

Tender Notification for the procurement of a three-zone furnace for material synthesis at IISc (Last Date for submission of tenders: 4<sup>th</sup> June' 2020)

REF: PH/ASIN/320/2020-21

7<sup>th</sup> May, 2020

Dear Sir/Madam,

Kindly send best/lowest quotation for the following items on **C.I.P. Bangalore basis**. The quotation should clearly indicate the terms of delivery, delivery schedule, E.D., transportation charges, if any, payment terms etc. Kindly submit the quotation latest by 4<sup>th</sup> June, 2020 by email or post.

**Please enclose a compliance certificate along with the quotation.**

**Specifications: 3-zone furnace with heated length of 24" (or 600 mm) with the following specifications:**

1. 3 temperature zones, with independent temperature control.
2. Furnace splits into two halves (split-tube furnace) along its length, and can hold process tubes. The orientation of the furnace should be horizontal to the floor.
3. Allows process tubes of outer diameter at-least up-to 60 mm, and not more than 80mm.
4. Maximum operating temperature = 1200C.
5. Heat up time (to 1100C)  $\leq$  55 minutes, when measured with empty tube and insulation plugs/blocks.
6. The temperature control should be provided by 3 independent programmable temperature controllers (one for each zone) with at-least six independent segments each. The controllers should be included.
7. Inset thermocouples should be present at each zone to measure temperature.
8. End zones should have appropriate insulation.
9. Outer mesh grid or suitable protection for user. During heating up-to 800C, the outside surface of furnace should have a temperature  $<$  50 C.
10. Related accessories such as connectors, adapters, cables etc. necessary for independent operation of the system
11. Total power (all zones combined)  $\geq$  2000W.
12. 1 year warranty
13. No vacuum pump or work tube is necessary.
14. The vendor should have a track record of having previously supplied at-least three similar equipment (2 or 3-zone furnaces) in India during the past three years. It would be necessary to provide necessary details and desirable to get 2-3 reference letters from customers in India.

**Options (all options to be quoted separately)**

1. Vacuum flanges for connecting a 60mm quartz tube to external 1/4 inch tube.
2. Quartz tube with 60mm outer diameter and length in the range 150-180cm.
3. 1 year additional warranty (for a total warranty of two years).
4. 2 years additional warranty (for a total warranty of three years).

**Terms and conditions:**

1. The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).
2. The payment will be preferably through confirmed irrevocable Letter of Credit.
3. Any discount for payment terms- wire transfer in advance, should be mentioned in the quotation.
4. The lead time for the delivery of the equipment should not be more than 3-4 months from the date of receipt of our purchase order, and opening of irrevocable letter of credit (whichever is later).

Yours Sincerely,



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