

**Department of Materials Science and Engineering  
Indian Institute of Technology Kanpur**

Date: 16/09/2013  
IITK/MSE/Furnace

Subject: Quotation for Laboratory High Temperature Furnace System

We are interested in procuring two furnaces with following specification:

**Essentials**

1. High Temperature, programmable, tubular, resistance-heating furnace. One furnace should have MoSi<sub>2</sub> heating elements, whereas the second furnace should have SiC heating elements. Both furnaces should be double-walled with mild steel casing outside and on inside having ceramic fiber insulation.
2. The MoSi<sub>2</sub> heating element based furnace is meant for continuous working temperature up to 1600°C and should be capable of reaching a maximum intermittent temperature of 1650°C.
3. The SiC heating element based furnace is meant for continuous working temperature of up to 1350°C and should be capable of reaching a maximum intermittent temperature of 1400°C.
4. Both the furnace system should come with double recrystallized alumina tubing with end flanges so that the furnace can be used in various gases which include N<sub>2</sub>, Ar, Air and H<sub>2</sub>. The furnace should have the flexibility of fitting two types of tubes, namely, a 1.75 inch OD Al<sub>2</sub>O<sub>3</sub> tube and a 2.5 inch OD alumina tube.
5. The furnace should come with glass flow controller/mixer.
6. The length of the hot zone of furnace should be at least 10 cm at the highest temperature

Accessories:

1. Spare set of heating elements for each of the furnace
2. One spare thermocouple for each of the furnace
3. One spare set of controller for each for the furnace

Please carefully note and comply with the following instructions. If any of the instructions are not followed, the submitted bid will be disqualified.

- i. Please submit your bids in two separate envelopes named “Technical Bid” and “Price bid”. The Technical bid should contain the detailed technical specifications of the proposed machine, photographs of the machine and other accessories offered. The Technical Bid should not contain any prices. The Price Bid should contain the technical specifications as well as prices in details.
- ii. The prospective supplier should be either original manufacturer or 100% subsidiary or authorized agent of the original manufacturer of the offered

machine. The Technical Bid should contain an original certificate obtained from the principal company to this effect.

- iii. The prospective supplier should have supplied the offered machine to at least 3 government or government-affiliated institutes.
- iv. Each of the envelopes should be appropriately marked as either “Technical Bid” or “Price Bid”. Enclose the two sealed envelopes in another bigger sealed envelope and send it to the address mentioned below.
- v. The bids should reach the undersigned before **5 pm on 26<sup>th</sup> September 2013**.

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