



**CENTRE FOR MATERIALS FOR ELECTRONICS TECHNOLOGY,**  
(A Scientific Society, Ministry of Electronics and Information Technology, Govt. of India)  
SHORANUR ROAD, M.G. KAVU, P.O. ATHANI, THRISSUR 680 581, Kerala, India  
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### TENDER NOTICE

Sealed Tenders are invited in two parts; technical bid and financial bid, from either the Principal/OEM itself, or by Agent/Dealer on behalf of the Principal/OEM, for the supply, installation, commissioning and demonstration of stores mentioned below, in the tender format attached herewith.

S.No	Brief Description of Stores	Tender No. & Dt.	Qty
1	DC Sputtering Unit (As per specification at Annexure- II)	TR/PUR/SP/033/2017 Dated 23.10.2017	1 unit
Due date of Tender	22.11.2017 at 15.00 hrs		
Date of Tender Opening	22.11.2017 at 15.30 hrs The tender would be opened at 15.30 hrs on the date of tender opening above, at the address mentioned above		
EMD	Rs.20,000/-		

The General terms and conditions shall be as per the **Annexure -I** attached herewith.

**The technical and financial bid** shall be kept in separate covers and put in a single cover superscribing the **enquiry reference number and name of the item and date of tender opening**. Please submit your quotation **on or before 15.00 hrs on the due date**, in accordance with the terms and conditions .

**Our Provisional GST No. is 32AAAAC0801E1ZS**

Administrative Officer

### Limited Tender Format

Name of the Firm :

Firm Registration No. (If any)		Date			
GST No.		PAN (Attach photocopy)			
Phone		Address :			
Fax					
Email					
URL					
<b>Tender Schedule : All rates in Figures and in Words in Rupees</b>					
Tender No. and Date					
Sr. No.	Description and Specification	Qty	Unit	Rate per unit	Amount
Packing / Forwarding charges					
GST					
Total value					
Delivery Terms					
Delivery Schedule :					
Enclosed Specifications/Drawings/Special Conditions of Contract :					
Item /Tender Specific Conditions of this Tender :					
<p>I/we engage to supply the material(s) to your office and comply the following</p> <ol style="list-style-type: none"> <li>1) Tender schedule and technical specification indicated</li> <li>2) Item/tender specific conditions for this tender</li> <li>3) Terms and conditions printed overleaf</li> <li>4) General conditions of contract signed by me at the time of supplier registration (for registered suppliers)</li> <li>5) I/we confirm that set off for the GST paid on the inputs have been taken into consideration in the above quoted price and further agree to pass on such additional duties as sets offs as may become available in future under GST</li> <li>6) This offer is valid for 90 (ninety) days from the date of opening of the tender</li> <li>7) That we have not been debarred by any Government /Undertaking</li> <li>8) That the rates quoted are not higher than the rates quoted for same item to any Government/ Undertaking</li> <li>9) That the bid submitted by us is properly sealed and prepared as to prevent any subsequent alteration and replacement.</li> </ol>					
Signature & Seal Place & Date		Name of Authorised Signatory			
Address		Tel. No/Fax No/ Mobile No. Email id			

**TERMS AND CONDITIONS**

1. The tender shall be submitted by either the Principal/OEM itself, or by Agent/Dealer on behalf of the Principal/OEM, but both cannot bid simultaneously for the same product in the same tender. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another principal/OEM in the same tender for the same item/product.
2. The quotation must be in the form furnished by Procuring Entity (C-MET) and should be free from corrections/erasures. In case there is any unavoidable correction it should be properly attested; if not, the quotation will not be considered. Quotation written in pencil will not be considered.
3. Bidders are required to submit their quotation in two envelopes. The first envelop, called the techno-commercial bid, shall contain EMD and the eligibility, technical quality and performance aspects, commercial terms and conditions and documents sought in the tender, except the price and relevant financial details. In the second envelop, called the financial bid, the price quotation along with other financial details are submitted. Both the envelopes are to be submitted together in a sealed outer envelope.
4. The specifications for the items quoted should be explicitly clear and all available technical literature, catalogues and other data in support of the specification of the items should be furnished along with the quotation.
5. Only one quotation should be sent in one envelope for a specified equipment/instrument.
6. Quotation should be valid for a minimum period of Ninety Days from the due date.
7. **Earnest Money Deposit (EMD)**
  - a) E.M.D or Bid Security in Indian Rupees for Rs. 20000/- (Rupees Twenty thousand only ) should be deposited by the Bidder, in any one of the following forms, along with the Technical bid:-
    - i. Call Deposit Receipt duly endorsed in favour of C-MET or Pay Order or Demand Draft in favour of C-MET
    - ii. Fixed Deposit Receipt issued by Nationalised banks endorsed in favour of C-MET, Thrissur.
  - b) The EMD shall be put in a separate envelope superscribing tender reference no. as such on it and put in the envelope containing technical bid as described in terms and conditions at Sl. 3. In the absence of EMD the Bid will not be accepted.
  - c) 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.

