



**CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY (C-MET)**

(Scientific Society, Ministry of Electronics and Information Technology (MeitY), Govt. of India)

IDA PHASE – III, CHERLAPALLY, HCL (PO), HYDERABAD – 500 051

Phone: +91-40-27265587, 27267006 Fax: +91-40-27261658

No. HD/PUR/AVLP/SP-39/06/2018-19/10770

Date: 07.03.2019

Centre for Materials for Electronics Technology (C-MET), Hyderabad invites Tenders against Tender No. HD/PUR/AVLP/SP-39/06/2018-19/10770 dated 07.03.2019. Closing Date/Time **27.03.2019 at 12:30 Hrs.** Bidders will be able to submit their original/revised bids upto closing date and time only.

**2. ITEM: 100T FULLY AUTOMATIC VACUUM LAMINATING PRESS :  
INDIGENOUS**

Supply, Installation and Commissioning of High Temperature Sintering Furnace and Post Warranty Annual Maintenance Contract for the Item.

Tender Type: **OPEN TENDER**

Closing time: **27.03.2019 at 12:30 Hrs.**

Earnest Money Deposit (EMD) **Rs. 1,20,000.00**

*Note: Bidders who downloaded tender documents from our web site shall send an email to [venkatesan@cmet.gov.in](mailto:venkatesan@cmet.gov.in) as well as to [lakshmi@cmet.gov.in](mailto:lakshmi@cmet.gov.in) immediately giving the tender reference number, date of downloading, your full address and contact details. This will help us post any corrigendum or addendum to the tender taken place after the bidder downloaded it. Addendum/corrigendum will be posted in our website as well as in CPP portal only. It will also be sent to bidder who had informed after downloading of the document from our website.*

**NOTE:**

- (i) **The Technical bid & Financial bid should be in separate sealed covers**
- (ii) **The quotation should be submitted in the enclosed format only.**
- (iii) **The Enquiry Letter No. & date should be clearly indicated in the quotation, otherwise quotation will be rejected.**
- (iv) Firms or their authorized representatives are requested to attend the opening of **Technical bids 28.03.2019 at 1030 hours.** If there is any delay in opening of technical bids will be intimated to the bidder.
- (v) These details are also available in our website: <http://www.cmet.gov.in> & **CPP Portal**
- (vi) The offer should be valid for a period of **90 days** from the date of opening of Tender.
- (vii) C-MET is registered under Department of Scientific and Industrial Research (DSIR) and eligible for concessional GST rates @ 5% for Research Institutions as per Notification No 45/2017-Central Tax (Rate) dated 14.11.2017 and Notification No. 10/2018-Integrated tax (Rate) dated 25.01.2018. The requisite certificate for availing concessional GST Rate along with documents will be provided.

### 3. Earnest Money Deposit (EMD)

*Bidders from Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department or Startups as recognized by Department of Industrial Policy & Promotion (DIPP) are exempted from payment of EMD @ Rs. 1,20,000/- as per this tender document.*

#### **FOR OTHERS IT IS Rs.1,20,000/- (Rs. One lakh twenty thousand only)**

E.M.D or Bid Security should be deposited by the bidders, in any one of the following forms, along with the Technical bid:-

- (a) Call Deposit Receipt duly endorsed in favour of C-MET or Pay Order or Demand Draft in favour of C-MET, Hyderabad.
- (b) Fixed Deposit Receipt issued by Nationalized banks endorsed in favour of C-MET Hyderabad.
- (c) Bank Guarantee from a Nationalized Bank in favour of C-MET - irrevocable and operative till the expiry of forty days after the validity of offer.

In case the vendor/supplier/contractor would like to submit EMD by Bank guarantee (BG), then the original BG shall be routed through the banker to C-MET Hyderabad by registered post with acknowledgment due. In case the BG is handed over to the vendor/supplier/contractor by the bank for any genuine reasons, the BG issuing branch shall immediately send an unstamped duplicate copy of the BG directly to C-MET Hyderabad by registered post with acknowledgment due with the covering letter to verify the BG issued by us and confirm that it is in order. The vendor/supplier/contractor shall comply this provision meticulously.

- (d) The EMD shall be put in a separate envelope super-scribing tender reference no. as such on it and put in the envelope containing technical bid. In the absence of EMD the Bid will not be accepted.
- (e) The Earnest Money Deposit will be returned along with necessary endorsement for payment to the bidder (without interest) whose offers are not acceptable to C-MET after placing the final order.
- (f) The EMD shall also be forfeited:
  - (i) if a Bidder withdraws its bid or increases rates during the period of Bid validity specified by the Bidder on the Bid Form ;
  - (ii) or in case of a successful Bidder, if the Bidder fails:
    - (a) to accept the Purchase Order or refusal to execute the tender after it has been awarded or obligations under the same are not fulfilled; or
    - (b) to furnish the performance security deposit in accordance Purchase order.

#### **4. SUBMISSION OF BIDS**

##### **(i) Sealing and Marking of Bids**

- (i) The Bidders shall seal the two envelopes in separate inner envelopes, duly marking the envelopes as Technical Bid and Commercial Bid. Tender Reference No. and name and address of the Bidder should be marked on each of Technical Bid Envelope and Commercial Bid Envelope. These two envelopes should be placed inside an outer envelope. The outer envelope shall be sealed and indicate Tender Reference No. and name and the name and address of the bidder.
- (ii) The inner and outer envelopes shall be addressed to the Administrative Officer, Centre for Materials for Electronics Technology, IDA Phase-III, Cherlapally, HCL (Post), Hyderabad-500 051, Telangana State, INDIA.
- (iii) The inner envelope shall also indicate the name and address of the Bidder to be returned unopened in case it is declared "LATE".
- (iv) If the outer envelope is not sealed and marked as specified, C-MET will assume no responsibility for Bid's misplacement of premature opening.
- (v) E-mail, FAX bids will be rejected.

##### **(ii) CLARIFICATION OF BIDS**

During evaluation of bids, C-MET, at its discretion, may ask the Bidder for a clarification of its bid. The request for a clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, No post bid clarification at the initiative of the bidder shall be entertained.

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

- (i) Bids must be received by C-MET at its address mentioned above not later than **1230 Hrs. on 27.03.2019**. Bids may be sent through courier/speed post or dropped in the Tender Box available in the Laboratory. In the event of the specified date for the submission of Bids being declared as a Holiday for C-MET, the bids will be received upto the appointed time on the next working day.
- (ii) C-MET may, at its discretion, extend this deadline for submission of bids by amending the tender document, in which case all rights and obligations C-MET and Bidders will thereafter be subject to the deadline as extended.

