



CSIR - NATIONAL PHYSICAL LABORATORY

(Council of Scientific & Industrial Research)

Dr. K. S. Krishnan Marg, Pusa,

New Delhi -110 012

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Emails: spo@nplindia.org cosp@nplindia.org



From: Director, CSIR-NPL

Ref. No.: 14-III/KK (456)-12PB/PIC

Dt:

Dear Sirs,

Sub.: INVITATION FOR PRE-INDENT CONFERENCE –Intimation Regarding

NPL, a premier R&D unit of Council of Scientific & Industrial Research, intends to procure “**A complete high temperature crystal growth system with optical float zone furnace**” required to grow new crystals of different materials for R&D work. In this regard, a Pre-Indent Conference (PIC) is being organized to finalize the broad technical specifications of the required system. Prospective OEMs or their Authorized Distributors, System Integrators having specialization and experience of such installations and their maintenance thereof are invited to make presentations followed by discussions on technology, design, features utility, technical parameters and other related Techno-commercial issues. The credentials, technical capability, financial standing & track record of vendors, will be evaluated, based upon PIC discussions and documents submitted by the interested parties. For this purpose brief details and purpose of requisite equipment is enclosed at Annexure –I.

Further the detailed scope of PIC and other conditions can be seen on NPL website: <http://www.nplindia.org> under Tenders link. Parties willing to participate must send a formal communication and queries, if any, to Controller of Stores & Purchase (emails: cosp@nplindia.org / spo@nplindia.org), NPL **latest by 28.03.2013 up to 4.00 PM (IST)**. The schedule for Pre-Indent Conference will be as follows (as per pointer advertisement placed at Annexure -II):

Date & time of PIC: 04.04.2013 at 10.00 AM (IST) onwards.

Venue: Conference Room, 2nd Floor, Main Building, CSIR-NPL, New Delhi -110012.

Interested parties willing to take part in the above said PIC are requested to submit the documents to prove their Technical Capabilities, Client List, Financial Capabilities, Experience and Credentials at the time of attending of PIC along with Vendor Registration Form as per Annexure -III. A Line of confirmation in this regard may be sent.

Thanking you,

Yours Faithfully,

Encl: A/A

(Tariq Badar)

Controller of Stores & Purchase

Proposed Specifications

A. A Complete High-temperature Optical Float Zone Furnace (OFZ) for crystallization

- (1) Maximum attainable temperature: $\geq 2200^{\circ}\text{C}$
- (2) Typical operating temperature: $\geq 1850^{\circ}\text{C}$
- (3) Maximum difference of circumference temperature of the zone: $\leq 50^{\circ}\text{C}$
- (4) Crystal growth length upto 150 mm
- (5) Growth rate: ~ 0.01 to 100 mm/hr
- (6) Crystal diameter: upto 8 mm
- (7) High speed up and down movement: ~ 10 to 150 mm/min
- (8) Rotation rate: ~ 5 to 100 rpm
- (9) Lamps: Suitable set of Halogen lamps
- (10) Sample chamber: Quartz
- (11) Ultimate pressure (vacuum): $\sim 5 \times 10^{-5}$ torr
- (12) Maximum attainable pressure: ~ 1 MPa
- (13) Environment: Provision to have inert, reducing or oxidizing gaseous atmosphere in the growth chamber
- (14) CCD camera with LCD monitoring for insitu growth of crystal
- (15) Remote monitoring and control System
- (16) PC Control System
- (17) Suitable Water Chiller cum Circulating Unit
- (18) Turbo Molecular and Rotary Pumps for required Vacuum
- (19) A complete feed rod making system along with the required Hydrostatic Press
- (20) Programmable high temperature vertical molybdenum disilicide (MoSi_2) furnace (1800°C) having gas flow provision and rotational lifter having the required features of seed rotation, up and down speed.

- B. Table top diamond crystal cutting machine with goniometer**
C. Table top crystal polisher

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PRE -INDENT CONFERENCE NOTICE No: 17/2012

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Sd/-
(Controller of Stores & Purchase)

VENDOR'S INFORMATION FORM

[The interested party shall fill in this form and should submit at the time of attending PIC. This should be done on the letter head of the firm]

1. Vendor's Legal Name :

2. Vendor's actual or intended Country of Registration :

3. Vendor's Legal Address in Country of Registration :

4. Vendor's Authorization Representative Information

Name :

Address :

Telephone/Fax numbers :

Email Address :