- d) 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 with terms and conditions at sl. 26.
  - iii) EMD exemption : The firms which are registered with DGS &D and the Micro and Small Enterprises (MSE) which are registered as MSE with any agency mentioned in the notification of the Ministry of Micro, Small and Medium Enterprises, indicated below are exempted from EMD:-
    - a ) District Industries Centres;
    - b) Khadi and Village Industries Commission;
    - c) Khadi and Village Industries Board;
    - d) Coir Board;
    - e) National Small Industries Corporation;
    - f) Directorate of Handicraft and Handloom; and
    - g) Any other body specified by the Ministry of MSME

The exemption is subjected to furnishing of relevant valid certificate for claiming exemption and shall be kept along with Techno-Commercial Bid.

8. The quotation should reach **on or before 22<sup>nd</sup> November, 2017 by 15.00 hrs** , to the Administrative Officer, C-MET, (Centre for Materials for Electronics Technology, Shornur Road, Mulankunnathukavu (P.O), Athani – 680 581, Kerala State, India super scribing **Name of Item , Tender Reference No., Due date.** The Techno-Commercial bid will be opened on 22<sup>nd</sup> November, 2017 at 15.30 hrs at C-MET, Thrissur.
9. C-MET reserves the right to accept the offer by individual items and reject any or all tenders without assigning any reason thereof and does not bind itself to accept lowest quotations.
10. Manufacturer's name and country of origin of materials offered must be clearly specified. Please quote whether your organization is large scale industry or small scale industry. If you have NSIC/MSE/MSI/DGS & D Certificate. Please attach it to the quotation . Mention your registration details.
11. Complete details and ISI specification if any must accompany the quotation. Make/brand of the item shall be stated wherever applicable. If you have got any counter offer as suitable to the material required by us, the same may be shown separately.
12. Samples must be submitted where specified along with the quotations. Samples must be carefully packed, sealed and labeled clearly with enquiry number, subject and sender's name for easy identification. Rejected samples, will be returned at your cost if insisted.

13. All drawings sketches and samples, if any, sent along with this enquiry must be returned along with quotations duly signed .
14. All supplies are subject to inspection and approval before acceptance. Manufacturer/supplier warranty certificates and manufacturer/Government approved lab test certificates shall be furnished along with the supply, wherever applicable.
15. C-MET reserves the right to modify the quantity specified in this enquiry.
16. The prices quoted shall be in Indian Rupees and should be firm till the supplies are completed. Please quote the rates in words and figures. Rates quoted should be free delivery at destination including all charges otherwise the quotation is likely to be rejected. Prices quoted for free delivery at destination will be given preference. If there is no indication regarding the FOR, in the quotation, then it will be considered as FOR destinations. Price quoted should be net and valid for a minimum period of three months from the date of opening of the quotation.
17. In case the items in the enquiry are covered by any rate contract or running contract finalized by the DGS & D or any other state or central Government, it should be specified in your quotation and accepted contract rates should also be mentioned. It should be confirmed whether you could supply at the RC rates outside rate contract.
18. Payment of GST; in the case of supplier registered under GST, is primarily responsibility of the seller and will not be paid unless the percentage value is clearly mentioned in the quotations. If no indication regarding GST is recorded in the quotation, the GST will be considered as included.
19. Delivery period required for supplying the material should be invariably specified in the quotation.
20. In case your quotation is accepted and order is placed on you, the supply against the order should be made within the period stipulated in the order, C-MET reserves the right to recover any loss sustained due to delayed delivery by way of penalty. In case of failure to supply within the time specified in the Purchase order, a penalty/LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 10% in respect of items which are not supplied. The decision of C-MET shall be final in this regard.
21. If the deliveries are not maintained and due to that account Procuring Entity (C-MET) is forced to buy the material at your risk and cost from elsewhere, the loss or damage that may be sustained there by will be recovered from the defaulting supplier.
22. Dispute clause: Any dispute relating to the enquiry shall be subject to the jurisdiction of the court at Thrissur only.
23. Our normal payment terms are 100% (hundred percent) within 30 (thirty) days on receipt and acceptance of material at our site in good condition.

