

**e-Tender Document for**

**Supply and Installation of *High Temperature***

***Furnace with Gas Facility***

**at**

**CIPET: SARP- LARPM, Bhubaneswar**



**TENDER DOCUMENT NO.06/2020-21**

**LAST DATE FOR SUBMISSION OF BID: 12.11.2020**

**SCHOOL FOR ADVANCED RESEARCH IN POLYMERS (SARP) - LARPM**  
**CENTRAL INSTITUTE OF PETROCHEMICALS ENGINEERING & TECHNOLOGY**  
**(Ministry of Chemicals & Fertilizer, Govt. of India)**  
**B-25, C.N.I. Complex, Patia, Bhubaneswar – 751 024 (Odisha)**  
**Tel: 0674-2740173, Fax: 0674-2740463,**  
**Web: [www.cipet.gov.in](http://www.cipet.gov.in), e-mail : [larpmcipet@larpm.in](mailto:larpmcipet@larpm.in)**

**e-TENDER NOTICE (06/2020-21)**

CIPET: SARP-LARPM, Bhubaneswar invites bids through e-Tender **UNDER SINGLE STAGE TWO BIDS SYSTEM IN e-TENDER PORTAL ( [www.tenderwizard.com/CIPET](http://www.tenderwizard.com/CIPET) )** from Reputed Suppliers/ Manufacturers / Authorized Dealer & Distributors for supply & installation of the following equipment at CIPET: SARP-LARPM, Bhubaneswar. Bid offers should be of two parts viz., Technical Bid & Commercial Bid.

Sl. No.	Name of the Equipments	Tender No.
1.	<b>High Temperature Furnace with Gas facility (Programmable Dual Zone/Sliding Tube Furnace)</b>	06/2020-21

Bidders are requested to visit the web-site [www.tenderwizard.com/CIPET](http://www.tenderwizard.com/CIPET) or [www.cipet.gov.in](http://www.cipet.gov.in) and submit their offers electronically. It may be noted that offers submitted on paper manually or the offers sent by post shall not be accepted. The last date for submission of the bid is as mentioned below:

**Last date for the online submission of the bid** : 12.11.2020, 03.00 P.M.  
**Opening of Technical bid** : 12.11.2020, 03.30 P.M.  
**Opening of Commercial bid** : After Evaluation of Technical Bid

For further clarification, please contact no. 0674-2740173

**Note :- Further if any e-Tender queries please contact the following officials of e-tenderwizard:**

Sl. No.	Name of the Official	Contact Number	e-mail ID
01.	Mr. S.K. Mohapatra	7377708585	twhelpdesk404@gmail.com
02.	Mr. Swades Kumar Bal	7008064095	twhelpdesk404@gmail.com

CIPET:SARP-LARPM reserves the absolute right to accept/reject any or all bids at any stage of the tender process without assigning any reason whatsoever.

**Asst. Admin. Officer, CIPET:SARP-LARPM**

## INSTRUCTIONS TO BIDDERS

### (A) Introduction

School for Advanced in Research (SARP) - LARPM is an exclusive R&D wing of CIPET functioning at Bhubaneswar. SARP-LARPM was set up with an objective of developing high-end polymeric materials for various engineering applications in the areas of packaging, automotives, aerospace, defence, biomedical, energy conversion and energy storage etc. The laboratory has high-end characterization facility and basic amenities under one roof, for Researchers and Intellectuals working in the areas of Polymer Science & Technology. The laboratory is also recognized by National Accreditation Board for Testing and Calibration Laboratories (NABL) as per ISO:IEC 17025:2005 and DST / DSIR, Govt. of India for undertaking Research Activities in applied areas of Polymer Science & Technology.

### (B) The Bidding Documents

- **Content of Bidding Documents**

The Bidding Documents include;

- (a) Instruction to Bidders;
- (b) Terms and Conditions of Contract;
- (c) Schedule of Requirements;
- (d) Technical Specifications & Compliance Sheets;
- (e) Manufacturer's Authorization Form;
- (f) Bid Form and Price Schedules;
- (g) Contract Form;
- (h) Deviation Statement;

- The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in rejection of the bid.

