Government of India  
Bhabha Atomic Research Centre  
Refuelling Technology Division

T. S. Srinivasan  
Head, RTD

Phone 022-25591898  
email: srintis@barc.gov.in

Ref: RTD/FHS/TSS/OPA/109897  
2 Nov, 2020

Sub: Enquiry for Quotations for Fabrication and Supply of Ram Assembly Platform for FMTF, R&D Centre, TAPS 3&4, Tarapur.

On behalf of President of India, Head Refuelling Technology Division, Bhabha Atomic Research Centre, invites sealed quotations for Fabrication of Ram Assembly Platform for FMTF Tarapur:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Description of Job</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Procurement of raw materials, procurement of standard components, manufacturing, assembly, inspection, testing, packing, supply and site erection of Ram Assembly Platform at 135m elevation of Fuelling Machine Test Facility (FMTF), R&amp;D Centre, TAPS 3&amp;4, Tarapur, Maharashtra.</td>
<td>4 Months</td>
</tr>
</tbody>
</table>

1. Scope of Work: As per attached tender specification (RTD/FHS/AG/MF/01)
2. Delivery period: Within 4 (four) months after acceptance of work order.
3. Price:
   a) Price should be firm throughout the period of contract.
   b) The price quoted shall remain valid for 90 days.
   c) Bidder should quote for the entire job in lump sum along with applicable taxes.
4. Payment:
   a) Payment will be made as per rules, only after the completion of the work to purchaser’s satisfaction against submission of original bill in triplicate, satisfactory completion certificate by user and advance stamped receipt. Advance/Partial payment cannot be made.
   b) 100% payment shall be made by cheque/ECS (Please furnish details).
   c) Deduction of Taxes: Income tax @2% and Educational cess as applicable will be deducted from the bill.
   d) A penalty @0.5% per week (max. 5%) shall be levied for delay in completion of work.
   e) Since the goods are to be supplied against the work order meant for research purpose of a research organization under DAE, the necessary GST will be exempted to the party.
5. **General instructions to bidder:**

a) Supplier should have GST registration. He should clearly write GST No. and PAN No. in his quotation, otherwise the quotation will not be considered.

b) The past experience of the firm in similar nature in BARC/DAE shall be made available with work order copy and satisfactory completion certificate from the user. Also the list of ongoing jobs inside BARC premises with expected completion period shall be provided if any.

c) The quotations in a sealed envelope should reach the following address **on or before 24th Nov 2020 by 1600 hrs.** The envelope must be sent by “speed post” only to reach within above mentioned period. Any other mode of delivery is not acceptable. The envelope should be marked “Enquiry for Quotations for Fabrication and Supply of Ram Assembly Platform for FMTF, R&D Centre, TAPS 3&4, Tarapur”. Following information shall be clearly written on the envelope containing the quotation.

Ref. no. **RTD/FHS/TSS/OPA/10997**

Due date: 24th Nov 2020 till 16:00 hrs.

d) The Bids will be opened preferably on **25th Nov 2020 at 14.00 hrs** subject to availability of Minor fabrication opening committee (MFOC). If opening date falls on Holiday or unavailability of MFOC members, quotations will be opened on next working day. Department reserves the right to extend the date of opening the quotation.

e) Quotation should be printed on letter head signed by authorized signatory.

f) The address on envelop should read as follows:

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Attention: Shri. V K Srivastava
SO/E, FHS, RTD
R. No. 123, HALL-7
BARC, Trombay, Mumbai
Maharashtra 400085.
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g) **Proof of ability:** A brief list of similar jobs executed, if any, and name of the organization to be furnished.

h) For any clarification regarding the job bidder shall contact S/Shri Amarnath Gawas (02525-263057/9421630853)/ M dev (Ph.022-25595136).

6. **Confidentiality clause:**

a) Confidentially:

- Party shall not disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as “Property” in nature by disclosing party shall be kept strictly confidential by receiving party and shall not be disclosed to any third party without the prior consent of the original disclosing party.

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

b) Restricted information:

- Categories under section 18 of the Atomic Energy Act, 1962 and “Official Secrets”
under section 5 of the official Secret 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.

c) Prohibition against use of BARC’S name without permission for publicity purpose:
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.