#### **6. Late Bids**

Any bid inadvertently received by C-MET after the deadline for submission of bids prescribed by C-MET, will not be considered and returned unopened to the Bidder.

## 7. Contacting C-MET

No Bidder shall contact C-MET, Hyderabad on any matter relating to its bid, from the time of the bid opening to the time of contract is awarded. If he wishes to bring additional information to the notice of C-MET, it should do so in writing. C-MET reserves its right as to whether such additional information should be considered or otherwise.

Any effort by a Bidder to influence C-MET in its decision on bid evaluation, bid comparison or contract award shall result in disqualification of the Bidders Bid and also forfeiture of his EMD amount.

**IN CASE OF ANY LEGAL DISPUTE THE JURISDICTION WILL BE HYDERABAD (INDIA) ONLY.**

### CLARIFICATION ON BIDDING DOCUMENTS

A prospective Bidder requiring any clarification of the bidding documents may notify to

Administrative Officer  
IDA Phase-III  
Cherlapally, HCL (Post),  
Hyderabad-500 051  
TELANGANA STATE, INDIA  
Tel No.:+91-40-27262437 / 27265587 / 27267006  
Fax: +91-40-27261658

## 8. TERMS AND CONDITIONS

**F.O.R** : C-MET, HYDERABAD

### Delivery Period

Within 4 months after placing Purchase Order PLUS 10 WORKING DAYS grace period for submission of PSD etc

**LIQUIDATED DAMAGES:** – The delivery period quoted should be realistic. The delivery period so quoted and mentioned in the order is the essence of the order/contract. In case of delay in delivery of material as per the delivery schedule, Liquidated Damage @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value shall be levied. Wherever, installation and commissioning is also involved, the supply will be deemed to have been completed only when the entire stores is supplied, installed and accepted.

## 9. PERFORMANCE SECURITY DEPOSIT (PSD)

Within 10 working days of the receipt of notification of award of purchase order / contract from C-MET, the Bidder shall furnish a Performance Security Deposit equivalent to 10% of the contract value in anyone of the forms as given below:

- (a) Call Deposit Receipt duly endorsed in favour of C-MET or Pay Order or Demand Draft in favour of C-MET.
- (b) Bank Guarantee from a Nationalized Bank in favour of C-MET - irrevocable and operative for the entire period starting from acceptance of the contract ending 60 days after completion of the warranty period or 30 months, whichever is longer.
- (c) In case the vendor/supplier/contractor would like to submit security performance security Deposit by Bank guarantee (BG), then the original BG shall be routed through the banker to C-MET Hyderabad directly by registered post with acknowledgment due. In case the BG is handed over to the vendor/supplier/contractor by the bank for any genuine reasons, the BG issuing branch shall immediately send an unstamped duplicate copy of the BG directly to C-MET Hyderabad by registered post with acknowledgment due with the covering letter to verify the BG issued by us and confirm that it is in order. The vendor/supplier/contractor shall comply this provision meticulously.
- (d) Fixed Deposit Receipt issued by Nationalized banks endorsed in favour of C-MET Hyderabad.
- (e) The Performance Security Deposit is required towards fulfillment of the Purchase order / Contract obligations. This Security Deposit will be forfeited in case the successful Bidder fails to execute the Purchase order/ Contract.

**10. PAYMENT TERMS**

Our standard payment term is 100% payment within 30 days against receipt, inspection and acceptance of material in good condition by NEFT/RTGS. However, in deserving cases it will be considered as per Rule 172 (1) of GFR-2017 by the competent authority.

**Special Condition:** The stipulated delivery date for completion of all activities to be performed by the supplier under contractual obligations i.e., supply of equipment/machinery and erecting & commissioning including all the civil, electrical works, if any under the contract.

| S.No. | Description  |
|-------|--|
| 1     | The tenderer shall quote the rate by taking into account all the existing statutory duties/taxes up to the date of opening of tender and provide details in respect of this break up at the time of tendering. Any New Import or revision in the duties, taxes during the original currency of the contract will be to the purchasers account subject to production of Govt. notification and documentary evidence. This will also be applicable for the relevant quantity supplied during the extended delivery period, if such extension is on purchase's account. However, if the extension of delivery period is on account of failure of supplier, no compensation shall be made towards upward revision or imposition of any new taxes. Any benefit on account of downward revision of duty either in original Delivery Period or during extended Delivery Period shall be passed on by the supplier to C-MET. |

**11. STATUTORY VARIATION CLAUSE:**

|     |  |
|-----|--|
| 3.1 | Statutory Variation in taxes and duties, or fresh imposition of taxes and duties by State/Central Governments in respect of the items stipulated in the contract (and not the raw materials thereof), within the original delivery period stipulated in the contract, or last unconditionally extended delivery period shall be to C-MET's account. Only such variation shall be admissible after the submission which takes place after the submission of bid. No claim on account of statutory variation in respect of existing tax/duty will be accepted unless the tenderer has clearly indicated in his offer the rate of tax/duty considered in his quoted rate. No claim on account of statutory variation shall be admissible on account of misclassification by the supplier/contractor |
|-----|--|

**12. Standard Governing Conditions**

| S.No. | Description  |
|-------|--|
| 1     | Tenderer's must accept the C-MET conditions of contract, Instructions to the Tenderer's, General Conditions and Special conditions of contract |

**13. CONDITIONS FOR ELIGIBILITY OF TENDERER**

| S.No. | Description   | Confirmation Required |
|-------|---|-----------------------|
| 5.1   | The tenderer must have supplied the same or similar items/Equipments to other organizations and documentary evidence must be furnished alongwith their offer evidencing the execution of such Purchase Orders. Tenderer's with past performance of satisfactory execution of contracts before the date of tender opening as mentioned above for the supply of the subject or similar items in last five years from date of tender opening may be considered as responsive to C-MET requirements for placement of regular order. | YES                   |

**14.** (i) The Tenderer shall furnish along with his offer the details of past performance of the machines, same or similar to those offered in the tender in the following proforma during the last 3 years:

| S.No. | Name of Machine | Name of customer | Purchase Order No. & Dt. | Delivery due date as per PO | Actual date of delivery | Whether customer's certificate in respect of past performance of the machine is enclosed |
|-------|-----------------|------------------|--------------------------|-----------------------------|-------------------------|--|
| (1)   | (2)             | (3)              | (4)                      | (5)                         | (6)                     | (7)  |
|       |                 |                  |                          |                             |                         |  |

(ii) Certificates from the customers to whom such machines have been supplied in the past, regarding performance of the machines shall be enclosed with the above information failing which the offer shall not be considered. Certificates from Central/State Govt. Departments & Public Sector Undertaking only shall be accepted, and performance from at least two such customers should be submitted. Same/Similar refers to function and capacity within reasonable range.

