

Dr. Panchanana Khuntia
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Dr. Panchanana Khuntia
Project Coordinator

Ref.: PHY/2018/012/Stores
Dated: 04.03.2019

Limited Tender No.: PHY/2018/012/Stores

Due Date: 25.03.2019, 5:00 PM

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of “**Compact tube furnace with accessories**” confirming to the specifications given in (Annexure-I):

Instructions to the Bidder

(i) Preparation of Bids: - The limited tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid SEPARATELY.

(ii) Delivery of the tender: - The tender shall be sent to the below-mentioned addresses either by speed post/registered post or by courier so as to reach the following address before the due date and time specified in our Schedule:

**Dr. Panchanana Khuntia, Department of Physics
Indian Institute of Technology Madras
Chennai-600036, India**

(iii) Opening of the tender: - The offer/bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements. In respect of opening of financial bid, those bidders who are technically qualified only will be called for.

(iv) Prices: - The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges to Physics Department of IIT Madras. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of tax & duties should be clearly indicated separately. IIT Madras is eligible for concessional GST and relevant certificate will be issued. The price should be quoted without custom duty and excise duty, since IIT Madras is exempt from payment of excise duty, and the custom duty will be paid at concessional rate against duty exemption certificate.

In case of import supply, the price should be quoted without custom duty. IIT Madras is exempted from levy of IGST on Imports and eligible for concessional custom duty (not exceeding 5%) and the price should be quoted on EX-WORKS and CIP basis indicating the mode of shipment.

(v) Agency Commission: - Agency commission, if any, will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in the case of 'Nil' commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent. The foreign Principal should indicate about the percentage of payment and it should be included in the originally quoted basic price, if any.

(vi) Terms of Delivery: - The item should be supplied to the Physics Departments as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.

(vii) Technical Bid Opening: The technical bid will be opened on **26th March, 2019** and the financial bids of those tenders who are technically qualified will be opened at a later date.

(viii) IIT Madras reserves the full right to accept / reject any tender at stage without assigning any reason.

Sincerely,

Dr. Panchanana Khuntia
Department of Physics
Indian Institute of Technology Madras
Chennai-600036, India
Ph: +91-44-2257 4847
Email: pkhuntia@iitm.ac.in

TERMS AND CONDITIONS

Important Conditions of the tender

1. The due date for the submission of the tender is **25.03.2019, 5:00 P.M.**

2. The offers / bids should be submitted in two bids systems (i.e.) Technical bid and Financial bid separately. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The Technical bid and Financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Limited Tender for supply of one “**Compact Tube Furnace with Accessories**” should be written on the left side of the Outer bigger cover and sealed. Mark reference no. on the top of the envelopes.

3. **Performance Security:-** The successful bidder should submit Performance Security for an amount of 5% of the value of the contract/supply. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt from the commercial bank, Bank Guarantee from any nationalized bank of India will be acceptable.

Only after submission of Performance Security, Purchase Order/Work Order will be released / L.C will be opened.

Performance Security in the form of Bank Guarantee:- In case the successful bidder wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end user bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee from a Nationalized Bank of India.

The Bank Guarantee should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including the warranty obligations.

4. If an Indian agent is involved, the following documents must be enclosed:

Foreign principal’s proforma invoice indicating the commission payable to the Indian Agent and nature of after-sales service to be rendered by the Indian Agent.

- ✓ Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
- ✓ The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.

5. The offer/bids should be sent only for a machine that is available in the market and supplied to a number of customers (renowned research/academic institutes in India and abroad). A list of customers in India and abroad with details must accompany the quotations. The bidder should have supplied at least one renowned research/academic institute in India. Quotations for a prototype machine will not be accepted.

6. Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid.

7. Documentary proof for the claimed position and repetition accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.

8. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.

9. Validity: Validity of Quotation not less than 90 days from the due date of tender.

10. Delivery Schedule:- The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.

11. Risk Purchase Clause:- In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.

12. Payment:- No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. **In case of import supplies the payment will be made only through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done).**

13. Advance Payment:- No advance payment is generally admissible. In case of specific percentage of advance payment is required, the Foreign Vendor has to submit a Bank Guarantee equal to the amount of advance payment and it should be routed through the Beneficiary Bank to the end user Bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee through a Nationalized Bank of India.

14. On-site Installation: - The equipment or machinery has to be installed or commissioned by the successful bidder within 15 to 20 days from the date of receipt of the item at site of IIT Madras. Installation should be done by highly qualified engineer of the successful bidder in free of cost. Free installation and local service is mandatory

15. Warranty/Guarantee: - The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately. (for more details please refer our Technical Specifications). At least one year warranty from the date of installation. Clear warranty statement required.

