**Technical:**

i. General Arrangement drawing of the system.

ii. Detailed list of Instrumentation items to be supplied.

iii. Detailed list of mechanical items to be supplied.

iv. Annexures – 1 to Annexure – 3 shall be filled, signed and to be uploaded on the portal under Vendor Solicited Documents section

v. Bidder shall submit the documentary evidence indicating the tank / vessel design capabilities of similar capacity (20/30 m³ or higher) by submitting relevant PO copies.

vi. Bidder shall submit the documentary evidence indicating tank / vessel erection & commissioning works carried out by submitting relevant PO copies.

**Commercial:**

i. Firm establishment certificate indicating nature of work.

ii. Documentary proof shall be submitted with the offer indicating execution of at least one order of value of Rs. 30 lakhs or two orders of value of Rs 20 Lakhs each or three orders of Rs. 10 Lakhs each during preceding three Audited financial years.

iii. Details of work of similar type – minimum 3 nos. completed by providing copies of purchase orders during the preceding five years.

iv. Satisfactory work Completion certificates from the clients

v. IT/ TDS certificate shall be submitted with Profit & Loss statement for preceding three financial years.

vi. Bidder shall submit audited statement of financial status for preceding three years.
9.0 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.

9.1.1. Technical Qualification Requirements:
   a. The bidder shall meet the technical specification and other requirements and shall submit relevant certificates to establish the credentials.
   b. The Bidder shall be a party who has manufactured tanks & pressure vessels and executed similar / identical works during previous 3 years period.
   c. Bidder shall submit the documentary evidence indicating the tank / vessel design capabilities of similar capacity (20/30 m³ or higher) by submitting relevant PO copies.
   d. Bidder shall submit the documentary evidence indicating tank / vessel erection & commissioning works by submitting relevant PO copies.

9.1.2. Financial Qualification Requirements:
   a. The Bidder shall have executed at least one order of value of Rs. 30 lakhs or two orders of value of Rs 20 Lakhs each or three orders of Rs. 10 Lakhs each during preceding three Audited financial years. Documentary proof shall be submitted with the offer in this regard.
   b. IT/ TDS certificate shall be submitted for preceding three financial years.
   c. Bidder shall submit audited statement of financial status for preceding three years.

9.1.3 Following documents shall be submitted along with the bid for prequalification of Bidder.
   a. Firm establishment certificate indicating nature of work.
   b. Details of work of similar type - minimum 3 nos. completed by providing copies of purchase orders during the preceding five years.
   c. Satisfactory work Completion certificates from the clients, with the work / purchase order copies

9.1.4 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 leads 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.

9.1.5 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. Visit to earlier executed work sites, if required, where similar works have been carried out, erected and commissioned by the party, 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. In case the qualifying experience is claimed by private organizations based on work order and completion certificates from another private organization, PCRI reserves the right to ask for further proofs including submission of TDS certificates for the said job.

f. Visit to vendor’s premises by our technical team for accessing the technical capabilities of bidder, if required.

g. The documents listed in Sl No. 9.1.1 to 9.1.4 of this section will be reviewed by the purchaser during factory visit, if required.

h. 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 as per Annexure – I.

i. Financial bids of shortlisted bidders (qualified in technical bid) shall only be opened.

j. Financial bids of unqualified bidders shall not be opened.

k. Conditional bids may be rejected by PCRI. 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. PCRI is not bound to accept the lowest quoted offer. Conditions, if any, on any document enclosed with financial Bid shall not be considered. PCRI’s decision in this regard shall be final and binding.

9.1.6 General Terms & Conditions:

a. Successful bidder shall make their own arrangements towards lodging, boarding & conveyance during Erection & commissioning activities at Propellant Complex Rasayani, ISRO.

b. Liquidated Damages - Delivery schedule indicated in the Purchase Order/Contract is the essence of the contract and if the party fails to deliver the material within the delivery schedule, Liquidated Damages will be levied @ 0.5% per week or part thereof subject to a maximum of 10% of total order value.
c. **Performance Bank Guarantee** - Performance Bank Guarantee for 10% of the order value shall 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.

d. **Security Deposit** – Security Deposit for 10% 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.

