



# CSIR - NATIONAL PHYSICAL LABORATORY

(Council of Scientific & Industrial Research)

Dr. K. S. Krishnan Marg, Pusa, New Delhi -110 012

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**From:** Director, CSIR-NPL

**Ref. No.:** 17(956)14-PB/PIC

**Dt:** 14.07.2014

M/S .....

Dear Sirs,

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

National Physical Laboratory (NPL), a premier R&D unit of Council of Scientific & Industrial Research, intends to procure specific services for “**Setting up of Exhaust Facility for two Diffusion Furnaces in Solar Energy Clean Room Complex**” required at NPL (as per pointer advertisement placed at **Annexure -II**).

In this regard, a **Pre-Indent Conference (PIC)** is being organized to finalize the broad technical specifications of the required services as mentioned above. Prospective vendors 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**.

The detailed scope of PIC and other conditions can also be seen on NPL website: <http://www.nplindia.org> under “Tenders/Pre-Indent” → “Pre-Indent Conference Notifications” link. Parties willing to participate must send a formal communication to Controller of Stores & Purchase (emails: [cosp@nplindia.org](mailto:cosp@nplindia.org) / [spo@nplindia.org](mailto:spo@nplindia.org)), in advance. The schedule for PIC will be as follows (as per pointer advertisement placed at Annexure -II):

**Date & time of PIC: 25.07.2014 at 10.00 AM (IST) onwards.**

**Venue:** TEC Conference Room, 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 Information Form as per Annexure -III. A Line of confirmation in this regard may be sent.*

Thanking you,

**Yours Faithfully,**

Encl: A/A

**(Kuldeep Kaushik)**  
**Stores & Purchase Officer**

**Ref. No.: 17(956)13-PB/PIC****Tentative Technical Specification for Exhaust Works at Solar Energy Clean room Complex, CSIR-NPL**

**Scope:** Setting up of exhaust facilities for two sets of diffusion furnaces (M/s Tempress, Model TS 6803) housed in Silicon processing area in Solar Energy Clean Room complex which involves design, supply, installation, testing and commissioning of such facilities.

1. Scope of the job work is supply of materials as per the design layout prepared by the party, complete installation, testing and commissioning.
2. Participating vendor is expected to design exhaust facility based on following data. Brief Calculation of design shall be presented in the Pre-Indent Conference (PIC) for technical evaluation.
3. Participating vendor should provide detail process and instrumentation design (PID).
4. Requirement of blower capacity shall be given by bidder based on exhaust design.
5. Design of damper valve suitable for semiconductor exhaust shall be submitted during PIC.
6. It is expected that design of Exhaust system shall have vetting by professionals in the area at end of the Vendor.

**Technical Data for Exhaust Design:**

Technical data: **Process lines and exhaust facilities required for two sets of diffusion furnaces (Tempress, TS6803)**

Details of diffusion furnaces for which exhaust required					Specifications of exhaust facilities required for different processes		
S N	Equipment/Tool Name	Nature	Line No	Tool End Connection mm	Mouth Pressure Pa	Flow CFM	Remarks
1.	Diffusion Furnace 1	Non Toxic/Clean	1	127 mm	200-250	225	Damper required
		Non Toxic/Clean	2	127 mm	200-250	130	Damper required
		Non Toxic/Clean	3	127 mm	200-250	200	Damper required
		Non Toxic	4	203.2 mm	200-250	400	Damper required
		Non Toxic	5	203.2 mm	200-250	400	Damper required
		Toxic	6	125 mm	200-250	70	Damper required
		Toxic	7	101.6 mm	200-250	20	Damper required
2.	Diffusion Furnace 2	Non Toxic/Clean	1	127 mm	200-250	225	Damper required
		Non Toxic/Clean	2	127 mm	200-250	130	Damper required
		Non Toxic/Clean	3	127 mm	200-250	200	Damper required
		Non Toxic	4	203.2 mm	200-250	400	Damper required
		Non Toxic	5	203.2 mm	200-250	400	Damper required
		Toxic	6	125 mm	200-250	70	Damper required
		Toxic	7	101.6 mm	200-250	20	Damper required
		Dry pump	8	KF 40		300	

