Ph No. 25596461/25595646  Product Development Section (RC & I GROUP)

Tender Enquiry

DATE: OCT 17, 2019

1. Tender number : PDS/2019/StudyModel/OPA-195180

2. Description of the work : Design, fabrication & supply of study model for gas handling system as per the specifications mentioned in Annexure I.

3. a) Sketch/Dwg. No 
   b) Specifications : As per Annexure- I

4. Due date & Time : NOVEMBER 08, 2019 15:00 hrs

5. Mailing Address : Abhishek Sharma
                   C/o Head, Product Development Section, S-62, South Site, BARC, Trombay
                   Mumbai – 400 085

6. Person to contacted for any clarification : Abhishek Sharma, SO(D), PDS
                                              Tel No. 25596461, E-mail: absharma@barc.gov.in

7. Terms of Submission : All the firms should submit technical and financial bid separately in sealed envelope super scribing with i) Tender No. ii) Due Date & iii) Name of work by Indian post only.
Financial bid of firms with technically qualified bids will only be opened.
The bidder should contact the indenting officer for P&I diagram and other related drawings for budgetary estimation.

(ABHISHEK SHARMA)
SO(D), PDS
RC & I Group, BARC
ANNEXURE-I

TECHNICAL SPECIFICATIONS, SCOPE OF WORK & GENERAL INSTRUCTIONS

Tender No.: PDS/2019/StudyModel/OPA-195180  Dated: Oct 17, 2019

Name of the Work: Design, fabrication & supply of study model for gas handling system as per the specifications mentioned in Annexure I.

Quantity: 1 Unit

1.0 Scope:

<table>
<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Size of Model                                                                                                                                  100 cm x 58 cm x 30 cm</td>
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<tr>
<td>2</td>
<td>Scale of Model                                                                                                                                1:10</td>
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<td>3</td>
<td>Base boards and table for the model                                                       This should be prepared out of 12 mm thick plywood with sun mica or equivalent laminate fascia.</td>
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<tr>
<td>4</td>
<td>Packing box                                                                                 Thick wooden/cardboard box shall be provided for safe transportation of model.</td>
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<tr>
<td>5</td>
<td>Model Material                                                                               The model should be basically prepared out of acrylic, PVC, metals or such hard and durable materials. Other model materials shall be used as per the requirement of model. The model should be finished and spray painted with the international color code or as directed.</td>
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| 6 | Model Description                                                                                                                              The physical model should show the following:
   | 1. The room with external shed & partition wall. Staircases, working platforms, columns etc. should also be shown to scale. |
   | 2. Approximately 30 equipment, 08 pumps & around 250 valves should be shown. |
   | 3. All the piping should be shown. |
| 7 | Solidworks Drawings                                                                          The work also involves preparation of 3D Solidworks models for the project and detailed drawings of the equipment. The scope of the work is as follows: |

PART A

1. Preparation of part drawings in Solidworks (Approx. 35 to 40 parts including pressure vessels, pumps, tanks etc. Only external features should be shown with all pipe connections and mounting arrangements. Support arrangements for vessels should also be shown. No internal details are required.)

2. Piping drawing should be prepared in Solidworks. (Approximately 250 meters of piping is involved. Support arrangements for pipes should be shown. Pipes shall be embossed with flow marks and part numbers)

3. Drawing for valves, instruments, flanges and other fitting arrangements should be prepared in Solidworks. Each
component should be embossed with flow marks and part numbers).
4. Room layout drawing should be prepared in Solidworks showing locations of all equipment, support structures, pipe supports, openings etc.

PART B
1. Fabrication drawings of all parts should be prepared. The output should be in pdf as well as DWG format. (Including part and assembly drawings).

| 9. Input from purchaser        | 2. Fabrication drawings in PDF as well as Solidworks/AutoCAD format. |
|                               | 1. Room Layout schematic. |
|                               | 2. GA drawing of equipment layout schematic. |
|                               | 3. Schematics of individual part drawings including pipe connections and port details. |
|                               | 4. Fitting components standards. (For pipes, flanges, valves etc.) |
|                               | 5. Pump details. |
|                               | 6. Technical Details for fabrication (to be included in fabrication drawing) such as material details, welding details etc. |
|                               | 7. Supervision from BARC scientists will be vital in the preparation of drawings. At least 6 inspection visits will be required by BARC officers to the supplier's drafting facility. Initially, BARC officers will sit with the supplier's drafting team for 2-3 days to provide input and to check the progress of the work. Supplier should make necessary arrangements. |
|                               | 8. Template standards and paper sizes will be discussed and finalized and will be provided by BARC. |

2.0 Fabrication/Execution shall be done in following stages:

a) Technical Discussions with user.
b) Preparation of 3 D Solidworks assembly drawings.
c) Preparation of detailed part drawings.
d) Preparation of fabrication drawings for all the components.
e) Submission and obtaining user’s Approval of drawings.
f) Manufacturing, assembly and testing of the study model at supplier’s site.
g) Supply of the system at site including packaging, safe transport, unloading and unpacking.
h) Installation and testing at purchaser’s site.
i) Guarantee/Warranty of the units and its accessories (as applicable).