(iii) If the tenderer is not a manufacturer, but only an agent/trader, a certificate from the manufacturer authorizing him as agent shall be attached with the offer failing which the offer shall not be considered.

(iv) The tenderer shall submit with his offer particulars plant and machinery installed at his works as well as equipment for ensuring quality control and inspection. Details like make, capacity, quality, horse power of all plant and machinery shall be given. In case of an agent/dealer, the above details of their principal manufacturer shall be given.

(v) The tenderer shall submit with his offer details of man-power available with him showing the designation, no. of men, qualification & experience separately for each section like management, shop floor, inspection and quality control etc.,

(vi) C-MET has the option to verify the above information by physical inspection or otherwise by any authorized representative of C-MET at any time.

**15. ELEMENT OF FREIGHT FOR INDIGENOUS PURCHASE**

- a) In case where the consignees are more (say more than 4 or so), Tenderer's are required to quota for the FOR station of dispatch prices with an average freight for all consignees, which will be added to FOR station for dispatch price to get FOR destination prices.
- b) In case where the consignees are 4 or less, Tenderer's are required to quota FOR station of dispatch price with an actual freight for each individual consignee, which will be added to FOR station for dispatch price to get FOR destination prices for each individual consignee.

**16. TIMELY COMMISSIONING:**

In the event of contractors failure to have commissioned by the time or times respectively specified in the letter of acceptance or contract, purchaser shall levy Liquidated damages for the delay:

| S.No. | Description  | Confirmation Required |
|-------|--|-----------------------|
| 1     | 100T FULLY AUTOMATIC VACUUM LAMINATING PRESS Technical Specifications is to be read before quoting | YES                   |

## 17. COMPLIANCE CONDITIONS

### Commercial-Compliance

| S.No. | Description  | Confirmation Required |
|-------|--|-----------------------|
| 1     | Please enter the percentage of local content in the material being offered. Please enter 0 or fully imported item, and 100 for fully indigenous items. The definition and calculation of local content shall be in accordance with the Make in India policy as incorporated in the tender conditions |                       |

## 18. SUBMISSION OF BID

|   |                            |  |
|---|----------------------------|--|
| 1 | Technical Bid              | <b>Documents should be serially arranged as per CHECK LIST WITH PAGE NUMBERING. This will be opened on 28.03.2019 at 1030 hours</b>  |
| 2 | Commercial Bid (Price Bid) | Should contain only Price Bid. There are two formats viz (a) Main system and (b) Optional accessories. Date of opening of Price bid will be informed to those whose bid technically qualified. |

## CRITERIA FOR PRE-QUALIFICATION OF TENDER AND NEGOTIATIONS

Specifications conforming to the requirement or better than that, Past Performance, Financial Soundness, Technical Competence, Total Cost and Organizational Capability of the Tenderer to provide installation, commissioning, after sale service and spare parts supply shall be some of the crucial parameters for pre-qualification of tenderers to be called for Negotiations.

## RE-TENDERING

On finding inadequate response to Tender Notice or if the Prices quoted are substantially high and negotiations with the tenderers have not resulted in any positive response C-MET may accept or order Re-tendering.

In case a ring is suspected, re-tendering will normally be resorted to.

## CORRUPT OR FRAUDULENT PRACTICES

C-MET requires that the bidders/suppliers/contractors under this tender, observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, the following is defined for the purposes of this provision, the terms set forth as follows:

- a) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution and
- b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or an execution of a contract to the detriment of C-MET, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive C-MET of the benefits of the free and open competition;
- c) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

C-MET will declare a firm ineligible, either indefinitely or for a stated period of time to be awarded a contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.

#### **INTERPRETATION OF THE CLAUSES IN THE TENDER DOCUMENT**

In case of any ambiguity in the interpretation of any of the clauses in Tender Document , the interpretation of the Director, C-MET shall be final and binding on all parties.

#### **IN CASE OF ANY LEGAL DISPUTE THE JURISDICTION WILL BE HYDERABAD (INDIA) ONLY.**

C-MET shall have the right to issue addenda to tender documents to clarify, amend, modify, supplement or delete any of the conditions, clauses or delete any of the conditions clauses or items stated therein. Each addendum so issued shall form part of

#### **ORIGINAL INVITATION TO THE TENDER.**

#### **FORCE MAJEURE**

The Supplier shall not be liable for forfeiture of its performance security, penalty or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

If a Force Majeure situation arises, the Supplier shall promptly notify C-MET in writing of such conditions and the cause thereof. Unless otherwise directed by C-MET in writing, the Supplier shall continue to perform its obligations under the Supply as far as it is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure.

## **CANCELLATION OF ORDER**

C-MET reserves the right to cancel the order without any liability in case the stores/goods/equipments is not supplied within the stipulated period and for non-fulfillment of specifications.

## **ARBITRATION**

Any dispute between the parties on the purchase would be settled by arbitration. The Place of arbitration proceedings shall be at the place decided by C-MET. Applicable laws shall be laws of Union of India.

## (in the company letter head)

### CHECK LIST

Documents to be submitted along with the bids  
(TECHNICAL BID)

| S No | Description  | Yes/No | Page No |
|------|--|--------|---------|
| 1    | Covering/introduction letter from the Firm referring to C-MET's tender enquiry No and date <b>towards participation in the tender.</b> |        |         |
| 2    | Details of EMD ( attach relevant documents in both cases)  |        |         |
| 3    | Acceptance of terms & conditions of tender enquiry   |        |         |
| 4    | Signed copy of tender enquiry  |        |         |
| 5    | Price Reasonability Certificate  |        |         |
| 6    | Bid form and Price schedule with <b>commercial terms WITHOUT PRICE</b>   |        |         |
| 7    | Previous experience details alongwith documents like PO/WO etc. (not more than 3 years old)  |        |         |
| 8    | Undertaking and declaration  |        |         |
| 9    | Technical compliance statement with/without deviation  |        |         |
| 10   | Technical brochure of the Product offered or drawings  |        |         |
| 11   | GST Registration certificate or No   |        |         |
| 12   | Bank details for NEFT/RTGS   |        |         |
| 13   | Warranty   |        |         |

### Documents to be submitted alongwith Commercial bids (PRICE BID) (Separate sealed cover)

| S No | Description   | Page No |
|------|---|---------|
| 1    | Bid form and Price schedule with commercial terms <b>WITH PRICE</b> |         |