- **Amendment of Bidding Documents:**

- At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at their own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by amendment.
- In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bid, the Purchaser may, at their discretion, extend the deadline for the submission of bids

### (C) Eligible Criteria for Bidders :

- Balance sheet & PL Account statement for the last 3 financial years (2016-17, 2017-18, 2018-19)
- IT return for the last 3 Assessment years (2017-18, 2018-19, 2019-20) & submit PAN Card, GST Registration Certificate.
- The Bidders must have satisfactorily supplied & completed installation of similar type of Instrument at least 02 nos. in any Govt. Organisations/PSU/Corporate Sectors during the last 5 years. The Certificate in support of that from the user must be attached. The Customer Feed Back Certificate must be enclosed.

- Average Annual Turnover certificate for the last financial year of Rupees One Crore or more certified by Chartered Accountant.
- Self-declaration on **NO PENDING LITIGATION** along with he is **Not Debarred/ Blacklisted or Banned** from any Central Government / PSU / State Govt / any Corporate Sector.
- The vendor shall have local service and application office and infrastructure to attend visit within 48 hours.
- The bidders shall give a list of his relatives working with the CIPET along with their designations and addresses.
- Only Original Equipment Manufacturer (OEM) or Authorised Dealer can participate.
- The bidder should sign & seal each page of the tender document and required to upload.

**(D) Terms&Conditions :**

- **Taxes:**All taxes, duties, packing, forwarding& installation have been included in the quoted rate. ***GST should be charged 5% only, since CIPET is having DSIR certificate.***
- **Performance Security:** 10% of the Purchase Order value shall be submitted by the party towards performance security within 7 days of receipt of Purchase Order in the form of Demand Draft. The Performance Security will be refunded after warranty period is over.
- **Warranty:**The Instrument should be covered under 1 year warranty from the date of installation and commissioning with maintenance must be provided in order to keep the equipment in continuous working condition. Part numbers of all parts for which warranty will not be applicable should be specified in the quotation
- **Delivery Period:**Supplier should be delivered the instrument within 4-6 weeks from the date of receipt of Purchase Order, failing which liquidated damage @ 0.5% per week shall be deducted from the final payment, for each week of delay beyond the delivery period upto maximum of 2%.
- **Payment:**90% after supply of Instrument & balance 10% after successful installation, commissioning& Training as per our Technical Specifications & subject to fulfilment of other terms & conditions of the e-Tender documents.
- The Bidder shall provide the Bank accounts details along with Scanned copy of cancelled cheque for onward transaction.
- The vendor should furnish details of customers in India.
- The vendor should have technical support in the area of application and service available within the country.
- In case of any up-gradation of software then the same should be provided free of cost by the supplier/manufacturer.
- Power and receptacle/socket as per Indian Standards should be provided.

- Appropriate tool box/kit for routine maintenance should be provided with the equipment
- On-site (at SARP-LARPM, Bhubaneswar) installation, demonstration and training for system operation and maintenance as well as application support should be provided by the vendor at its own cost.
- Bidder should specify & provide all mandatory and other accessories required for installation, commissioning and running the machine.
- The repairing/rectification/replacement/configuration required, if any, of the items under warranty must be done at CIPET:SARP-LARPM, Bhubaneswar by the bidder.
- The Annual Maintenance Charges (AMC) for 3 Years should be quoted separately (Optional), which should not be quoted in the Price Bid.
- The supplier should mention the make & model against the Instrument.
- **Spares:** The supplier must confirm in writing on its letter pad that the spares for the instrument will be available for a period of at least 05 (Five) years after the Instrument supplied.
- **Bid document:** The vendor should read the e-Tender documents carefully before quoting. It shall be deemed that the vendor has gone through the documents carefully and has understood its implication.
- **Technical bid:** The Technical Bid should accompany with full technical literature, leaflets of the technical features of the Instrument must be submitted for evaluation.
- **Manual:** Complete set of service manual for diagnostics, trouble shooting and maintenance along with electronic circuit diagram (in English) – hard and soft copy should be provided with the instrument
- The e-Tender, submitted by the Bidder who have already been declared as Black Listed or whose contract was terminated for dissatisfactory supply or who was unable to supply any Institute/Organization run by the State / Central Government / PSU / Corporate Sectors will not be considered even his being the lowest rate.
- The Bidder should provide relevant documents regarding the Partnership Firm/Public/Pvt. Ltd. Company/Cooperative society.
- Any legal disputes subject to Bhubaneswar, India jurisdiction only

