



Indian Institute of Technology Kanpur
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Date: 9 July 2015

Closing date: 20th July 2015

Ref. No. SERB/MSE/TM/2015-2016/01

Sub: Request for submission of quotation for Laboratory High Temperature Tube Furnace System

For the Plasmonics and Perovskites Lab located in WL204A, it requires the quotation for High Temperature Tube Furnace complying with or better than all of the specifications mentioned in **Appendix A**. The closing date for the above item is **5 PM, 20th July 2015**.

The prospective supplies are required to send quotation in two parts in sealed envelopes, as "Technical Bid" and "Financial Bid". The Technical Bid should contain detailed technical specification of the product being offered and should not mention any prices. The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges. The two separate and sealed envelopes should be clearly marked appropriately as "Technical Bid" and "Price Bid".

Terms and Conditions:

1. Maximum education discount, if any should be offered
2. Validity of quotation should be at least for 60 days
3. Prices should include delivery up to IIT Kanpur
4. Prices should include the installation and training cost
5. **Warranty** should be for at least **two years** after installation **with 1 year AMC at free of cost**.
6. Delivery period: **Within 80 days** from the date of purchase order
7. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection)
8. Quotation should carry proper certifications like agency certificate, proprietary certificate, etc.
9. An undertaking that the vendor will supply all the spares and services for the equipment for at least 5 years from the date of commissioning

Kindly send the Technical and Financial bids in sealed envelopes latest by **5 PM, 20th July 2015** to:

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Technical Specifications for High Temperature Tube Furnace

Required Specification**:

Sl. No.	Parameter	Required Specification
1.	Temperature	1650 °C (2 hrs) with continuous working at 1600°C.
2.	Model Name	Clearly mention make, model and model number of the equipment being offered.
3.	Chamber Size	Tube furnace of 50 mm inner diameter, 800 mm long with working area (maintaining constant temperature) of up to 6 inch (150 mm). The tube ends should have a cover for sealing or maintaining required environment (by passing inert gas).
4.	Controller	Computer controlled/ Eurotherm/ Libratherm microprocessor based Digital PID Temp. Programmer/ Controller, Temperature stability ± 1 °C.
5.	Heating element	KANTHAL SUPER 1800 or better quality. Certificate for Kanthal Super MUST be provided.
6.	No. of Heating elements	At least 8 (EIGHT)
7.	Thermocouple	Attached both at heater and also near-sample chamber
8.	Software	<ul style="list-style-type: none"> - Complete set to provide the required thermal cycle, programmable for at least 16 segments - The instrument should be installed with latest available version of software for control, operation and analysis. - The supplier should upgrade the software as and when the upgradations become available for at least five years from installation - Should have intelligent calibration logic.
9.	Gas Inlet Control System	<p>(One) unit Gas Inlet Control System for Controlled Atmosphere operation comprising of</p> <ol style="list-style-type: none"> a) 1 no. 3:1 Manifold, for Mixture of 3 Nos. Gases b) 3 nos. Flowmeters, 0.1 – 1 litre/min. with Needle Valve c) 1 set Pigtail Clip, for control the Flow of Mixing Gas d) 1 no. Toggle Valve <p>All assembled on the Furnace Control Panel for purging application of the Furnace Tube with Argon gas, Hydrogen gas and oxygen/nitrogen selectively from our Cylinders.</p>
10.	Safety Norms	The instrument should be compliant with international norms for safety and environment

Technical Specifications for High Temperature Tube Furnace

11.	Proof of Specifications	<ul style="list-style-type: none"> Please provide the proof of specification) of temperature, tube, and controller (in order to ensure high quality of the furnace)
12.	History Check	<ul style="list-style-type: none"> Provide copy of 'Performance Reports' from standard research institute like IITs, national labs where the equipment has been supplied. This requirement is MUST.
13.	Computer or Laptop	<p><u>Quote as optional accessories:</u></p> <ul style="list-style-type: none"> PC interface with data acquisition, program storage and processing analysis facility. The unit should come with a high performance computer with the latest version of Windows operating system. Minimum Configuration: intel core i3 processor, 4GB RAM, 500 Gb Hard Disk, 24" Display with other essential peripherals
14.	Spare Parts	<p><u>Quote as optional accessories:</u></p> <p>Please provide a list of price for spares (heating elements, thermocouple, tube, etc) and commit this price for next one year (if equipment is purchased from your firm).</p>
15.	Installation, Commissioning and Training	<ol style="list-style-type: none"> The delivery should be considered complete only after successful commissioning of the instrument The pre-installation requirements should be communicated to IIT Kanpur well in advance of the installation The Installation, commissioning and training should be done only by well trained factory engineers The supplier should provide training to at least two candidates at the installation site to make them familiar with smooth operation of the instrument
16.	After-sales Service	<ol style="list-style-type: none"> The supplier should provide a prompt after-sales service such as regular instrument maintenance, troubleshooting and fixing The list of service centers in India should be included.
17.	Warranty	<p>Warranty of 2 years with 1 year AMC must be provided at no cost with the high temperature furnace (especially for tube and controller).</p>
<p>**Additional optional accessories should be indicated separately along with their price. The above specs are desirable and the actual numbers achievable for your system should be indicated.</p>		