# (in the company letter head)

## BIDDER'S DETAILS

|   |  |  |
|---|--|--|
| 1 | Name of the supplied/party/firm                    |  |
| 2 | Name of the authorized representative              |  |
| 3 | Communication address                              |  |
| 4 | Telephone Nos.                                     |  |
| 5 | Mobile Nos.  |  |
| 6 | Fax and e-mail address                             |  |
| 7 | Web address  |  |
| 8 | Bank details for payment through NEFT/RTGS         |  |
| 9 | Name of Bank                                       |  |
|   | Branch   |  |
|   | Account No   |  |
|   | IFSC No  |  |
|   | MICR No  |  |
|   | Cancelled cheque for verification of above details |  |

Signature of Tenderer\_\_\_\_\_

Name\_\_\_\_\_

Business Address\_\_\_\_\_

Seal of the Tenderer\_\_\_\_\_

**(in the company letter head)**

**PREVIOUS EXPERIENCE DETAILS  
(LAST 3 YEARS)**

| S.No. | Name of Machine | Name of customer | Purchase Order No. & Dt. | Delivery date as per PO | Actual date of delivery |
|-------|-----------------|------------------|--------------------------|-------------------------|-------------------------|
| (1)   | (2)             | (3)              | (4)                      | (5)                     | (6)                     |
|       |                 |                  |                          |                         |                         |
|       |                 |                  |                          |                         |                         |
|       |                 |                  |                          |                         |                         |

Signature of Tenderer \_\_\_\_\_

Name \_\_\_\_\_

Seal of the tenderer \_\_\_\_\_

**(in the company letter head)**

**PRICE REASONABILITY CERTIFICATE**

It is certified that the rates quoted \_\_\_\_\_ are not more than as charged to other Govt. /PSU's for similar supplies made in recent past. Copies of the supply orders received from other Govt/PSU's are enclosed alongwith the technical bid.

Signature of Tenderer\_\_\_\_\_

Name\_\_\_\_\_

Business Address\_\_\_\_\_

Seal of the Tenderer\_\_\_\_\_

(TO BE SUBMITTED ALONG WITH TECHNICAL BID)

**(in the company letter head)**

**UNDERTAKING/ DECLARATION**

I/We having our office at .....  
declare that I/we have never been blacklisted by any State Government/Central Government or any State/Central PSU.

2. I/We, ..... hereby declare that the particulars furnished by me/us in this offer are true to the best of my/our knowledge and I/We understand and accept that, if at any stage the information furnished by me/us are found to be incorrect or false, I/We am/are liable for disqualification from this tender and also liable for any penal action that may arise due to the above, besides being black listed.

3. I/We hereby accept to provide warranty/ guarantee and Free Service for a period of minimum one year from the date of supply/ installation of the materials.

4. I/We ..... of ..... hereby agree on the acceptance of this tender by Director, C-MET to \_\_\_\_\_, in accordance with the terms and conditions of contract and at the rates or price specified in financial bid (BOQ).

5. This is also certified that the rates quoted in the financial bid are not more than the rates charged from any other Institution/Department/ Organization in the last six months. No Other charges would be payable by the Institute.

6. I/We \_\_\_\_\_ have gone through the terms and conditions and will abide by them as laid down above. I hereby undertake that the information provided above and elsewhere in the tender is true and the tender is liable to rejection if the same is found to be false or the information is found to have been suppressed by me.

Name & Signature of the Supplier/Contractor/  
Authorized signatory with Official stamp/seal

**(TO BE SUBMITTED ALONG WITH TECHNICAL BID)**  
**(in the company letter head)**

To,

Date:

The Administrative Officer  
C-MET, IDA Phase III  
Cherlapally,  
Hyderabad 500 051

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No. ----- dated  
\_\_\_\_\_

Name of the Tender/Work: - **100T FULLY AUTOMATIC VACUUM LAMINATING PRESS**

Sir/Madam,

I/We have downloaded/obtained the tender document(s) for the above mentioned 'Tender/Work' for the web site(s) namely:

\_\_\_\_\_ as per your advertisement, given in the mentioned website(s)/enquiry letter.

2. I/we hereby certify that I/we have read the entire terms & conditions of the tender documents from Page No. \_\_\_\_\_ to \_\_\_\_\_ (including all documents like Annexure(s), schedules(s), etc.) which form part of the contract agreement and I/We shall abide hereby by the terms/conditions/clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/organization too have all been taken into consideration, while submitting this acceptance letter.

4. I/We hereby unconditionally accept the tender conditions of above mentioned tender document (s)/Corrigendum(s) in its totally/entirely.

5. In case any provisos of this tender are found violated, then your Department/Organizations shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours faithfully,

Name & Signature of the Supplier/Contractor/  
Authorized signatory with Official stamp/seal

### 100T Fully Automatic Vacuum Laminating Press

**Job to be carried out:**

The automatic vacuum laminating press is required for fabrication of planar ceramic filled PTFE laminates (250 x 250 mm<sup>2</sup> having thickness 0.6 mm to 2 mm with 20 μm tolerance) through hot pressing. The press should also be suitable for cladding oxygen free copper foil on the laminates by vacuum lamination. The entire molding/cladding cycle has to be automated by integrating pressure and temperature cycles and vacuum through PID and PLC with master control on a PC. The entire operation of the press should be operated in manual mode also.

| S. No. | Description                     | Detailed Specification   |
|--------|---------------------------------|--|
| 1      | Type of Hydraulic Press         | Heavy duty fully automatic 4 pillar down-stroking/up-stroking type hydraulic press with platen guided on four pillars, sliding bolster platen for lamination under vacuum.                                 |
| 2      | Capacity                        | 100 Ton, accuracy <u>+ 1%</u>  |
| 3      | Stroke                          | 150 mm   |
| 4      | Required Vacuum                 | 10 <sup>-3</sup> Torr for the entire daylight volume (300x 300 x 200 mm <sup>3</sup> ) to be achieved within 10 minutes. Open day light = 300 mm   |
| 5      | Heater plate area               | 300 x 300 mm, SS 316 grade, surface ground and lapped to 0.1micron accuracy  |
| 6      | Lower platen height from floor  | 1000 mm  |
| 7      | Approach speed                  | 15 to 20 mm/sec  |
| 8      | Pressing speed                  | 3 to 4 mm/sec  |
| 9      | Opening speed                   | 4 to 5 mm/sec  |
| 10     | Return speed                    | 20 to 25 mm/sec  |
| 11     | Operating temperature and rate  | 450°C within two hours to be achieved by providing high density cartridge heaters which has to be controlled through PID and thyristor. Required sample moulding temperature is 380°C.                     |
| 12     | Electric supply                 | Three phase, 415V  |
| 13     | Type of Pressure & vacuum Gauge | Glycerin filled diaphragm type, suitable vacuum control valves, couplings etc.   |
| 14     | Set pressure, temperature       | PLC and MMI to control set pressure, timers, breathing counters etc.   |
| 15     | Tonnage control                 | By means of remotely operated variable pressure regulating valve.  |
| 16     | Accuracy                        | As per JIS Grade II maintaining the perpendicularity, parallelism and flatness. There should be a provision for digital indication of parallelism of the press (moving platen with respect to fixed ones). |