### **Pre-Requisites**

- Pre-installation requirements indicating details of power requirement, utility air, water, ventilation, safety device, if any, along with the foundation requirement needed for installation & commissioning should be provided prior to supply of Machine.
- Appropriate tool box/kit for routine maintenance should be provided with the equipment
- All documents (i.e. operating & service manuals, drawings etc.) and original softwares relevant to the instrument and its accessories must be supplied.

- Power and receptacle/socket as per Indian Standards should be provided.
- The vendor shall visit within 48 hours of requirement.

### **Training**

- Training at vendor site and onsite for system operation and maintenance as well as application support should be provided by the vendor at its own cost.
- Prices quoted should be on Delivered Duty Paid (DDP) basis to CIPET:SARP-LARPM, Bhubaneswar.

### **Delivery and Documents**

#### **(a) For Imported Goods**

- Original and three copies of Supplier's invoice showing Goods description, quantity, unit price, total amount.
- Original and three copies of the negotiable clean, on –board bill of lading marked freight prepaid and three copies of non-negotiable bill of lading.
- Five Copies of packing list identifying contents of each package.
- Insurance Certificate.
- Manufacturer's /Supplier's guaranty certificate.
- Traceable Calibration Certificate issued by Accredited Calibration agency and
- Certificate of Origin.

#### **(b) For Domestic Goods:**

Original and Three copies of:

- Copies of the Supplier invoice showing Goods description, quantity, unit price, total amount.
- Railway receipt /Acknowledgement of receipt of goods from the consignee(s);
- Manufacturer's /Supplier's guarantee Certificate;
- Traceable Calibration Certificate issued by Accredited Calibration agency,
- Certificate of origin and
- Document evidence for GST Registration /Octroi etc., wherever applicable, bearing seal of office of issue indicating payments made extra.

The above documents shall be received by the Purchaser before arrival of the goods (except where the goods have been delivered directly to the consignee with all documents) and if not received, the supplier will be responsible for any consequent expenses.

#### **• Warranty/Guarantee**

- The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except insofar as the design or material is required by the Purchaser's Specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied Goods in conditions obtaining in the country of final destination.

- This warranty/guarantee shall remain valid for 12 months after the Goods or any portion thereof as the case may be, have been delivered and Commissioned at the final destination indicated in the Contract.
- The Purchaser shall promptly notify the Supplier, in writing, of any claims arising under this warranty.
- Upon receipt of such notice, the Supplier shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Purchaser.
- If the Supplier, having been notified, fails to remedy the defect(s) within a reasonable period, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- The Supplier must provide the following warranties:
  - (a) The equipment proposed is Complete in every way
  - (b) The hardware/software specification, Capabilities and performance characteristics are as stated in the bidder's proposal and accompanying documentation.
  - (c) The supplier will offer to the Purchaser all technological updates, cost reductions and facilities, which are offered to other clients, in India, during the Contracttenure.

If the supplier is acting directly for the manufacturer of the Goods and Services, the Manufacture must honor these guarantee.

The MAINTENANCE SERVICE shall be as follows.

- (a) Free maintenance services shall be provided by the Supplier during the period of warranty.
- (b) The maximum response time for maintenance complaint from any of the destination specified in the Schedule of requirements (i.e. time required for supplier's maintenance engineer to report at the installation after a request call/email is made or letter is written) shall not exceed 24 hours.