e. In case, if parties are unable to provide two separate BGs, i.e., one for SD & one for PBG, they can submit a combined BG for SD & PBG for 10% of the Order value valid till the completion of total contractual obligation (i.e., Supply period + warranty period + 60 days).

f. **Force Majeure:**
The following shall amount to Force Majeure:

   i. Acts of God, act of any Government, War, Sabotage, Riots, Civil commotion, Police action, Revolution, flood, Fire, Cyclones, Earthquake and Epidemic and other similar causes over which the Supplier has no control.

   ii. If the Supplier suffers delay in the due execution of the contractual obligation due to delays caused by force majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the Supplier shall be extended by a period of time equal to period of delay, provided that on the occurrence of any such contingency, the Supplier immediately reports to PCRI in writing the causes of delay and the Supplier shall not be eligible for any compensation.
## 10. Schedule of Prices

*(To be filled in on-line bid only at specified place under Price Bid)*

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>Amount, in INR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Design, Fabrication &amp; Supply of Vertical, Cylindrical &amp; Fixed Cone Roof Furnace Oil (FO) Storage Tanks to Propellant Complex, Rasayani, ISRO (PCR): 30 m³ capacity, 2 nos.</td>
<td>********************</td>
</tr>
<tr>
<td>2</td>
<td>Design, Fabrication &amp; Supply of Vertical, Cylindrical &amp; Fixed Cone Roof Furnace Oil (FO) Storage Tanks to Propellant Complex, Rasayani, ISRO (PCR): 20 m³ capacity, 2 nos.</td>
<td>********************</td>
</tr>
<tr>
<td>3</td>
<td>Testing, Erection &amp; Commissioning, etc. of items against sl. no. 1 at Propellant Complex Rasayani, ISRO (PCR)</td>
<td>********************</td>
</tr>
<tr>
<td>4</td>
<td>Testing, Erection &amp; Commissioning, etc. of items against sl. no. 2 at Propellant Complex Rasayani, ISRO (PCR)</td>
<td>********************</td>
</tr>
<tr>
<td>5</td>
<td>Approximate Third party Inspection charges for both at Manufacture’s site as well as purchaser’s erection site towards sl.no. 1 &amp; 3 as above (Charges will be paid against documentary evidence “on actuals” or quoted cost, whichever is lower)</td>
<td>********************</td>
</tr>
<tr>
<td>6</td>
<td>Approximate Third party Inspection charges for both at Manufacture’s site as well as purchaser’s erection site towards sl.no. 2 &amp; 4 as above (Charges will be paid against documentary evidence “on actuals” or quoted cost, whichever is lower)</td>
<td>********************</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>SR. NO.</th>
<th>DESCRIPTION</th>
<th>To be filled / confirmed by the bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Name of Company</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Address of Company</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Type of Company (Proprietary/Pvt.Ltd/Public Ltd/Joint Venture/Consortium)</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Registration number</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Year of inception of the company</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Registered address</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Name &amp; address of the office of the Chief Executive of the company</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Name &amp; Designation of the officer of the Bidder to whom all correspondence shall be made for expeditious technical/commercial co-ordination.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Telephone number</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fax number</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E-mail address</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Bidder’s previous track record: The Manufacturer shall be a Company/Society/Firm registered since last 5 (five) years or more.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Locations of the Branches of Company (if any)</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Annual turn-over of the company for the last three years</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>IT returns for the last 3 years</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Enclose copies of the similar Purchase Orders executed in last five years</td>
<td></td>
</tr>
<tr>
<td>SR. NO.</td>
<td>DESCRIPTION</td>
<td>To be filled / confirmed by the bidder</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14.</td>
<td>Customers feedback on the services which is in writing (Pl. enclose copies)</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Quality certification of the company</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>PAN Card Copy</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>The Profit &amp; Loss Account details for the last 3 years which is duly audited and Submitted as part of the Annual Report</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Acceptance for Scope of work as detailed above</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Acceptance of QAP &amp; Inspection Clauses mentioned in the respective annexure</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Acceptance for Sequence of Design, Fabrication, Supply, Testing, Erection &amp; Commissioning of Vertical, Cylindrical &amp; Fixed Cone Roof Furnace Oil (FO) Storage Tanks to Propellant Complex, Rasayani, ISRO (PCR) as mentioned in the tender specification document</td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Details of purchase orders executed earlier to be submitted</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>The bidder shall not have been blacklisted by Central Government or any State Government organization / department in India at the time of submission of the Bid (Self-declaration has to be attached)</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Confirm acceptance of the Delivery schedule as per the contract</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Visit by Purchaser: 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 by him. It is the responsibility of the bidder to submit necessary supporting documents / to evaluate technical competency to meet the specifications of this document</td>
<td></td>
</tr>
</tbody>
</table>
**EXCEPTIONS AND DEVIATIONS**