|    |  |  |
|----|--|--|
| 17 | For easy loading and unloading of the product.                     | Sliding bolster platen operated using suitable cylinder has to be provided   |
| 18 | Suitable standard 'T' slots provision                              | Should be provided on both top and bottom platens (IS:2013) to fit heater platens of smaller size for small components. Heater platens (2 Nos) of size 300 x 300 mm have to be bolted to the top and bottom platens. Two surface ground lapped parallel plates of size 300 x 300 x 16 mm made out of SS 316 should be provided for lamination. Sample will be kept between these plates and these plates have to attain a temperature of 380°C during lamination. Suitable heater (high density type) of 3/4" diameter can be used for the same. The heater platen has to be properly insulated so as to prevent heat transmission to hydraulic parts. |
| 19 | Number of heater platens and size                                  | 2 Nos. size 300 x 300 mm have to be bolted to the top and bottom platens..   |
| 20 | Lamination plates.   | Two surface ground lapped parallel plates of size 300 x 300 x 16 mm made out of SS 316 should be provided for lamination. Sample will be kept between these plates and these plates have to attain a temperature of 380°C during lamination.   |
| 21 | Type of heater for heating lamination plates                       | Suitable heater (high density type) of 3/4" diameter can be used for the same. The heater platen has to be properly insulated so as to prevent heat transmission to hydraulic parts.   |
| 22 | Hydraulic Pump & Motor made up of                                  | ABB/Polyhydron/Vickers/Rexorth/Siemens/NGEF/Dowt y conforming to BIS325 standard   |
| 23 | Oil tank   | Suitable capacity tank has to be provided  |
| 24 | Limit switches   | Limit switches are to be provided for effective control of stroke and pressing (Fast approach & pressing). And also the Vacuum chamber should be able to lift up and down using limit stitches independently.  |
| 25 | Alignment of Die with punches                                      | In order to align the die with punches, press should be capable of work in 'inching' mode also.  |
| 26 | Hydraulic cylinders for automation of sample loading and ejecting. | Proper hydraulic cylinders (2 Nos.) of small capacity should be provided for automation of sample loading and ejecting   |
| 27 | Moving top Platen made up of                                       | Moving top platen should be accurately guided on four nos. of round columns, which is to be ground and hard chrome plated. The platen has to be provided with 4 Nos. of phosphor bronze bearings so as to maintain the parallelism with the required tolerance (20 □m). Tie rod passing through the columns should bind the top and bottom structure. The tie rods and other high quality rolled steel for the fabrication of frame should be fully stress relieved (IS:2026). Proper reinforcements have to be given to resist deflection   |

|    |  |  |
|----|--|--|
|    |  | during operation. All the necessary valves gauges, filters, accessories, piping, fitting for the operation of the press are to be provided.  |
| 28 | Main Hydraulic Cylinder capacity and type of material of construction. | Main cylinder should be capable for producing 100 T capacity with additional side cylinders of suitable capacity for speed control. Cylinder should be manufactured out of completely ultrasound tested solid steel. Ram is to be fabricated out of ultrasonically tested, EN-9 forgings proof machined with hard chrome plated surface, high temperature resistant, oil resistant rubber seals and packing from reputed manufacturers like VAKO, KELIT(high temperature resistant) etc. has to be used. |
| 29 | Suitable pressure maintenance system during laminating time            | Suitable pressure maintenance system during laminating time using excess pressure relief valve and low pressure booster has to be provided.  |
| 30 | Pressure relief valve  | Fixed pressure relief valve to control maximum pressure and for safety of machine to be provided.  |
| 31 | Variable pressure relief valve   | Variable pressure relief valve to control maximum working pressure are also to be provided.  |
| 32 | Return and suction strainers   | Return and suction strainers should be provided  |
| 33 | Manual grease lubrication  | Manual grease lubrication of the centralized type should be provided   |
| 34 | First fill of oil  | First fill of oil is to be provided by the party   |
| 35 | Temperature controllers and Thyristors                                 | Temperature at the mate should be accurately controlled and indicated using programmable PID controllers and thyristor - 3nos. each (Eurotherm/Yokogawa make – 4 programme, 16 segments). 2 nos are for platens and the other one is for monitoring sample temperature at the die.   |
| 36 | On-line temperature recoding system                                    | On-line temperature recoding system with digital output of the sample temperature throughout the lamination cycle and the data should be retrieved through PC.   |
| 37 | Provision for cooling the heater platen                                | Provision for cooling the heater platen from 380 to 100°C at a cooling rate of 20°C/min. through water circulation/cooled air comprising of compressor and suitable chiller have also to be provided. Necessary grooves have to be provided for fast cooling of the platen   |
| 38 | Safety devices   | Safety devices like safety guard for operator, emergency mushroom type pushbutton for stopping, light at the front side.   |
| 39 | Control panel  | Control panel should be wired neatly conforms to BIS8544. Panel should be provided with necessary switches and lights and it should be at a suitable working height. All electrical items should be of reputed make such as SIEMENS, L&T, ABB etc. Front   |

|    |                               |  |
|----|-------------------------------|--|
|    |                               | <p>panel should have the following:<br/>         PLC Display unit (MMI) for user –friendly operation to automate the entire product cycle – pressure, temperature (heating and cooling), platen movements, vacuum etc.<br/>         Pressure and vacuum Gauges to check the working Pressure and vacuum. The entire system has to be interfaced and to be operated through PC. The entire operation of the press should be operated in manual mode also.</p>   |
| 40 | Front panel should consist of | <p>PLC Display unit (MMI) for user –friendly operation to automate the entire product cycle – pressure, temperature (heating and cooling), platen movements, vacuum etc.<br/>         Pressure and vacuum Gauges to check the working Pressure and vacuum. The entire system has to be interfaced and to be operated through PC. The entire operation of the press should be operated in manual mode also. Heaters On / OFF switch, Auto On Push button, Motor On / OFF switch, Selector Switch ( Auto / Manual ), Cylinder Up / Down push button , Main On / Off switch , Water circulation on / Off , Vacuum pump On / Off , Air Circulation on / off, Chiller On/Off etc.</p> |
| 41 | Pressure Switch               | To set the working Pressure manually. Sensitivity of pressure control < 2 Tons.  |

Other details:

One year warranty has to be provided for the fool-proof operation of the press

### Spares

Suitable O-rings, gaskets etc. have to be supplied for the trouble free operation of lamination press for next 3 yrs.