Note: Toxic exhaust lines (#6 & 7 of each furnace) will be routed through scrubber (Make: Pure Air systems/Ebara, USA; model; E. DOC. Sc-10-4ip). These connections are in the scope of the supplier of the scrubber (up to 5 meter). However, the connection of exhaust lines from the scrubber to the exhaust blower/exhaust header as per the design would be in the scope of the vendor for creating exhaust facility.

**Exhaust Duct material should have following material specification:**

1. Material – Stainless Steel 304
2. Thickness – 1.5-2 mm
3. Arrangements should be there in each line to monitor the flow and pressure so that it can be set as per the specifications required for each line.

**List of approved OEM's for Various Components, equipment required in the Project:**

1	Exhaust Blowers	1. Chasm Technologies Pvt Ltd 2. Alpha Projects Pvt Ltd 3. Pilani Envirotech
2	Clamps	1. AKI 2. Stauff 3. Any other reputed make
3	Exhaust Material	Reputed Make conforming to the requirement
4	Dampers	Reputed Make conforming to the requirement
5	Unistrut	1. Divine 2. DKNV 3. RSSIPL

**Bid Technical Evaluation Criteria:**

1. The participating Vendor must have successfully completed similar projects in nature for customers in semiconductor manufacturing, nanotechnology and photovoltaic cells.
2. Participating Vendor should have experienced in working inside clean room of class 1000 or better for exhaust work.
3. Should have experience and demonstrate capability to design safe and robust Exhaust Distribution System.
4. List of customers, projects done with contact address, phone number, e-mail etc., for necessary site visit to any of the projects mentioned in your reference may be conducted at our discretion.
5. Participating Vendor is advised to visit facility/site before presentation for Pre-Indent Conference so that material quantity is estimated and design may be vetted in PIC. In case of assumptions, bidder will be responsible.

**For site visit please contact:**

1. Dr. S.K. Srivastava Room No. 51 A CSIR-National Physical Laboratory Dr. K.S. Krishnan Road New Delhi-110012 Tel. +91-11-45608617 E-mail: <a href="mailto:srivassk@nplindia.org">srivassk@nplindia.org</a>	2. Dr. Sushil Kumar Semiconductor Building CSIR-National Physical Laboratory Dr. K.S. Krishnan Road New Delhi-110012 Tel. +91-11-45608650 E-mail: <a href="mailto:skumar@nplindia.org">skumar@nplindia.org</a>
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Emails: [spo@nplindia.org](mailto:spo@nplindia.org) [cosp@nplindia.org](mailto:cosp@nplindia.org)**PRE -INDENT CONFERENCE NOTICE No: 05/2014**

National Physical Laboratory (NPL), a premier R&D unit of Council of Scientific & Industrial Research, intends to procure specific services for “**Setting up of Exhaust Facility for two Diffusion Furnaces in Solar Energy Clean Room Complex**” required for NPL.

In this regard, a **Pre-Indent Conference (PIC)** is being organized to finalize the broad technical specifications of the required system(s) as mentioned above. Prospective vendors 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.

Further, the detailed scope of PIC and other conditions must be seen on NPL website: <http://www.nplindia.org> under “Tenders/Pre-Indent” → “Pre-Indent Conference Notifications” links. Parties willing to participate must send a formal communication to Controller of Stores & Purchase (emails: [cosp@nplindia.org](mailto:cosp@nplindia.org)/[spo@nplindia.org](mailto:spo@nplindia.org)), in advance. The schedule for PIC will be as follows:

**Date & time of PIC: 25.07.2014 at 10.00 AM (IST) onwards.**

**Venue:** TEC Conference Room, CSIR-NPL, New Delhi -110012.

Further Corrigendum/Amendments, if any, will be posted in NPL website: <http://www.nplindia.org>

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 :