3.0 Prerequisites from Vendor:

- The vendor should possess licensed copy of SolidWorks and other software used for preparation of drawings.
- The vendor should have similar experience of at least 3 projects with minimum 40 part assemblies.
- The vendor should have executed at least one similar project for DAE units in past three years.
4.0 Material of Construction:

The base board and table for the model should be prepared out of 12 mm thick plywood with sun mica or equivalent laminate fascia. The model should be basically prepared out of acrylic, PVC, metals or such hard and durable materials. Other model materials shall be used as per the requirement of model. The model should be finished and spray painted with the international color code or as directed. Thick wooden/cardboard box should be provided for safe transportation of model. The material of construction may change if required after technical discussions.

5.0 Fabrication and Machining:

- Workmanship shall be accordance with high-grade practice and adequate to achieve the accuracy & finish.
- All the sharp corners shall be rounded off.
- Proper care shall be taken to align the various parts and clamp them with suitable fixtures prior to welding to eliminate distortion.

6.0 Inspection:

- Supplier should make the necessary arrangements for preliminary testing of the system at his site. During the testing, purchaser’s representative will inspect and witness the testing.
- The supplier will make necessary improvements/modifications based on the inspection report before supplying the system.
- Unit will be inspected for overall dimensional accuracies, tolerances and functionality.
- At least 6 inspection visits will be required by BARC officers to the supplier’s drafting facility. Initially, BARC officers will sit with the supplier’s drafting team for 2-3 days to provide input and to check the progress of the work.

7.0 Installation & Commissioning:

The supplier should install and commission the study model system at purchaser’s site.

8.0 Term and Conditions:

(1) You shall send your offer in a sealed envelope indicating delivery period, price inclusive of taxes and other relevant information to:

Abhishek Sharma

C/o Head, Product Development Section,
S-62, South Site,
Bhabha Atomic Research Centre,
Trombay, Mumbai 400 085.
(2) Quotation shall reach us on or before due date. Quotation received through Indian post (Speed/Registered post) only will be acceptable.

(3) On top left corner of the envelope please indicate Quotation for - "Study Model for Gas handling system" along with due date.

(4) Quotations are to be on printed letter head/quotation format which should consist of GST registration number, PAN of the firm etc.

(5) Please mention the delivery period, validity of offer, Govt. Duties, all the taxes and charges applicable, payment terms clearly in the offer.

(6) Incomplete quotation will not be considered.

(7) Price quoted shall be for free delivery up to our site at BARC, Trombay, Mumbai – 400085.

(8) No Free Issue Material (FIM) will be supplied for the fabrication job.

(9) Overwriting, scratching etc. must be avoided in the quotation. Rewriting the whole figure shall carry out any alteration in the figure. The authorised person from the firm shall countersign such figure.

(10) The delivery period mentioned in the quotation shall be strictly adhered to. If the contractor fails to supply and secure extension of delivery date before effecting delivery of the supply against the contract, acceptance of such item by the purchaser will in no way prejudice the right of the purchaser to levy liquidated damage nor will it be entitled to the contractor for payment of statutory levies that comes into force after the expiry of the delivery date.

(11) Guarantee/Warranty certificate for one year against any manufacturing defects should be provided.

(12) You may contact Shri. Abhishek Sharma, SO(D), PDS (contact no. 25596461) for PnI diagram and any other clarifications.

9.0 PLACE OF DELIVERY:

The inspected and accepted Assemblies shall be delivered to:

Product Development Section,
RLG Laboratories,
Bhabha Atomic Research Centre,
Mumbai- 400 085.

10.0 PAYMENT TERMS:

No advance is admissible. Payment will be released only after satisfactory completion of the work on submission of following documents:

a. Satisfactory work completion certificate from our officer

b. Invoice in triplicate

c. Advance stamped receipt

d. Guarantee/Warranty certificate
1.0 CONFIDENTIALITY CLAUSE:

I. CONFIDENTIALITY

No party shall disclose any information to any third party, concerning the matters under this contract generally. In particular, any information identified as "PROPRIETARY" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.

This clause shall apply to the sub-contractors, consultants, advisers or the employees engaged by a party with equal force.

II. "RESTRICTED INFORMATION" CATEGORIES UNDER SECTION 18 OF THE ATOMIC ENERGY ACT, 1962 AND "OFFICIAL SECRETS" UNDER SECTION 5 OF THE OFFICIAL SECRETS ACT, 1923:-

Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation.

III. PROHIBITION AGAINST USE OF BARC’S NAME WITHOUT PERMISSION FOR PUBLICITY PURPOSES:-

The contractor or sub-contractor, consultant, adviser or the employees engaged by the contractor shall not use BARC’s name for any publicity purpose through any public media like press, radio, T.V. or Internet without the prior written approval of BARC.

[Signature]
Abhishek Sharma
Indenting Officer
SO(D), PDS, BARC