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

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>Reference in Specification</th>
<th>Purchaser Specification</th>
<th>Offered Specification</th>
<th>DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PAGE NO</td>
<td>CLAUSE NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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, SDSC SHAR

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
### Annexure -4

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

**QUALITY ASSURANCE PLAN (QAP)**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Characteristics / type of check</th>
<th>Ref. Document</th>
<th>Method of check</th>
<th>Quantum of check</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Manufacturer QC</td>
</tr>
<tr>
<td>1</td>
<td>Identification of material with Mill T/C &amp; witness of mechanical Testing.</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% H</td>
</tr>
<tr>
<td>2</td>
<td>Identification of material &amp; witness of mechanical testing for nozzles, fittings, etc.</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% H</td>
</tr>
<tr>
<td>3</td>
<td>Review of fabrication drawings and Design Calculation</td>
<td>As per PO/drawing</td>
<td>Material as per design</td>
<td>100% H</td>
</tr>
<tr>
<td>4</td>
<td>Review of welding procedure &amp; Qualification</td>
<td>AWS</td>
<td>Review</td>
<td>100% H</td>
</tr>
<tr>
<td>5</td>
<td>Checking of root run &amp; final weld by dye Penetrant test</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% W</td>
</tr>
<tr>
<td>6</td>
<td>Marking of nozzle orientation</td>
<td>As per drawing</td>
<td>Location of nozzle</td>
<td>100% W</td>
</tr>
<tr>
<td>7</td>
<td>Dye Penetrant test on all fillet welds &amp; Root butt welds</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% W</td>
</tr>
<tr>
<td>8</td>
<td>Visual &amp; Dimensional inspection</td>
<td>As per approved drawing</td>
<td>Dimension</td>
<td>100% W</td>
</tr>
<tr>
<td>9</td>
<td>Fit up of nozzles and supports</td>
<td>As per std</td>
<td>Visual</td>
<td>100% W</td>
</tr>
<tr>
<td>10</td>
<td>Evaluation of radiography films of all butt welds</td>
<td>As per PO</td>
<td>Film evaluation</td>
<td>100% W</td>
</tr>
<tr>
<td>11</td>
<td>Mechanical cleaning and buffing at accessible places.</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% W</td>
</tr>
<tr>
<td>12</td>
<td>Hydraulic test / Water fill test of tanks as per design code</td>
<td>As per PO</td>
<td>Pressure hold method</td>
<td>100% W</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Characteristics / type of check</td>
<td>Ref. Document</td>
<td>Method of check</td>
<td>Quantum of check</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Manufacturer QC</td>
</tr>
<tr>
<td>13</td>
<td>Pneumatic leak test / Vacuum test</td>
<td>As per PO</td>
<td>Pressure hold method</td>
<td>100% W</td>
</tr>
<tr>
<td>14</td>
<td>Painting</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% W</td>
</tr>
<tr>
<td>15</td>
<td>Stamping of the tank and issue of certificates</td>
<td>As per PO</td>
<td>Visual</td>
<td>100% R</td>
</tr>
<tr>
<td>16</td>
<td>Verification of Material test certificates</td>
<td>As per PO</td>
<td>Review</td>
<td>100% R</td>
</tr>
<tr>
<td>17</td>
<td>Production master file</td>
<td>As per PO</td>
<td>Document</td>
<td>100% R</td>
</tr>
</tbody>
</table>


Note:
The purchaser reserve right to participate in the Inspection at any stage of fabrication & the supplier has to intimate the work progress periodically.
Plan