(T. S. Srinivasan)
Head, RTD
Government of India
Department of Atomic Energy
Bhabha Atomic Research Centre

Tender document for

Manufacturing, Supply and installation of Ram Assembly Platform
at FMTF (ITFT, R&D Centre, TAPS-3&4 Tarapur)

Ref: RTD/FHS/AG/MF/01
1.0 Introduction:
This tender is for manufacturing, supply and installation of Ram Assembly Platform at 135m elevation of Fuelling Machine Test Facility (FMTF), R&D Centre, TAPS 3&4, Tarapur, Maharashtra. The job includes procurement of raw materials, procurement of standard components, manufacturing, assembly, inspection, Shop Testing, painting, packing, delivery and site installation of the complete assembly at FMTF, ITFT, R&D Center, TAPS 3&4, Tarapur.

The FMTF is located at R&D centre, TAPS 3&4 in approx. 40 m tall building made of steel beams and columns. The platform to be manufactures by the supplier and needs to be installed at 135m elevation (35 m above ground level) of the building. To install the platform, the platform needs to be bolted with existing Fuelling Machine (FM) structure. Sketch showing the platform in installed condition at FMTF is shown in Annexure-1. The site installation activity will requires Bolting/Assembly/Aligning of some components/plates with existing FM structure.

The General Assembly (GA) and Detail Drawings (DDs) of the components to be manufactured are supplied with this tender specification. These components are to be manufactured and supplied by the supplier as per this specification and the drawings.

This specification covers requirements of different raw materials, standard items, fabricated/machined components etc. It is desirable that supplier shall have past experience to execute such kind of job preferably at NPCIL / BARC sites at Tarapur, Maharashtra. The entire tender document in this regard consists of hard copy of tender specification and applicable drawings.

2.0 Scope of the work for Supplier:
The scope of the work for supplier includes procurement of raw materials, procurement of standard components, manufacturing, assembly, inspection, Shop Testing, painting, packing and supply, site installation at FMTF, R&D Centre, TAPS 3&4, Tarapur, Maharashtra. The details are as below-

1. Manufacturing & supply of following subassembly / component as per drawings given in table below. The drawings are arranged with this tender document.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Assembly Name</th>
<th>Ref. Drawing No. (GA &amp; DDs)</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FMTF Ram Assembly Platform at 135 m elevation</td>
<td>1. A1-FMTF/PLATFORM/GA/100</td>
<td>3 GAs + 13 DDs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. A3-FMTF/PLATFORM/DD/101</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. A3-FMTF/PLATFORM/DD/102</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. A3-FMTF/PLATFORM/DD/103</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. A2-FMTF/PLATFORM/DD/104</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. A3-FMTF/PLATFORM/DD/105</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. A2-FMTF/PLATFORM/DD/106</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. A3-FMTF/PLATFORM/DD/107</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>9. A3-FMTF/PLATFORM/DD/108</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. A2-FMTF/PLATFORM/DD/109</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. A3-FMTF/PLATFORM/DD/110</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. A2-FMTF/PLATFORM/DD/111</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. A3-FMTF/PLATFORM/GA/112</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>14. A3-FMTF/PLATFORM/GA/113</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>15. A2-FMTF/PLATFORM/DD/114</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>16. A2-FMTF/PLATFORM/DD/115</td>
<td></td>
</tr>
</tbody>
</table>

A sketch of Site Assembly is attached as Annexure-2 & load test table setup is attached as Annexure-3.

2. This platform will be installed on existing FM structure. It is required that Supplier visit the site at Tarapur for clarity. Any suitable changes in the drawings shall be done by the supplier in consultation with purchaser.

3. Procurement of all the raw materials for manufacturing of above components/assemblies and standard items (including spares) in accordance with requirements given in the tender document.
4. Submission of Material Test certificates (as per IS: 2062) of all raw material and bought out components used in drawing ref. no. A2-FMTF/PLATFORM/DD/106.

5. Manufacturing and fabrication of components and preparation of their inspection report.

6. Carry out necessary modifications or improvements as suggested by purchaser to achieve satisfactory performance.

7. Load testing of platform to be carried out at supplier workshop in presence of purchaser. The load test is carried out on Rigid table similar to FM structure as shown in Annexure-II. After testing, inspection like deflection of platform and DPT of weld joints to be check, for any dissimilarity, further repair and repeat of this step till full satisfaction should be carried out by supplier at its own workshop without extra cost. Load test report has to be submitted to purchaser.

8. Painting of components after testing.

9. Packing and safe delivery of components / assemblies and spares along with inspection reports at ITFT, R&D Center, TAPS 3&4, Tarapur after obtaining shipping release from the purchaser. Installation of assemblies at site which include bolting/assembly/cutting of few components/plates. To perform the site installation work, supplier should follow the prevailing safety & security requirements of the R&D Centre, TAPS 3&4, Tarapur.