- **Liquidated Damages:-**

If the Supplier fails to deliver any or all of the goods within the time period(s) specified in the Contract ,the Purchaser shall, without prejudice to its other remedies under the contract, deduct form the Contract Price, as liquidated damages, a sum equivalent @ 0.5% per week shall be deducted from the final payment, for each week of delay beyond the delivery period upto maximum of 2% of the delayed goods or services Contract price. Once the maximum is reached, the purchaser may consider termination of the contract

## **(E) Preparation of Bids**

### **1. Bid Form**

The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the Bidding Documents, indicating for the goods to be supplied, a brief description of the Goods, their country of origin, quantity and prices

### **2. Agents and service facilities in India :**

If a foreign bidder has engaged an Indian agent, it will be required to give the following details in the offer:

- (i) The name and address of the local agent;
- (ii) What service the agent renders; and
- (iii) The amount of remuneration for the agent included in the offer

### 3. Documents establishing Bidder's Eligibility and Qualifications

- The Bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.
- The documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the Purchaser's satisfaction:
  - (a) In the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods manufacturer or producer to supply the goods in India.
  - (b) In the case of a Bidder not doing business within India, the Bidder is or will be (if successfully represented by an agent in India) equipped and able to carry out the Supplier's maintenance, repair and spare-parts stocking obligations prescribed by the Conditions of the Contract and / or Technical Specifications
  - (c) The Bidder has the financial, technical, and production capability necessary to perform the Contract and meets the criteria outlined in the qualification criteria specified as per the Tender norms.

### 4. Period of Validity of Bids

- Bids shall remain valid for 120 days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period may be rejected by the Purchaser as non-responsive.

### 5. Submission of Bids

- i) The detailed technical specification of the equipment is enclosed in the Bid document, Offer should be of two parts Viz., "**TECHNICAL BID**" and "**COMMERCIAL BID**" The content of the both bids should be as under;

#### (a) TECHNICAL BID should include the following:-

- ✓ Detailed specification of the base equipment (Product Make & Model) along with the specification of accessories, which are included in the Base unit.
- ✓ Scope of supply
- ✓ Deviation Statement
- ✓ Product Literature/Brochure
- ✓ Proforma for Performance Statement
- ✓ Qualification Criteria
- ✓ List of spare parts included (without quoting the price) (the acceptance and rejection of spare parts will be at sole discretion of CIPET:SARP-LARPM)
- ✓ List of optional accessories with their technical specification. (without quoting the price)
- ✓ Manufacturer's Authorization Form
- ✓ Bid Form
- ✓ Any other information which the bidder would like to state about the technically of the equipment.

#### (b) COMMERCIAL BID should include the following:-

- ✓ Statement showing the price of the each items of spare parts which is mentioned in the Technical Bid
- ✓ Conditional bids will not be accepted. The condition laid down by CIPET:SARP-LARPM is final and binding on all bidders.



- ✓ The quote should be in Indian Currency (INR).
- ✓ CIPET:SARP-LARPM reserves the right to accept or reject any or all tenders either in part or in full without assigning any reasons thereof.

The bids, which are not containing the statements, mentioned in 5 (i) (a) & (b) are liable to be rejected.

- The proforma of Annexures in the Bidding document, wherever necessary, should be typed on the bidder's letter head and upload the same.
- Price Schedule should be submitted in the prescribed format given under price schedule of the Bidding Document.
- The Deviation Statement enclosed should be duly filled in and submitted along with Bidding Document. If the bidder is offering more than one options/models a separate Deviation statement for each of such quotes should be submitted along with the offer.
- Quotes received without price schedule and deviation statement as per our prescribed format, will summarily be rejected.
- Relaxation of Norms for Startup and Micro & Small Enterprises in Public Procurement on Prior Experience – Prior Turnover Criteria is applicable; hence the MSME/NSIC certificate should be submitted.
- In Pursuance of Rule 153 (iii) of GFR-2017, preference to "Make in India" shall be given in procurement.
- Restriction of Bidders from Countries sharing Land Borders with India: vide Department of Expenditure, MOF, Govt. of India OM No. 6/18/2019-PPD date: 23/07/2020 and its subsequent order dated 23.07.2020 and 24.07.2020 is applicable in this tender.

#### **6. Deadline for Submission of Bids**

The Purchaser may, at its discretion, extend this deadline for submission of bids by amending the Bid Documents, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the dead-line as extended.

#### **7. Evaluation and Comparison of Bids**

- The Purchaser will evaluate and compare the bids previously determined to be substantially responsive.
- The availability of spare parts in India and after-sales services for the equipment offered (imported goods) – in the bid; (the inclusion of cost of spare parts for comparison as per requirement will be at sole discretion of CIPET:SARP-LARPM. Also, CIPET:SARP-LARPM reserves right to accept any bid and to reject any bid or all bids.