ALL DIMENSIONS ARE IN MM

--
<table>
<thead>
<tr>
<th>N°</th>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SHELL</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>2</td>
<td>BOTTOM</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>3</td>
<td>TOP</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>4</td>
<td>BRACE</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>5</td>
<td>RACK</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>6</td>
<td>MIN. TUBE</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>7</td>
<td>MAX. HEIGHT</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>8</td>
<td>EXIT</td>
<td>5x50 x 1000</td>
</tr>
<tr>
<td>9</td>
<td>OIL</td>
<td>5x50 x 1000</td>
</tr>
</tbody>
</table>

**Note:** For indicative purpose only as part of tender specification.

All dimensions are in mm.
STANDARD TERMS & CONDITIONS

1. OFFERS SHALL BE SENT ONLINE ONLY USING STANDARD DIGITAL SIGNATURE CERTIFICATE OF CLASS III WITH ENCRYPTION / DECRYPTION. THE TENDERS AUTHORISED ONLINE ON OR BEFORE THE OPEN AUTHORISATION DATE AND TIME ONLY WILL BE CONSIDERED AS VALID TENDERS EVEN THOUGH THE BIDS ARE SUBMITTED ONLINE.

2. THE TENDERER MUST AUTHORISE BID OPENING WITHIN THE TIME STIPULATED IN THE SCHEDULE BY SDSC SHAR. OTHERWISE THE ONLINE BID SUBMITTED WILL NOT BE CONSIDERED FOR EVALUATION. PHYSICAL COPY WILL NOT BE CONSIDERED EVEN THOUGH IT IS RECEIVED BEFORE THE BID SUBMISSION DATE.

In case of two-part tenders, parties shall submit their offers as follows:-

1) Part-I – Techno-commercial Bid
   (No price details shall be mentioned in this bid and shall not upload the details of price along with the techno-commercial bid)

2) Part-II – Price Bid
   In view of Two Part Tender, the Offers submitted contrary to above instructions will be summarily rejected.

3. In case, the tenderer is not interested to participate in the tender, the tenderer shall submit regret letter giving reasons, failing which future enquiries will not be sent.

4. Offer Validity: The validity of the offers / tenders should be 90 days (in case of single part tender) and 120 days (in case two part tender) from the date of opening of the tenders. Tenders with offer validity less than the period mentioned above, will not be considered for evaluation.

5. GST - GST and/or other duties/levies legally leviable and intended to be claimed should be distinctly shown separately in the tender. GST details are given below
   GSTIN: 37AAASG1366J1Z1
   LEGAL NAME : SATISH DHAWAN SPACE CENTRE SHAR
   VALIDITY FROM:29/08/2017
   TYPE OF REGISTRATION:REGULAR

6. Customs Duty - SDSC-SHAR is eligible for 100% Customs Duty exemption as per Notification No. 050/2017 539 (b) Dt: 30.06.2017. This may be taken into account while quoting for import items, if any.

   In case tenderers offering items considering customs duty exemption, they should also indicate the bill of materials and price, separately, with Customs Duty component and terms and conditions thereto.

8. Advance Payment - Wherever advance payment is requested, Bank Guarantee from any Nationalized Bank/Scheduled Bank should be furnished. In case of advance payments, if the party is not supplying the material within the delivery schedule, interest will be levied as per the Prime Lending Rate of RBI plus 2% penal interest.

   Interest will be loaded for advance payments/stage payments as per the prime lending rate of RBI and will be added to the landed cost for comparison purpose. In case of different milestone payments submitted by the parties, a standard and transparent methodology like NPV will be adopted for evaluating the offers.

9. Liquidated Damages - In all cases, delivery schedule indicated in the Purchase Order/Contract is the essence of the contract and if the party fails to deliver the material within the delivery schedule, Liquidated Damages will be levied @ 0.5% per week or part thereof subject to a maximum of 10% of total order value.

10. Performance Bank Guarantee - Performance Bank Guarantee for 10% 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.
11. **Security Deposit** – Security Deposit for 10% of the order value is mandatory, if the ordered value is Rs. 5.00 lakhs and above. 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.