### Inspection Criterion

Pre-dispatch approval based on 2 successful lamination experiment cycles at your site

Installation approval after 3 successful lamination experiment cycles at our end

### Optional accessories

- Lapped aluminum plates of size 200 x 200 x 25 mm<sup>3</sup> for copper lamination on the PTFE composite.
- Two sets of Eurotherm/Yokogawa make PID and thyristors as spares.

## 18. GENERAL INSTRUCTIONS

| S.No. | Description  | Confirmation Required |
|-------|--|-----------------------|
| 1     | All conditions shall be as per tender document   |                       |
| 2     | The bidder confirms that Rates and other financial terms quoted in relevant columns of financial bid will only be ruling terms for acceptance, and such terms quoted anywhere else should be ignore.[Denial of this condition not recommended] |                       |
| 3     | The bidder agrees to supply the tendered stores at the rates quoted by him in accordance with C-MET conditions of Contract and [OR] Special Conditions and [OR] other Conditions specified/attached with the tender                            |                       |
| 4     | Inspection - By nominated C-MET official at Destination  |                       |
| 5     | In case the date of bid opening falls on a gazette holiday or is subsequently declared as such, the bids will be opened on the next working date at the appointed time   |                       |

## 19. SPECIAL CONDITIONS

| S.No. | Description   | Confirmation Required |
|-------|---|-----------------------|
| 1     | <p>Taxes/Duties</p> <ol style="list-style-type: none"><li>1. Tenderer should clearly indicate Basic rate and applicable rate of GST</li><li>2. Tenderer's should ensure that they are GST compliant and their quoted tax structure/rates are as per GST law. Tenderer should clearly indicate Basic rate and applicable rate of GST.</li><li>3. In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, C-MET shall deduct the applicable GST from his/their bills under reverse charge mechanism [RCM] and deposit the same to the concerned tax authority</li><li>4. While submitting offer, it shall be the responsibility of the bidder to ensure that they quote correct GST rate and HSN number.</li><li>5. Wherever the successful bidder invoices the goods at GST rate or</li></ol> |                       |

|   |   |  |
|---|---|--|
|   | <p>HSN number which is different from that incorporated in the Purchase Order, payment shall be made as per GST rate which is lower of GST rate incorporated in the Purchase Order or billed.</p> <p>6. Any amendment to GST rate or HSN number in the contract shall be as per the contractual conditions and statutory amendments in the quoted GST rate and HSN number.</p> <p>7. Vendor is informed that he/she would be required to adjust his/her basic price to the extent required by higher tax billed as per invoice to match the all inclusive price as mentioned in the Purchase Order.</p> |  |
| 2 | Quantity Variation Clause: The Purchaser reserves the right to vary the quantity mentioned in the schedule of requirements by Plus 30%. The Purchaser also reserves the right to increase the contract quantity by a maximum of 30% after the placement of order within a year from the date of placement of order keeping the overall quantity increase within 30% of the bid quantity.  |  |
| 3 | Bidders are requested to refer Special Conditions of Contract while submitting their offers   |  |

## 20. DOCUMENTS ATTACHED WITH TENDER

| S.No. | Document Name            | Document Description                         |
|-------|--------------------------|--|
| 1     | Technical Specifications | 100T FULLY AUTOMATIC VACUUM LAMINATING PRESS |

## 21. RESPONSIVENESS

| S.No. | Description   |
|-------|---|
| 1     | Validity of the Offer: No deviation from the offer validity period stipulated in the tender is permitted  |
| 2     | Payment Terms: No deviation from the Payment Terms stipulated in the tender is permitted. However, in deserving cases it will be considered as per Rule 172 (1) of GFR-2017 by the competent authority. |

**(in the company letter head)**

**BID FORM AND PRICE SCHEDULE**

Tender Reference No. : ENQ. NO.: HD/PUR/AVLP/SP-39/06//2018-19/10770  
Date: 07.03.2019

Name of the Stores/  
Goods/Equipment : SUPPLY, INSTALLATION AND COMMISSIONING  
OF 100T FULLY AUTOMATIC VACUUM  
LAMINATING PRESS

| Sl. No. | Description                                  | HSN/ SN CODE | Qty.  | Amount/ Rs |
|---------|--|--------------|-------|------------|
| 1       | 100T FULLY AUTOMATIC VACUUM LAMINATING PRESS |              | 1 No. |            |
|         | Freight charges                              |              |       |            |
|         | Insurance                                    |              |       |            |
|         | Installation charges                         |              |       |            |
|         | Taxable value                                |              |       |            |
|         | GST  |              |       |            |
|         | <b>GRAND TOTAL</b>                           |              |       |            |

1. Payment Terms:
2. Bid Validity:
3. Delivery Schedule:
4. Place of delivery: C-MET, HYDERABAD
5. Warranty, if applicable:
6. GST Registration No.
7. Any other relevant information:

Signature of Tenderer \_\_\_\_\_

Name \_\_\_\_\_

Seal of the Tenderer \_\_\_\_\_

**(in the company letter head)**

**BID FORM AND PRICE SCHEDULE**

Tender Reference No. : ENQ. NO.: HD/PUR/AVLP/SP-39/06/2018-19/10770  
Date: 07.03.2019

Name of the Stores/  
Goods/Equipment : SUPPLY, INSTALLATION AND COMMISSINING OF  
100T FULLY AUTOMATIC VACUUM LAMINATING  
PRESS - **OTHER OPTIONAL ACCESSORIES**

| Sl. No. | Description  | HSN/ SN CODE | Qty. | Amount / Rs |
|---------|--|--------------|------|-------------|
|         | OTHER OPTIONAL ACCESSORIES   |              |      |             |
| 1       | Lapped aluminum plates of size 200 x 200 x 25 mm <sup>3</sup> for copper lamination on the PTFE composite. |              |      |             |
| 2       | Two sets of Eurotherm/ Yokogawa make PID and thyristors as spares.   |              |      |             |
|         | Freight charges  |              |      |             |
|         | Insurance  |              |      |             |
|         | Taxable value  |              |      |             |
|         | GST  |              |      |             |
|         | <b>GRAND TOTAL</b>   |              |      |             |

