

**Department of Materials Science & Engineering  
Indian Institute of Technology, Kanpur**

**Call for Quotation: Horizontal Tube Furnace**

Enquiry No. MSE/KK/12-13/1 dated 14/01/2013

Closing Date : 31/01/2013

We are interested to purchase a Horizontal Tube Furnace complying with or better than all of the specifications mentioned in Appendix A. The tube furnace should be capable of working up to at least 1600°C in normal air. The furnace should also be capable of operating under vacuum or in the gas atmosphere of Argon, Nitrogen, Carbon dioxide, Sulphur dioxide etc. Appropriate stainless steel flanges, hoses, gaskets, O-rings, valves and pressure gauges should be provided along with the furnace for vacuum or gas operation. Do not include vacuum pumps or any other gas accessories. The furnace should also include a power cable along with Indian style power plug or adaptor.

The prospective suppliers should note and mandatorily follow the following points while sending the quotations.

1. Send the Technical Bid and Price Bid in two separate envelopes. The Technical Bid should contain detailed technical specification of the product being offered and should not mention any prices. The Price Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges up to IIT Kanpur, U.P. 208016, India and any other associated costs if applicable.
2. The two separate and sealed envelopes should be clearly marked appropriately as "Technical Bid" and "Price Bid".
3. The offered product should comply with or be better in each of the specifications mentioned in Appendix A. The prospective supplier should print out Appendix A and clearly indicate in the "Supplier's Comments" column against each specification, whether the corresponding specification is complied with or not along with brief specification. The completely and properly filled Appendix A should be signed and stamped by the supplier and should be included in each of the Technical Bid and Price Bid.
4. The bids should also contain the detailed technical specification of each and every part of the equipment, photographs of the model of the offered equipment in running condition and a brief list of all the customers within India to whom the similar instrument has already been supplied.

Please send the Technical and Price bids in sealed envelopes latest by 31<sup>st</sup> January 2013 to:

**Dr. Kaustubh Kulkarni,  
Faculty Building Office No. 403,  
Materials Science and Engineering,  
IIT Kanpur, U.P. 208016, India.  
e-mail: kkaustub@iitk.ac.in**

## Appendix A

### Technical Specifications for Horizontal Tube Furnace

Item No.	Parameter	Required Specification	Supplier's Comments (Complied/Not Complied and Brief Specification)
1.	Model Name	Clearly mention make, model and model number of the equipment being offered.	
2.	Operating Temperature Range	Up to 1600°C or higher with continuous operation (min. 100 h) up to 1500°C. Also specify minimum operating temperature.	
3.	Processing Tube	Alumina tube with purity greater than 99.5%.	
4.	Tube diameter	Tube inner diameter should be between 35mm and 50mm.	
5.	Temperature Accuracy	±1°C.	
6.	Heated Length	Uniform heated length should be at least 70mm with the temperature uniformity of ±1°C.	
7.	Furnace atmosphere	Furnace should be able to operate in normal air, under vacuum or with controlled atmosphere of Argon, nitrogen, carbon di-oxide or sulphur di-oxide.	
8.	Thermocouple and Temperature Controller	Specify the thermocouple type and number used for temperature control. The best quality temperature controller should be included with the furnace.	
9.	Heating elements	Suitable heating elements should be provided for operations specified above.	
10.	Insulation	Good insulation preferably fibrous Alumina or better for minimizing loss of heat.	
11.	Vacuum/Gas accessories	Appropriate stainless steel flanges, O-rings, gaskets, hoses, valves and pressure gauges should be included. Mention their specifications.	
12.	Power Supply	Specify requirements of the power supply. Also, power cable with Indian style power plug or adaptor should be included.	
13.	Warranty	Minimum of 1 year.	
<b>Signature:</b>			
<b>Supplier Name:</b>			
<b>Address and Contact Details:</b>			
<b>Date:</b>			