12. **BANK GUARANTEE FOR FIM**: Supplier has to submit Bank guarantee for equal value of Free Issue of Materials (FIM) issued by the Department from Nationalised / Scheduled Bank valid till receipt and acceptance of supply and satisfactory accounting of FIM plus sixty days as claim period.

13. The delivery period mentioned in the tender enquiry, if any, is with the stipulation that no credit will be given for earlier deliveries and offers with delivery beyond the period will be treated as unresponsive.

14. The Department will have the option to consider more than one source of supply and final orders will be given accordingly.

15. The bidders should note that conditional discounts would not have edge in the evaluation process of tenders.


17. Wherever installation/ commissioning involved, the guarantee/warranty period shall reckon only from the date of installation and commissioning.

18. Purchase/Price Preference will be extended to the MSMEs under the Public Procurement Policy for MSMEs formulated under the Micro, Small and Medium Enterprises Development Act, 2006 and instructions issued by Government of India from time to time. Vendors who would like to avail the benefit of MSME should clearly mention the same and submit all the documentary evidences to substantiate their claim along with tender itself.

19. The drawings, specifications, end use etc., given by the Centre/Unit along with the tender enquiry are confidential and shall not be disclosed to any third party.

20. **SPECIAL CONDITIONS FOR SUBMITTING QUOTATIONS IN FOREIGN CURRENCY BY THE INDIAN AGENTS**

   The Tenderer should submit the following documents/information while quoting:-
   
   a) Foreign Principal's proforma invoice/quote indicating the commission payable to the Indian Agent and nature of after sales service to be rendered by the Indian Agent.
   
   b) Copy of Agency agreement with the Foreign Principal and the Indian Agent, precise relationship between them and their mutual interest in the business.
   
   c) Registration and item empanelment of the Indian Agent.
   
   d) Agency Commission will be paid only Indian Currency.
   
   e) Compliance of the tax laws by the Indian Agent.

21. **High Sea Sales** - Against High Sea Sale transactions:

   a. Offers shall be on all inclusive basis including delivery up to Sriharikota at the risk and cost of the supplier. Customs Clearance is the responsibility of the supplier and at his cost and risk.
   
   b. 100% payment will be made within 30 days after receipt and acceptance of the items at our site.
   
   c. GST as applicable
   
   d. Customs Duty Exemption Certificate and other relevant documents required for Customs clearance will be provided.
   
   e. High Sea Sales Agreement furnished by the supplier in accordance with the terms and conditions of our purchase order will be signed and issued by SDSC-SHAR.

22. The following information/ documents are to be submitted wherever applicable.

   1. Product Literature
   
   2. Core banking account number of SBI, RTGS Details
   
   3. PAN No. in quotation and invoices
   
   4. GST Registration details.
   
   5. In case of MSME, registration details / documents from Competent Authority.

23. **EXCLUSION OF TENDERS**

   The following tenders shall be summarily rejected from the procurement process

   a. Tenders received from vendors who have not qualified in terms of their registration.
   
   b. Tenders received against publishing of a limited tender in the CPP portal.
   
   c. Tenders of vendors who have been removed from the vendor list or banned/debarred from having business dealings.
   
   d. Unsolicited tenders from vendors.
   
   e. The tenders which materially depart from the requirements specified in the tender document or which contain false information.
   
   f. The tenders which are not accompanied by the prescribed Earnest Money Deposit.
   
   g. The tenders of vendors who have not agreed to furnish Security Deposit, Performance Bank Guarantee and Liquidated Damages.
   
   h. The validity of the tenders is shorter than the period specified in the tender enquiry.
   
   i. The tenders received from vendors or their agents or anyone acting on their behalf, who have promised or given to any official of the Centre/Unit/Department, a gratification in any form, or anything of value, so as to unduly influence the procurement process.
   
   j. The tenders received from vendors, who, in the opinion of the Centre/Unit, have a conflict of interest materially affecting fair competition.
k. The tenders received from Indian agents on behalf of their foreign Principals/OEMs (in cases where the Principals/OEMs also submit their tenders simultaneously for the same item/product in the same tender).

l. In case two or more tenders are received from an Indian agent on behalf of more than one foreign Principal/OEM, in the same tender for the same item/product.

m. If a firm quotes 'NIL' charges / consideration, the bid shall be treated as un-responsive and will not be considered.