

**Government of India  
Bhabha Atomic Research Centre  
Laser & Plasma Technology Division**

Trombay  
Mumbai - 400 085.

REF: LPTD/BD/WORKS/2017/151684

Date: 31/08/2017

**Notice inviting tenders**

To : All parties  
Sub : **Assembly of PCF internals as per annexure-1.**

**DUE DATE: 11/09/2017**

Dear Sirs,

1. Quotations are invited for the minor fabrication job as per the enclosed specifications. Taxes and excise duties shall be quoted separately. PAN number and VAT or Service tax number of the party must be mentioned in the quotation.
2. The quotations must reach Head, Laser & Plasma Technology Division by the due date as above and must be sent in a sealed envelope *superscribed with the above reference number and due date given above*. Quotations must be sent by registered post / speed post through Indian postal services.
3. The address on the envelope should read  
**Attn. Dr B Dikshit: Assembly of PCF internals**  
To  
**The Head,  
Laser & Plasma Technology Division.  
Modular Lab., BARC, Mumbai - 400 085.**
4. The bidder shall get the job approved by our engineer and complete the work order within 120 days from the date of issue of work order. The work order will be executed by the bidder inside BARC at: Hall-6, BARC, Trombay, Mumbai - 400 085.
5. Head, Laser & Plasma Technology Division, BARC reserves the right to accept or reject any or all quotations without assigning any reason.

Yours faithfully.

*B. Dikshit*

(Dr B Dikshit)  
SO/G, L&PTD

**Dr. B. DIKSHIT**  
Officer-in-charge

RIS Process Engineering  
L&PTD, BARC,  
Mumbai - 400 085.

Encl: Detailed Technical Specification (Annexure-1)

Copy to:

- 1) BARC site (Hall-6)
- 2) SIRD (for uploading in BARC website)
- 3) V S Bhavan notice board

**Technical Specification for Assembly of PCF internals**

Specification	Quantity
<p><b><u>Assembly of PCF internals</u></b></p> <p><u>Scope of work</u></p> <p>1) Cleaning the internal surface of PCF chamber of volume ~16 m<sup>3</sup> by vacuum cleaner and ethyl alcohol to make it vacuum compatible.</p> <p>3) Assembly of one additional heater on dump plate and one on floor of bottom trolley (each heater length is ~23m).</p> <p>4) Careful lifting and assembly of approximately ~50 number of graphite components of different sizes to make the graphite structure for recirculation of liquid metal (Assembly drawings will be provided).</p> <p>4) All the gaps in furnace through which heat might be lost should be covered by making heat shield packs of required sizes (raw materials will be provided).</p> <p>5) Lifting and Inserting the bottom trolley and top trolley along with graphite structure, heat shields and heating elements inside PCF vacuum chamber.</p> <p>6) Lifting and Inserting the copper crucible along with metal target (total weight ~500kg) safely inside PCF vacuum chamber.</p> <p>7) Connecting all the cooling water lines such as crucible, front and back water pads, anode and dump plate using conflate flanges and copper gaskets and making it leak tight to the order of ~10<sup>-9</sup> mbar-litre/sec.</p> <p>8) Closing of PCF chamber after connecting the extension chamber to PCF chamber using two SS bellows of approximate size~1200mm×1000mm×500mm</p> <p>NOTE: As it is a labor job to be executed on site inside BARC, the vendor should have PVC for its workers.</p>	1 No.

## **General Specifications**

**1.0 Free issue materials :-** No free issue materials

### **2.0 Quality surveillance, inspection and inspection report**

2.1 All work covered by the specification shall be subject to quality surveillance by the purchaser or his authorized representative for which purpose the fabricator shall allow access at all reasonable time during manufacture to

2.1.1 The premises in which the work is being carried out.

2.1.2 The drawing and/or tooling involved.

2.1.3 Gauge instruments, etc. required for inspecting the work.

2.2 Inspection and tests shall be carried out by the fabricator as per the requirements detailed in the drawings and these specifications.

2.3 Components found unsatisfactory as to workmanship or material shall be removed by fabricator and replaced by components, which are satisfactory.

### **3.0 Delivery**

The bidder shall deliver the finished components after approval by our engineer within 120 days from the date the firm purchase order is issued to bidder.

### **4.0 Subcontract**

4.1 The fabricator shall not sub-contract any or all the work without written consent from the purchaser, The Fabricator shall be responsible to the purchaser for all work of the sub-contractor of the fabricator, if allowed by the purchaser.

### **5.0 Tax**

5.1 H form will be issued if necessary.

Income Tax @ 2% will be deducted from your bill for an amount > Rs. 20,000/.

Guarantee certificate/warranty certificate may be forwarded along with the bills.

Payment: Payment shall be made only on satisfactory completion of work and on production of bill, advance stamped receipt and guarantee / warranty certificate.