



Indian Institute of Technology Kanpur

Materials Science & Engineering

Enquiry Number: MSE/SO/Nov-2017/05

Enquiry Dated: November 20th, 2017

Closing Time & Date: 5:00 PM, December 11th, 2017

We require the quotation for split low-temperature tube furnace complying with or better than all of the specifications mentioned in **Appendix A**. The tube furnace should be capable of sustaining 1100°C for prolonged duration (continuous use). The maximum outer diameter of the tube that can be inserted inside the furnace should be 60 mm with 300 mm of heated length. The closing time and date for the above item is **5:00 PM on December 11th, 2017**.

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 be FOB (if it is imported).
4. Price should include shipping charges if the furnace is from India.
5. Prices should include the installation and training cost
6. Warranty should be for at least one year after installation
7. Normal payment terms for the Institute will be applicable.
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 one years from the date of commissioning at site.

Kindly send the Technical and Financial bids in sealed envelopes latest by 5:00 PM on 11th December 2017 to:

Dr. Shobit Omar
Faculty Building 412
Materials Science & Engineering
IIT Kanpur, U.P. 208016, India.
e-mail: somar@iitk.ac.in
Ph: 09454012093

Appendix A

Technical Specifications for Low Temperature Furnace

Sr. No.	Parameter	Required Specification
1.	Description	<p>Low-temperature split furnace (1200°C).</p> <ul style="list-style-type: none"> • The maximum outer diameter should be 60 mm with 300 mm of the heating length. Stainless Steel sealing flanges should be provided in operate in vacuum or gas atmosphere. • Split furnace can operate in both vertical and horizontal configurations. • Stand to hold the split-furnace in vertical/horizontal positions should be provided. • Temperature fluctuation should not be more than 1°C. • Temperature controller with a single set-point control option should be present. Controller can be fitted with RS232 for data logging. • Insulation plug should be provided to minimize the heat loss. • Should be able to provide a ramp of 200°C/ hour. • Should provide thermocouples both: (i) flexible external thermocouple that can be placed near the sample, and (ii) internal thermocouple for controlling furnace temperature. • Can run at 230 V AC 50 Hz.
2.	Model Name	Clearly mention make, model and model number of the equipment being offered.
3.	Heating Elements & Thermocouples	<ul style="list-style-type: none"> • Clearly provide the details of heating element. • Type of thermocouples provided (both external and internal).
4.	Factory calibration	The low-temperature furnace should come with factory calibrations.
5.	Software	<ul style="list-style-type: none"> • The instrument should be installed with latest available version of software for control, operation and analysis. • Should have intelligent calibration logic.
6	Power Supply	<ul style="list-style-type: none"> • Specify the requirements of the power supply for the offered high temperature furnace
7	Documentation	<ul style="list-style-type: none"> • One sets of operating manual for the equipment and control system should be provided in hard copies. • A soft copy of the above manuals should also be provided in a CD/DVD.
8	Safety Norms	<ul style="list-style-type: none"> • The instrument should be compliant with international norms for safety and environment.
9	Installation, Commissioning and Training	<ul style="list-style-type: none"> • The delivery of the furnace 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.

Appendix A

Technical Specifications for Low Temperature Furnace

10.	After-sales Service	<ul 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.
11.	Spares	<ul style="list-style-type: none"> • An undertaking that the vendor will supply all the spares and services for the equipment for at least 1 year from the date of commissioning.
12.	Furnace of the same model in India	Provide the list of institutes where the same model is installed.

Optional Items:

1.	Heating elements	<ul style="list-style-type: none"> • Include the heating elements as spares.
2.	Thermocouples	<ul style="list-style-type: none"> • Include thermocouples (one each for internal and external connection) for replacement in case of damage of thermocouples.
3.	Alumina tube of 60 mm diameter.	
4.	Other spare items should be included.	

Warranty and Maintenance:

1. Must have warranty for one year (in base cost)
2. Include the extended warranty and AMC (annual maintenance cost) for the next two years as 'optional'