#### **(F) Award of Contract**

- **Post Qualification**
  - The Purchaser will determine to its satisfaction whether the Bidder selected as having submitted the lowest evaluated responsive bid is qualified to satisfactorily perform the Contract.
  - The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder as well as such other information as the Purchaser deems necessary and appropriate.
  - An Affirmative determination will be a prerequisite for award of the Contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.
- **Purchaser's right to vary Quantities at Time of Award**
  - The Purchaser reserves the right at the time of award of Contract to increase or decrease of the quantity of goods and services specified in the Schedule of Requirements without any change in price or other terms and conditions.

- **Purchaser's Right to Accept any Bid and to Reject Any or All Bids**

- The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidders or Bidders of the grounds for the purchaser's action.

### **SECURITY DEPOSIT/ PERFORMANCE GUARANTEE**

1. Successful bidder has to submit Performance Guarantee/Security deposit equivalent to 10% of the amount of Purchase Order value in the form of fixed deposit of a nationalized bank in favour of **CIPET LARPM** Payable at **Bhubaneswar** which should be valid for a period of 60 days beyond the completion of the contractual obligations by the bidder. In case, the contract is further extended beyond the initial period, the performance security will have to be accordingly renewed by the bidder. The same will be returned after the completion of contract without interest.

### **FORFEITURE OF SECURITY DEPOSIT/PERFORMANCE GUARANTEE**

1. If the successful bidder refuses/fails to accept the Letter of Intent (LOI)/Purchase Order issued by **CIPET:SARP-LARPM,Bhubaneswar** or the work assigned to the bidder are not done as per the scope of work/schedule of requirement, Security Deposit will be forfeited and the bidder will not be entertained for any tenders that may be published in future by **CIPET:SARP-LARPM,Bhubaneswar**.
2. If the contract is terminated by **CIPET:SARP-LARPM, Bhubaneswar** due to poor performance/violation(s) of any clause(s) of the agreement or for any bad acts considered prejudicial by CIPET Centre of the selected bidder, Performance Guarantee will be forfeited.

### **JURISDICTION FOR DISPUTE REDRESSAL**

1. All disputes or differences whatsoever arising between the parties out of or relating to the meaning and operation of effect of the purchase order or the breach thereof shall be subject to courts at **CIPET:SARP-LARPM,Bhubaneswar**.

### MANUFACTURER'S AUTHORIZATION FORM

No.....dated.....

To  
School for Advanced Research in Polymers – LARPM,  
CIPET, B-25,C.N.I Complex, P.O: KIIT, Patia,  
Bhubaneswar-751024, India.

Dear Sir  
Ref: Bid Reference

We ..... who are established and reputable  
manufacturers of .....having factories at

.....and.....do hereby authorize

M/s.....

M/s.....

M/s.....etc (Name and  
address of Agents) to bid and conclude the contract with you against the above Bid are authorized  
to bid and conclude the contract in regard to this business against this specific Bid.

We hereby extend our full guarantee and warranty as per the Terms and Conditions of Contract for  
the goods offered for supply against this invitation for bid by the above firms.

Yours Faithfully,

(Name)  
for and on behalf of M/s.....  
(Name of Manufactures)

**Note:** This letter of authority should be on the letterhead of the manufacturing concern and should  
be signed by a person competent and having the power of attorney to bind the manufacturer

**PROFORMA FOR DEVIATION STATEMENT**

Bid Ref No.

Date of Opening

Time :

Name of the Firm

Name of the Equipment quoted

Model No.:

Purchaser's Specification	Bidders Specification	Deviation, if any	Justification	Remarks

Note : Separate Deviation statements should be submitted along with the bid for all models / alternative quotes.

