TENDER No: BARC/UED/KM/18119  
DUE DATE: 28/09/2019

Tender enquiry

Sub: Fabrication and supply of a control panel for Resistance heating Pit Furnaces in SUMP.

Dear Sir / Madam,

Quotations are invited on behalf of Head, UED in sealed envelope for Fabrication and supply of a control panel for Resistance Heating Pit furnace in SUMP as per following specific terms and conditions.

1. **Scope of work:**

The scope of work includes the followings:

- Fabrication of the control panel as per the given technical specification
• The control panel should be of IP55 protection standard.
• The panel has to powder coated MS, which has undergone the seven tank process and spray painted and oven dried.
• All the material required for the panel are in the scope of the vendor.
• The panel has to be available in complete form for inspection before dispatch.
• The fabrication of the panel should be done only after the approval of all the related drawings.
• The commissioning support is required during the panel installation.
• At the time of hand over all the documents have to be submitted as hard copy, it includes all the related manuals of controllers, digital ammeters, voltmeters, Thyristor controller manuals, etc. All the related panel drawings power line drawings and control line drawings.
• The panel fabrication should follow the following standards: IS: 732 for electrical wiring and All cables shall conform to IS-692, IS-7098, IS-1554 (Part-I) 1964 and IS 694-1990 or latest.

2. TECHNICAL SPECIFICATION:

• The panel is for operation of resistance heating furnace. Qty – 1Nos
• The heating control is based on the phase angle control of the thyristor.
• The furnace has 1 heating zones of 45KW.
• The heater is a 3ph star connected load.
• The system should be a thyristor based heating system.
• The thyristor module should be accompanied by its controller module.
• The heater operating circuit should be controlled by a temperature controller and a blind controller for safety. i.e. it should have 2 temperature controllers. The main controller should be a programmable PID controller and the blind controller should be an ON/OFF controller. The controllers should have a 4-20mA retransmission signal facility.
• The current in all the 3 phases should be measurable with an ammeter.
• Current transformer for the measurement of the current should be as per the requirement of the ammeter.
• The overall panel should have a voltmeter to measure the voltage across the 3 phases.
• The starting of the heater should be through a contactor and a switch.
• All the contactors being provided should have an additional NO auxiliary contact.
• In case the blind controller temperature is attained an alarm has to be generated.
• Hooter should be provided for audio alarm indication.
• The panels should have self ventilation.
• The panel should have a provision for cable entry from bottom.
• All the contactors should be rated as per the wattage of the respective equipment.
• The cabling should be done with proper ferruling and color coding.
• LED indication of all the equipment status, incomer status should be available on the panel.
• LED indication of the heater ON, Blind controller relay output, control circuit ON.
• Control circuit should have a separate MCB for protection.
• The thyristor module should have overload indication.
• The failure in the thyristor control module should be indicated through LEDs on the thyristor controller.
• The panel should have a starter to operate a vacuum pump of 3HP.
• The Panel should have indication of Motor start stop and trip.
• The panel should have emergency stop push button to stop all the operations.
• The panel should be made of CRC sheet, It should go through the 7 tank process and should be powder coated with Siemens grey and oven dried.
• All the equipment installed inside the panel should have user manual and test certificates.

3. **QUANTITY:**
   Total job is as tabulated below:

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<thead>
<tr>
<th>Sr No</th>
<th>Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>1.</td>
<td>Fabrication and supply of a control panel for Pit furnace in SUMP</td>
<td>1 set</td>
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4. **PRICE:**
   Offered should be including the entire scope of work (Fabrication, supply, commissioning, taxes, packing and forwarding, transportation). Max possible break up price should be given in the offer. Taxes, octroi, ED, other levies, transportation whichever is applicable should be mentioned separately and precisely.

5. **TESTING:**
The system will be tested for its complete functionality before dispatch. The panel will be tested with a lamp load for manual variation of the power. The system will be tested for its complete functionality at BARC after installation. All relevant material test certificates for ammeters, voltmeters, temperature controllers and documents have to be submitted at the time of hand over along with bill.

6. **WARRANTY:**
   12 months from the date of commissioning.

7. **VALIDITY:**
   Price should be valid throughout the contract period.

8. **COMPLETION PERIOD:**
   The job is to be completed within **8 weeks** from the date of receipt of the order any delay which is liable to the contractor is liable for penalty @ 0.5% per week (5% maximum) to be imposed on the contractor.

9. **INCOME TAX:**
   Income Tax @2% and surcharge on tax as applicable shall be deducted from vendor’s bill.

10. **SAFETY:**
    Party should follow all the safety procedure while working inside BARC. During the execution of the work order party will be responsible for all safety precautions to be maintained in the work area. The party should arrange all the safety appliances.

11. **PAYMENT:**
    100% including taxes after receipt of the unit at our site, final acceptance of the total job and submission of the following documents:
    1. Delivery Challan.
    2. Advance Stamped Receipt.
    3. Original Bill.
    4. Guarantee certificate
    5. Job completion certificate.

12. **TERMS AND CONDITIONS:**

    **Note:** [Reference: (2/Misc-9/Lgl/2001/92 dated April 30, 2001, BARC)]

    **Confidentiality:** No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as “Propriety” 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.

“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.

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, TV or Internet without the prior written approval of BARC.

Party should write clearly the Tender No. and due date on the top of envelope. Quotation should be submitted on printed letter head and signed. Party should mention their own PAN No or GST registration No. Quotations should be sent by government postal service only (e.g. speed post)

Thanking you,

Yours faithfully,

(P. Kalpana Mitra)
SO/F
HPS, UED

For and On Behalf of
President of India