3.0 Notes to bidder

1. Entire job up to successful site installation should be completed within 4 months from the date of purchase order.

2. The price for the job shall be quoted as lump sum price for entire work excluding taxes and duties. Taxes and duties shall be shown separately.

3. All tools, rigs etc required during manufacturing and site installation shall be arranged by supplier.

4. Any deviation from the requirements indicated in this specification, drawings, annexure etc. shall be brought out clearly by the bidder in his quotation.

4.0 Technical specifications:

4.1 General supply condition:

1. All the Standard Parts / Proprietary Items shall be of reputed make and shall be procured from the reputed supplier.

2. All machined surfaces of the components shall have a finish of 3.2 microns or better unless a better finish is specified on the drawings.

3. Manufacturing of Platform Assembly components is a development activity, it is quite likely that certain modifications of minor nature may be done by the purchaser in the items to be manufactured. The Supplier shall accommodate the same without any additional charge to the purchaser.

4. The Supplier may sub-contract with individuals or firms for some technical services with the prior approval from BARC. The Supplier shall, however, be ultimately responsible for all subcontracted jobs.

4.2 Spare Parts

The supplier shall manufacture/procure and supply the spare parts for the job. The Spare Parts and their required quantities are as follows:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Type of components</th>
<th>UOM</th>
<th>Spare Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bolt M20, L=125, Make Unbracko</td>
<td>No.</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Nut M20, Make Unbracko</td>
<td>No.</td>
<td>10</td>
</tr>
</tbody>
</table>

4.3 Welding
4.3.1 General
All welding shall comply with requirements of IS:816-1969 on code of practice for metal arc welding. Electrode shall be as per AWS Standards. Detailing of the grooves for weld edge preparation shall be done by the Supplier. The weld joint configuration shown on the drawings shall be retained while detailing the joint edge preparations.
The parts that are to be joined by welding may be fitted, aligned and retained in position during welding by the use of bars, jacks, clamps, tack welds or temporary attachments. All the tack welds shall be removed before the commencement of final welding. All these used to secure alignments shall be completely removed after completion of welding. Offset, angular deviation and distortion of parts being joined shall be strictly controlled to achieve the dimensions indicated on the component drawings.

4.3.2 Specific Requirements for Welded Joints
1. Full Penetration Groove Joints
   Before depositing weld metal on the second side of the joint, the root of double weld full penetration butt joints shall be prepared by suitable methods such as chipping / grinding (thermal gouging is not permitted) and checked by Liquid Penetrant Examination. It shall be free from unacceptable defects like cracks, porosity etc.

2. Quality of Welds
   i) Groove welds shall be free from lack of fusion, undercuts, overlaps, abrupt ridges and valleys.
   ii) The surface of fillet welds shall be free from coarse ripples or grooves, undercuts, overlaps, abrupt ridges or valleys etc. and shall merge smoothly with the surfaces of members being joined.
   iii) To ensure that the weld grooves are completely filled so that surface of the weld metal at any point does not fall below the surface of the adjoining plate, weld metal may be built up as reinforcement. The thickness of reinforcement shall not exceed 1.5 mm. The groove welds shall be ground flush wherever indicated in the drawings.
   iv) DP test with Supplier approved material should be used and test for all the welds shall be performed and test report should be submitted to purchaser.

4.4 Painting
All the structural steel / carbon steel components and structures having surfaces exposed to open atmosphere and does not have any mating component on that surface shall be painted as following:
1. Painting shall be done after completion of manufacture and before packing and dispatch.
2. The surfaces to be painted shall be cleaned by completely removing all mill scale, rust, paint and foreign matter.
3. The painting shall be first done with primer and then by two coats of epoxy paint.

4.5 Inspection and Shop Testing
4.5.1 General
A systematic record of all inspection and testing carried out by the supplier shall be maintained and offered to the purchaser before delivery.

4.5.2 Dimensional Inspection:
100% visual and dimensional inspection, including inspection of geometric features and surface finish, shall be performed on all dimensions of the components and their numerical values shall be recorded to ensure their conformance to the respective drawings. These dimensions shall be recorded and shall be part of history docket.

4.5.3 Load Test
Supplier shall carry out Load test of the platform at its own workshop by using suitable loads upto 800 kg (8x100 kg), the platform shall be rest on Rigid table similar to Ram Head as shown in Annexure-II.
4.5.4 **Post inspection**
Supplier shall carry out post inspection, DPT of load bearing components to be checked for any dissimilarity in weld joints.