16. Late offer: - The offers received after the due date and time will not be considered. The Institute shall not be responsible for the late receipt of Tender on account of Postal, Courier or any other delay.

17. Acceptance and Rejection: - IIT Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

18. Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.

19. Disputes and Jurisdiction: -

(a) **Settlement of Disputes:** Any dispute, controversy or claim arising out of or in connection with this PO including any question regarding its existence, validity, breach or termination, shall in the first instance be attempted to be resolved amicably by both the Parties. If attempts for such amicable resolution fails or no decision is reached within 30 days whichever is earlier, then such disputes shall be settled by arbitration in accordance with the Arbitration and

Conciliation Act, 1996. Unless the Parties agree on a sole arbitrator, within 30 days from the receipt of a written request by one Party from the other Party to so agree, the arbitral panel shall comprise of three arbitrators. In that event, the supplier will nominate one arbitrator and the Project Coordinator of IIT Madras shall nominate one arbitrator. The Dean IC&SR will nominate the Presiding Arbitrator of the arbitral tribunal. The arbitration proceedings shall be carried out in English language. The cost of arbitration and fees of the arbitrator(s) shall be shared equally by the Parties. The seat of arbitration shall be at IC&SR IIT Madras, Chennai.

(b) The Applicable Law: This Purchase Order shall be construed, interpreted and governed by the Laws of India, Court at Chennai shall have exclusive jurisdiction subject to the arbitration clause.

(c) Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.

20. All Amendments, time extension, clarifications etc., will be uploaded on the website only and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date/ time shall be considered on account of delay in receipt of any document by mail.

Acknowledgement:- It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.

SIGNATURE OF TENDERER

ALONG WITH SEAL OF THE

COMPANY WITH DATE

Annexure-I

SPECIFICATIONS FOR “Compact tube furnace with accessories”

The furnace should have a 50 mm Outer Diameter (OD) ceramic processing tube with fiber plugs to be used in the synthesis of all types of new material samples under vacuum and other gas conditions. The max. heating temperature is 1300°C with horizontal heating application. The temperature controller should have multiple segments with programmable high precision digital controller with an accuracy of +/-1 °C.

INSTRUMENT SPECIFICATIONS:

Working Temperature	✓ 1250 °C continuous
Heating Elements	High quality integrated heating elements
Structure of the Furnace	<ul style="list-style-type: none"> ✓ Double layer textured stainless steel casing with air cooling. ✓ Cooling fans inside to keep case temperature < 60°C. ✓ Dual shell housing for low external temperatures and high stability ✓ Include high quality ceramic tube, vacuum flange, gauge & valves. ✓ Safeguarded against fumes and splashing, and easy to replace ✓ Solid state relays provide for low-noise operation ✓ Several heating rate (temperature ramp) : 1°C/min or less ✓ Multi steps temperature programming with option to store several program for future access
Power Consumption	Max. 1.5 kW
Input Voltage	Single Phase, 230V AC, 50 Hz
Thermocouple	High quality S-type
Temperature Accuracy	+/- 1° C
Heating Zone	Single zone with heated length= 245 mm or above
Constant Temperature Zone	80 mm within ± 5° C
Tube Materials	High purity ceramic, Purity > 99.99%
Temperature Controller	<p>Include very High quality temperature controller Proportional–integral–derivative control (PID control) and auto-tune function : Microprocessor based programmable PID temperature controller with LCD display</p> <ul style="list-style-type: none"> ✓ 5 programs ✓ 4 segments programmed with ramping, cooling and dwelling steps

	<ul style="list-style-type: none"> ✓ Heating rate (ramping rate): 1 deg. C/min. or less ✓ Built-in over-temperature controller alarm and thermocouple failure alarm ✓ +/- 1 °C temperature control accuracy ✓ PC communication port
Processing tube	<ul style="list-style-type: none"> ✓ Premier grade ceramic tube ✓ 40mm (I.D) x 50 mm (O.D) ✓ <u>Tube length= 445 mm or above and heated length=245 mm or above.</u> ✓ Support tube for 50 mm (OD) tubes to prevent the tube from bending under high temperature
Manual Gas Supply System and Sealing Flanges	<ul style="list-style-type: none"> ✓ Include Manual Gas Supply System only for non-flammable protective/reactive gas applications ✓ Include one pair sealing flange with high quality high-temperature O-ring ✓ Able to achieve vacuum pressure [$\sim 10^{-6}$ Torr] ✓ Include spares for the smooth operation of the tube furnace in gas and vacuum conditions.

N.B.: The successful bidder/vendor should be able to provide excellent life time technical support/service to the tube furnace.

Additional specifications for temp. controller:

Status message: yes

Entering prog. names: yes

Real-time clock: yes

Operating hour counter: yes

Sincerely,

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