Signature of Tenderer \_\_\_\_\_

Name \_\_\_\_\_

Seal of the Tenderer \_\_\_\_\_

**(in the company letter head)**

**Specification for 100T Fully Automatic Vacuum Laminating Press**

| Technical Requirement           | Technical Specification  | Specifications offered by the firm<br><b>(YES/NO NOT ACCEPTED)</b> |
|---------------------------------|--|--|
| Type of Hydraulic Press         | Heavy duty fully automatic 4 pillar down-stroking/up-stroking type hydraulic press with platen guided on four pillars, sliding bolster platen for lamination under vacuum.             |  |
| Capacity                        | 100 Ton, accuracy <u>+ 1%</u>  |  |
| Stroke                          | 150 mm   |  |
| Required Vacuum                 | $10^{-3}$ Torr for the entire daylight volume (300x 300 x 200 mm <sup>3</sup> ) to be achieved within 10 minutes. Open day light = 300 mm  |  |
| Heater plate area               | 300 x 300 mm, SS 316 grade, surface ground and lapped to 0.1micron accuracy  |  |
| Lower platen height from floor  | 1000 mm  |  |
| Approach speed                  | 15 to 20 mm/sec  |  |
| Pressing speed                  | 3 to 4 mm/sec  |  |
| Opening speed                   | 4 to 5 mm/sec  |  |
| Return speed                    | 20 to 25 mm/sec  |  |
| Operating temperature and rate  | 450°C within two hours to be achieved by providing high density cartridge heaters which has to be controlled through PID and thyristor. Required sample moulding temperature is 380°C. |  |
| Electric supply                 | Three phase, 415V  |  |
| Type of Pressure & vacuum Gauge | Glycerin filled diaphragm type, suitable vacuum control valves, couplings etc.   |  |
| Set pressure, temperature       | PLC and MMI to control set pressure, timers, breathing counters etc.   |  |
| Tonnage control                 | By means of remotely operated variable pressure regulating valve.  |  |
| Accuracy                        | As per JIS Grade II maintaining the perpendicularity, parallelism and flatness. There should be a provision for  |  |

|  |  |  |
|--|--|--|
|  | digital indication of parallelism of the press (moving platen with respect to fixed ones).   |  |
| Accuracy                                       | As per JIS Grade II maintaining the perpendicularity, parallelism and flatness. There should be a provision for digital indication of parallelism of the press (moving platen with respect to fixed ones).   |  |
| For easy loading and unloading of the product. | Sliding bolster platen operated using suitable cylinder has to be provided   |  |
| Suitable standard 'T' slots provision          | Should be provided on both top and bottom platens (IS:2013) to fit heater platens of smaller size for small components. Heater platens (2 Nos) of size 300 x 300 mm have to be bolted to the top and bottom platens. Two surface ground lapped parallel plates of size 300 x 300 x 16 mm made out of SS 316 should be provided for lamination. Sample will be kept between these plates and these plates have to attain a temperature of 380°C during lamination. Suitable heater (high density type) of 3/4" diameter can be used for the same. The heater platen has to be properly insulated so as to prevent heat transmission to hydraulic parts. |  |
| Number of heater platens and size              | 2 Nos. size 300 x 300 mm have to be bolted to the top and bottom platens.  |  |
| Lamination plates.                             | Two surface ground lapped parallel plates of size 300 x 300 x 16 mm made out of SS 316 should be provided for lamination. Sample will be kept between these plates and these plates have to attain a temperature of 380°C during lamination.   |  |
| Type of heater for heating lamination plates   | Suitable heater (high density type) of 3/4" diameter can be used for the same. The heater platen has to be properly insulated so as to prevent heat transmission to hydraulic parts  |  |
| Hydraulic Pump & Motor made up of              | ABB/Polyhydron/Vickers/Rexorth/Siemens/NGEF/Dowty conforming to BIS325 standard  |  |
| Oil tank                                       | Suitable capacity tank has to be provided  |  |

|  |   |  |
|--|---|--|
| Limit switches   | Limit switches are to be provided for effective control of stroke and pressing (Fast approach & pressing). And also the Vacuum chamber should be able to lift up and down using limit switches independently.   |  |
| Alignment of Die with punches  | In order to align the die with punches, press should be capable of work in 'inching' mode also.   |  |
| Hydraulic cylinders for automation of sample loading and ejecting.     | Proper hydraulic cylinders (2 Nos.) of small capacity should be provided for automation of sample loading and ejecting  |  |
| Moving top Platen made up of   | Moving top platen should be accurately guided on four nos. of round columns, which is to be ground and hard chrome plated. The platen has to be provided with 4 Nos. of phosphor bronze bearings so as to maintain the parallelism with the required tolerance (20 $\mu$ m). Tie rod passing through the columns should bind the top and bottom structure. The tie rods and other high quality rolled steel for the fabrication of frame should be fully stress relieved (IS:2026). Proper reinforcements have to be given to resist deflection during operation. All the necessary valves gauges, filters, accessories, piping, fitting for the operation of the press are to be provided. |  |
| Main Hydraulic Cylinder capacity and type of material of construction. | Main cylinder should be capable for producing 100 T capacity with additional side cylinders of suitable capacity for speed control. Cylinder should be manufactured out of completely ultrasound tested solid steel. Ram is to be fabricated out of ultrasonically tested, EN-9 forgings proof machined with hard chrome plated surface, high temperature resistant, oil resistant rubber seals and packing from reputed manufacturers like VAKO, KELIT(high temperature resistant) etc. has to be used.  |  |

|   |  |  |
|---|--|--|
| Suitable pressure maintenance system during laminating time | Suitable pressure maintenance system during laminating time using excess pressure relief valve and low pressure booster has to be provided.  |  |
| Pressure relief valve                                       | Fixed pressure relief valve to control maximum pressure and for safety of machine to be provided.  |  |
| Variable pressure relief valve                              | Variable pressure relief valve to control maximum working pressure are also to be provided.  |  |
| Return and suction strainers                                | Return and suction strainers should be provided  |  |
| Manual grease lubrication                                   | Manual grease lubrication of the centralized type should be provided   |  |
| First fill of oil   | First fill of oil is to be provided by the party   |  |
| Temperature controllers and Thyristors                      | Temperature at the mate should be accurately controlled and indicated using programmable PID controllers and thyristor - 3nos. each (Eurotherm/Yokogawa make – 4 programme, 16 segments). 2 nos are for platens and the other one is for monitoring sample temperature at the die. |  |
| On-line temperature recoding system                         | On-line temperature recoding system with digital output of the sample temperature throughout the lamination cycle and the data should be retrieved through PC.   |  |
| Provision for cooling the heater platen                     | Provision for cooling the heater platen from 380 to 100°C at a cooling rate of 20°C/min. through water circulation/cooled air comprising of compressor and suitable chiller have also to be provided. Necessary grooves have to be provided for fast cooling of the platen         |  |
| Safety devices  | Safety devices like safety guard for operator, emergency mushroom type pushbutton for stopping, light at the front side.   |  |
| Control panel   | Control panel should be wired neatly conforms to BIS8544. Panel should be provided with necessary switches and lights and it should be at a suitable working height. All electrical items should be of reputed make such as SIEMENS, L&T, ABB etc. Front panel                     |  |

