

Govt. of India
Bhabha Atomic Research Centre
Atomic & Molecular Physics Division

Ref: AMPD/AKY/2019/ 27665

Date: 07.02.2019

Sub: Minor Fabrication-Invitation of quotation for
**Fabrication of substrate heater with feed through flange and PID controller as per details given
in Annexure I**

Dear Sir,

1. Quotations are invited for the minor fabrication job, as per the enclosed specifications and drawings.
2. Bidder shall quote for fabrication of these components with materials and without materials.
3. Taxes and excise duties shall be quoted separately. Form AF shall be provided if necessary.
4. The last date for receipt of quotation at BARC is **28.02.2019 (AN)**.
5. The quotation shall be mailed (it should not be faxed) to the following address in a sealed envelope superscribed with the *reference number* **AMPD/AKY/2019/ 27665** and due date **28.02.2019 (AN)**.
Head, Atomic and Molecular Physics Division
Attn. Dr. Ashok Kumar Yadav
Scientific Officer (D)
Atomic and Molecular Physics Division
Bhabha Atomic Research Centre
Mumbai – 400 085
6. The bidder shall have to take an insurance policy against any material issued to him by the purchase.
7. The fabrication work shall be subjected to inspection by our engineer. The finished components shall not be dispatched prior to approval by our engineer at bidder's works. Necessary inspection facilities should be provided to our engineers during the fabrication at bidder's premises.
8. The bidder shall deliver the finished components after approval by our Scientific officer, within **6 (six) weeks** from the date the firm purchase order issued to the bidder. The finished components and the scrap from the free issue material shall be delivered by the bidder at **BARC, Mumbai**.
9. Head, Atomic and Molecular Physics Division, BARC reserves the right to accept/reject any or all quotations without assigning any reasons.


(Dr. Ashok Kumar Yadav)

SO/D, Atomic and Molecular Physics Division
BARC

Through:


(Dr. M. N. Deo)

Head, Atomic & Molecular Physics Division
BARC

डा. एम. एन. देव / Dr. M. N. DEO

अध्यक्ष, परमाणु एवं आण्विक भौतिकी प्रभाग
Head, Atomic & Molecular Physics Division

Encl: Annexure I: Specifications of substrate heater with feed through flange and PID controller

Annexure I

Details of the Fabrication of substrate heater with feed through flange and PID controller

1. The substrate heater should have following specifications:
 - (i) Flat plate compact heater with 2" diameter uniform hot area ($\leq \pm 2$ deg).
 - (ii) Operating temperature up to 1100 K in vacuum (10^{-6} mbar).
 - (iii) The heater should also work in air and oxygen environment.
 - (iv) It should have embedded K-type thermocouple.
 - (v) It should come with proper radiation shield.
 - (vi) The heater should have connections through a 150 CF SS flange as specified below.
 - (vii) The heater should come with PID programmable temperature controller connected through 150 CF SS flange.
 - (viii) The overall dimension of heater should be less than 3" dia and 60 mm thick.
 - (ix) The base of the heater should be flat for easy mounting.

2. The 150 CF SS flange with feed through
 - (i) This flange will have feed through for heater and thermocouple connections.
 - (ii) The connections should be detachable when required.
 - (iii) The feed through should be vacuum leak proof upto 10^{-7} mbar.
 - (iv) The flange should also come with 20 nos. of copper gaskets of 150CF.