4.6 **Site Installation**
The supplier shall carry out satisfactory site installation in presence of purchaser. The platform will rest on FM structure as shown in Annexure-I, EOT crane for installation will be provided by purchaser.

4.7 **Reports:**
The detailed reports for data on various inspection, DP test and load test shall be compiled and furnished by the Supplier. These reports shall be signed by authorized representative of the Supplier. Two copies of reports shall be delivered along with the delivery of subassembly.

4.8 **PACKING AND SHIPMENT**
1. The subassemblies shall be thoroughly cleaned before packing.
2. The subassemblies shall be shipped to ITFT, R&D centre, TAPS 3&4, Tarapur. The Supplier shall be fully responsible for the safe delivery without damage.
3. The package subassembly / components shall be clearly and legibly marked in a suitable permanent manner on top and sides with the information like Equipment Name, gross weight, purchase order number, number of package in shipment etc.
4. Delivery shall be made only after obtaining 'shipping release' from purchaser.

4.9 **Guarantee / Warrantee**
The Platform assembly components manufactured / supplied by the supplier shall be guaranteed for a period of 12 months against manufacturing / material defect of the components supplied by the supplier.

4.10 **Purchaser’s Drawings, Specifications etc.**
4.10.1 **Purpose**
All drawings, specifications etc. that may be furnished to supplier by the purchaser are property of purchaser and are intended to be complementary and to provide for and comprise everything necessary for the completion of works/supply. These are not to be used for any works or performance other than those for which these have been provided and shall be returned to purchaser immediately on completion of work/supply, in good condition.

4.10.2 **Property of purchaser**
If, during the process of execution of the contact, any improvement, refinement or technical changes and modifications are effected by Supplier, such changes shall not affect the title to the property of purchaser and all the information, specifications, drawings etc including the improvement/ modifications effected by Supplier shall continue to be the property of purchaser. Supplier shall not have any claim or rights whatsoever in respect of purchaser’s drawings, specifications, prototypes etc. even where improvement, refinement, modifications etc. have been effected by Supplier.

4.10.3 **Confidential Information**
The drawings, specifications, samples and such other information furnished to Supplier relating to the supply/works, sub-system/equipment etc. are to be treated as confidential which shall be held by Supplier in confidence and shall not be divulged, transferred, exchanged, gifted or communicated to any third party without the prior written consent of purchaser. Supplier therefore binds himself, his successors, heirs, executors, administrators, employees and the permitted assignees or such other persons or agents
directly or indirectly concerned with the works/supply to the confidential nature of the drawings, specification, prototypes, samples etc.
Annexure-2

FMTF RAM ASSEMBLY PLATFORM
INSTALLED ON FUELLING MACHINE

FMTF RAM ASSEMBLY PLATFORM (1 TON)

FUELLING MACHINE (FM)
**Square Cap**

FUELING MAchine Test Facility/MAfternoon

Bhabha Atomic Research Centre

Government of India

**NOTES**

1. 30201 GRADE 8.
2. 800-2-100X100X100
3. 800-2-100X100X100
4. MATERIALS: STEEL, MILD.
5. DIMENSIONS SHOWN IN THE ASSEMBLY ARE FINISHED DIMENSIONS TO BE ACCOURED TO.
6. DRAIN NO. 1 OR INLET RAIN ASSOCIATION PLATE (400/PLANT/PLANT/4/100).
7. PART NO. 1 OR INLET RAIN ASSOCIATION PLATE.
NOTES

1. PART NO. 04 FROM ASSEMBLY PLATFORM ASSEMBLY OF PLATFORM DD 107

2. SHEET 1 OF 2

3. DIMENSIONS SHOWN IN THE ASSEMBLY ARE MACHINING, RAW MATERIAL SIZE TO BE ESTIMATED BY MANUFACTURER.

4. M6 BOLT TYPE B.

5. PLATE, MANUALLY LIFT OF.

6. UNNECKED.

7. 20 80XX SERIES.

8. ALUMINUM ALLOY STANDARD.

9. M6 SCREW STANDARD.

10. STAY.
INCLINED TOOL GUARD PLATE

PROFESSION:...

SCALE: 1:10

DESIGN CHDX

DESCRIPTION:...

NOTES:

1. PART NO. 8 OF FRFT RAW ASM PLATFORM (90-PLATFORM/FA/100).
2. M10 BOLT L=20 MM.
3. M10 M8 NUT L=20 MM.
4. TOOL GUARD PLATE IS 3062: GRADE B.
5. MATERIALS OR/MT.

BILL OF MATERIALS:

1. 50
2. 10
3. 70
4. 10
5. 10