|   |  |  |
|---|--|--|
|   | <p>should have the following:</p> <p>PLC Display unit (MMI) for user – friendly operation to automate the entire product cycle – pressure, temperature (heating and cooling), platen movements, vacuum etc.</p> <p>Pressure and vacuum Gauges to check the working Pressure and vacuum. The entire system has to be interfaced and to be operated through PC. The entire operation of the press should be operated in manual mode also.</p>  |  |
| Front panel should consist of                               | <p>PLC Display unit (MMI) for user – friendly operation to automate the entire product cycle – pressure, temperature (heating and cooling), platen movements, vacuum etc.</p> <p>Pressure and vacuum Gauges to check the working Pressure and vacuum. The entire system has to be interfaced and to be operated through PC. The entire operation of the press should be operated in manual mode also. Heaters On / OFF switch, Auto On Push button, Motor On / OFF switch, Selector Switch ( Auto / Manual ), Cylinder Up / Down push button , Main On / Off switch , Water circulation on / Off , Vaccum pump On/ Off , Air Circulation on / off, Chiller On/Off etc.</p> |  |
| Pressure Switch   | To set the working Pressure manually. Sensitivity of pressure control < 2 Tons.  |  |
| Suitable pressure maintenance system during laminating time | Suitable pressure maintenance system during laminating time using excess pressure relief valve and low pressure booster has to be provided.  |  |
| Pressure relief valve                                       | Fixed pressure relief valve to control maximum pressure and for safety of machine to be provided.  |  |
| Variable pressure relief valve                              | Variable pressure relief valve to control maximum working pressure are also to be provided.  |  |
| Return and suction strainers                                | Return and suction strainers should be provided  |  |
| Manual grease lubrication                                   | Manual grease lubrication of the centralized type should be provided   |  |
| First fill of oil   | First fill of oil is to be provided by the party   |  |
| Temperature   | Temperature at the mate should be  |  |

|   |   |  |
|---|---|--|
| controllers and Thyristors              | accurately controlled and indicated using programmable PID controllers and thyristor - 3nos. each (Eurotherm/Yokogawa make – 4 programme, 16 segments). 2 nos are for platens and the other one is for monitoring sample temperature at the die.  |  |
| On-line temperature recoding system     | On-line temperature recoding system with digital output of the sample temperature throughout the lamination cycle and the data should be retrieved through PC.  |  |
| Provision for cooling the heater platen | Provision for cooling the heater platen from 380 to 100°C at a cooling rate of 20°C/min. through water circulation/cooled air comprising of compressor and suitable chiller have also to be provided. Necessary grooves have to be provided for fast cooling of the platen  |  |
| Safety devices                          | Safety devices like safety guard for operator, emergency mushroom type pushbutton for stopping, light at the front side.  |  |
| Control panel                           | Control panel should be wired neatly conforms to BIS8544. Panel should be provided with necessary switches and lights and it should be at a suitable working height. All electrical items should be of reputed make such as SIEMENS, L&T, ABB etc. Front panel should have the following:<br>PLC Display unit (MMI) for user – friendly operation to automate the entire product cycle – pressure, temperature (heating and cooling), platen movements, vacuum etc.<br>Pressure and vacuum Gauges to check the working Pressure and vacuum. The entire system has to be interfaced and to be operated through PC. The entire operation of the press should be operated in manual mode also. |  |
| Front panel should consist of           | PLC Display unit (MMI) for user – friendly operation to automate the entire product cycle – pressure, temperature (heating and cooling), platen movements, vacuum etc.<br>Pressure and vacuum Gauges to check   |  |

|                      |   |  |
|----------------------|---|--|
|                      | the working Pressure and vacuum. The entire system has to be interfaced and to be operated through PC. The entire operation of the press should be operated in manual mode also. Heaters On / OFF switch, Auto On Push button, Motor On / OFF switch, Selector Switch ( Auto / Manual ), Cylinder Up / Down push button , Main On / Off switch , Water circulation on / Off , Vacuum pump On/ Off , Air Circulation on / off, Chiller On/Off etc. |  |
| Pressure Switch      | To set the working Pressure manually. Sensitivity of pressure control < 2 Tons.   |  |
| Delivery Schedule    | Within 4 months after placing Purchase Order PLUS 10 DAYS grace period for submission of PBG etc  |  |
| Warranty             | 1 year from the date of installation & commissioning  |  |
| Other details        | Spares: Suitable O-rings, gaskets etc. have to be supplied for the trouble free operation of lamination press for next 3 years.   |  |
| Optional accessories | 1) Lapped aluminum plates of size 200 x 200 x 25mm <sup>3</sup> for copper lamination on the PTFE composite   |  |
|                      | 2) Two sets of Eurotherm/Yokogawa make PID and thyristors as spares   |  |

## BANK GUARANTEE FORM FOR BID SECURITY/EMD

Whereas \_\_\_\_\_ (hereinafter called the "Tenderer") has submitted its quotation dated \_\_\_\_\_ for the supply of

\_\_\_\_\_ (hereinafter called the "tender") against the purchaser's tender enquiry No. \_\_\_\_\_ Know all persons by these presents that we \_\_\_\_\_ of \_\_\_\_\_ (Hereinafter called the "Bank") having our registered office at \_\_\_\_\_ are bound unto \_\_\_\_\_

(hereinafter called the "Purchaser) in the sum of \_\_\_\_\_ for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_. The conditions of this obligation are:

- (1) If the Tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
  
- (2) If the Tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
  - a) fails or refuses to furnish the performance security for the due performance of the contract.  
or
  - b) fails or refuses to accept/execute the contract.  
or
  - c) if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition(s).

This guarantee will remain in force for a period of forty-five days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)  
Name and designation of the officer  
Seal, name & address of the Bank and address of the Branch

**BANK GUARANTEE FORM FOR PERFORMANCE SECURITY DEPOSIT**

To

The Administrative Officer  
C-MET, IDA Phase-III  
Cherlapally, HCL Post  
Hyderabad – 500 051  
TELANGANA STATE  
INDIA

WHEREAS \_\_\_\_\_ (Name and address of the supplier) (Hereinafter called "the supplier") has undertaken, in pursuance of contract no \_\_\_\_\_ dated \_\_\_\_\_ to supply (description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of \_\_\_\_\_ (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid up to ..... (In words) months from the date of Notification of Award i.e up to ----- (indicate date)

.....  
(Signature with date of the authorized officer of the Bank)

.....  
Name and designation of the officer

.....  
Seal, name & address of the Bank and address of the Branch