### Technical Specification of The Equipment

<b>Name</b>	<b>High Temperature Furnace with Gas Facility (Programmable Dual Zone/ Sliding Tube Furnace)</b>
<b>Quantity</b>	<b>01</b>
Make	Bidder to specify
Model	Bidder to specify
Purpose	Synthesis of various 2D materials & high temperature annealing at ambient air/vacuum and various atmospheres.
Furnace Structure	<ul style="list-style-type: none"> <li>• Double sliding rail made by Cr-plated steel.</li> <li>• Both furnaces are double layer steel structure with 1200°C max. working temperature.</li> </ul>
Max. Temperature	1200 °C or more
Operational Temperature	1100 °C
Heating Rate	0.5 – 20°C/min or more
Temperature Accuracy	+/- 1°C or better
Tube Material/ Size	High purity fused quartz tube (03 Nos) / Size: Diameter: 50 mm; Length: 1400 mm or above 4 fibrous ceramic tube blocks
Dimension	Bidder to specify
No of Heating Zone	2
Total required Heating Zone Length	8” or more for each zone
Heating Elements	Fe-Cr-Al Alloy doped by Mo or better
Thermocouple	K-type or better
Temperature Controller	<ul style="list-style-type: none"> <li>• Two temperature controllers are built to control heating zone independently via K-type thermal couples</li> <li>• PID automatic control via solid state relay with 30 steps programmable</li> <li>• Built in Over Temperature and Thermocouple Failure Protection</li> </ul>
Vacuum Flanges & Fitting Ports	<ul style="list-style-type: none"> <li>• Appropriate stainless steel vacuum flanges and vacuum sealing assembly with vacuum gauge</li> <li>• Sealing Flange Assembly according to tube size</li> <li>• Sealing cascades with additional nos.</li> </ul>
Vacuum pump/level	Mechanical pump, 10 <sup>-3</sup> torr or better
Vacuum pump	156 L/m Double Stage Rotary Vane Vacuum Pump with Exhaust Filter
Pressure Measurement & Monitoring	Standard mechanical vacuum gauge (-0.1 to 0.15Mpa) with digital display
Sliding Rails / Table	<ul style="list-style-type: none"> <li>• Double sliding rail made by Cr-plated steel</li> <li>• Sliding length: 1200 mm or more</li> <li>• Two slide stopping clamps are included for holding the position of the furnaces.</li> </ul>
Voltage	AC 240V Single Phase, 50/60 Hz, 20 A air breaker required
Power of furnace	2.5 KW in total
Warranty	1 year
Optional	<ul style="list-style-type: none"> <li>• O-rings</li> <li>• Alumina tube: Diameter: 50 mm; Length: 1200 mm</li> <li>• Mass flow Controller with digital flow display (200 sccm)- Inert gas-01, Methane-01, Hydrogen-01</li> </ul>

### TECHNICAL COMPLIANCE SHEET

Parameters	Details	Compliance
Make	Bidder to specify	
Model	Bidder to specify	
Purpose	Synthesis of various 2D materials & high temperature annealing at ambient air/vacuum and various atmospheres.	
Furnace Structure	<ul style="list-style-type: none"> <li>• Double sliding rail made by Cr-plated steel.</li> <li>• Both furnaces are double layer steel structure with 1200°C max. working temperature.</li> </ul>	
Max. Temperature	1200 °C or more	
Operational Temperature	1100 °C	
Heating Rate	0.5 – 20°C/min or more	
Temperature Accuracy	+/- 1°C or better	
Tube Material/ Size	High purity fused quartz tube (03 Nos) / Size: Diameter: 50 mm; Length: 1400 mm or above 4 fibrous ceramic tube blocks	
Dimension	Bidder to specify	
No of Heating Zone	2	
Total required Heating Zone Length	8" or more for each zone	
Heating Elements	Fe-Cr-Al Alloy doped by Mo or better	
Thermocouple	K-type or better	
Temperature Controller	<ul style="list-style-type: none"> <li>• Two temperature controllers are built to control heating zone independently via K-type thermal couples</li> <li>• PID automatic control via solid state relay with 30 steps programmable</li> </ul>	
Vacuum Flanges	<ul style="list-style-type: none"> <li>• Appropriate stainless steel vacuum flanges and vacuum sealing assembly with vacuum gauge</li> <li>• Sealing Flange Assembly according to tube size</li> <li>• Sealing cascades with additional nos.</li> </ul>	
Vacuum pump/level	Mechanical pump, 10 <sup>-3</sup> torr or better	
Fitting Ports	156 L/m Double Stage Rotary Vane Vacuum Pump with Exhaust Filter	

Vacuum pump	Standard mechanical vacuum gauge (-0.1 to 0.15Mpa) with digital display	
Pressure Measurement & Monitoring	<ul style="list-style-type: none"> <li>• Double sliding rail made by Cr-plated steel</li> <li>• Sliding length: 1200 mm or more</li> <li>• Two slide stopping clamps are included for holding the position of the furnaces.</li> </ul>	
Sliding Rails / Table	Synthesis of various 2D materials & high temperature annealing at ambient air/vacuum and various atmospheres.	
Voltage	AC 240V Single Phase, 50/60 Hz, 20 A air breaker required	
Power of furnace	2.5 KW in total	
Warranty	1 year	
Optional	<ul style="list-style-type: none"> <li>• O-rings</li> <li>• Alumina tube: Diameter: 50 mm; Length: 1200 mm</li> <li>• Mass flow Controller with digital flow display (200 sccm)- Inert gas-01, Methane-01, Hydrogen-01</li> </ul>	

**ANNEXURE-I**  
**TECHNICAL BID DOCUMENT**

1.	Name of the Dealer/Manufacturer		
2.	Profile of the Dealer/Manufacturer		
3.	Name of Proprietor/Director of the Dealer/ Manufacturer		
4.	Full Address of Registered Office of Dealer/Manufacturer		
	(a) Telephone No.		
	(b) Fax No.		
	(c) Mobile No.		
4.	(d) e-Mail No.		
5.	Correspondence address of office of Dealer/Manufacturer		
6.	Full address of branch office of Dealer/Manufacturer		
7.	PAN No.		
8.	GST No.		
9.	Original Equipment Manufacturer (OEM)/Authorized Dealer of the Equipment		
10.	Annual turnover of the Dealer/Manufacturer for the last three Financial year (a copy of the turnover statement for the below three assessment years separately, duly certified by the chartered accountant, to be attached) :		
	<b>Assessment Year</b>	<b>Amount ( ` in Lakh)</b>	<b>Remarks, if any</b>
	2016-17		
	2017-18		
	2018-19		
11.	Balance Sheet & PL Account statement for the last three financial year (a copy of the balance sheet statement for the below three financial year separately to be attached):		
	<b>Financial Year</b>	<b>Amount ( ` in Lakh)</b>	<b>Remarks, if any</b>
	2016-17		
	2017-18		
	2018-19		



12.	IT return for the last three assessment year (a copy of the statement for the below three assessment year separately to be attached):		
	Assessment Year	Amount ( `in Lakh)	Remarks, if any
	2017-18		
	2018-19		
	2019-20		
13.	Details of the Bidder must have satisfactorily supplied & completed installation of similar type of Instrument at-least 02 nos. in any Govt. Organisations/PSU/Corporate Sectors during the last 5 years.(Separate copies of related document should be separately uploaded)		
Sl. No	Details of Parties along with their address, telephone and fax no. & email address	Price of the Equipment (in ₹)	Name of the Equipment Supplied
01.			
02.			
14.	Self-declaration of <b>No pending litigation</b>		
15.	Self-declaration statement for bidder not <b>debarred/blacklisted</b> or <b>banned</b> from any Central Government / PSU / State Govt. / any Corporate Sector.		
16.	The bidder shall have local office/infrastructure to attend visit within 48 hours.(Mention in details)		
17.	Bidder shall have any relatives working with CIPET , if any give their name, designation & address.		
18.	The bidder should sign & seal each page of the tender document and required to upload.		

**DECLARATION**

I \_\_\_\_\_ son/daughter/wife of Shri/Smt. \_\_\_\_\_

Proprietor/Director/Authorised Signatory of the Manufacturer/Dealer mentioned above is competent to sign this declaration and execute this tender document.

I have carefully read and understood all the terms and conditions laid down in the tender and undertake to abide by them.

The information/documents furnished along with the above bid/application are true and authentic to the best of my knowledge and belief. I am well aware of the fact that furnishing of any false information/fabricated document would lead to rejection of my tender/bid at any stage besides liabilities towards prosecution under appropriate law.

(Signature of the authorized person)

Name \_\_\_\_\_

Date \_\_\_\_\_

Place \_\_\_\_\_

Office Seal

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