## 24. Evaluation of Tenders

- a. All tenders are evaluated strictly on the basis of the terms and conditions incorporated in the tender document and those stipulated by the tenderers in their tenders. Tenders that do not meet the basic requirements specified in the bid documents are treated as unresponsive and ignored.
- b. Evaluation is based only on the conditions included in the tender document and any other condition will not form the basis of this evaluation.
- c. **Evaluation of eligibility/qualification Criteria:** Procuring Entity will determine, to its satisfaction, whether the tenderers are eligible, qualified and capable in all respects to perform the contract satisfactorily. Tenders that do not meet the required eligibility/qualification criteria prescribed will be treated as unresponsive and not considered further.
- d. **Evaluation of Technical Suitability:** The description, specifications, drawings and other technical terms and conditions are examined with respect to the specifications Procuring Entity. Minor exceptions/deviations may be waived provided they do not constitute any material deviation and do not have significant financial impact and, also, would not prejudice or affect the ranking order of the price bid. Exceptions/deviations should not grant the tenderer any undue advantage vis-à-vis other tenders and Procuring Entity.
- e. **Evaluation of Commercial Conditions:** The commercial conditions quoted by the Tenderer are evaluated to confirm that all terms and conditions specified in the Tender have been accepted without reservations by the tenderer. Only minor deviations may be accepted/allowed, provided these do not constitute material deviations without financial impact and do not grant the tenderer any undue advantage vis-à-vis other tenders and Procuring Entity.
- f. **Evaluation of Financial Bids and Ranking of Tenders in general:**
  - a) The financial bids of only responsive and technically accepted tenders will be opened and evaluated.
  - b) If the price bid is ambiguous so that it may very well lead to two equally valid total price amounts, then the bid should be treated as unresponsive.
  - c) Sometime certain bidders offer suo motu discounts and rebates after opening of the tender (techno-commercial or financial). Such rebates/discounts should not be considered for the purpose of ranking the offer but if such a firm does become L1 at its original offer, such suo motu rebates can be incorporated in the contracts. This also applies to conditional rebates, for example, rebate for faster payments, and so on.
  - d) Normally, the comparison of the responsive tenders shall be on total outgo from the Procuring Entity's pocket, for the procurement to be paid to the supplier or any third party, including all elements of costs as per the terms of the proposed contract, including any taxes, duties, levies etc, freight insurance etc. Therefore it should normally be on the basis of FOR destination basis, duly delivered, commissioned, as the case may be.
  - e) Unless otherwise specifically indicated as inclusive in the total price, if any of the bidders has failed to quote any cost element; such as freight, packing charge etc., the highest of the charge quoted by other parties shall be taken for comparison and ranking.
  - f) In the case of bidders who are not registered with GST, the price comparison shall be after adding reverse tax payable by Procurement entity.
  - g) In the case of goods manufactured in India or goods of foreign origin already located in India, GST and other similar taxes and duties, which will be contractually payable (to the tenderer) on the goods are to be added.
  - h) As per policies of the Government from time to time, the purchaser reserves his option to give price/purchase preferences as indicated in the tender document.

**25. Procurement Preference :**

- i. Procurement preference is given to Micro and Small Enterprises registered with any agency mentioned in the notification of the Ministry of Micro, Small and Medium Enterprises, indicated below, as per Public Procurement preference Policy of Govt. of India:
    - h) District Industries Centres;
    - i) Khadi and Village Industries Commission;
    - j) Khadi and Village Industries Board;
    - k) Coir Board;
    - l) National Small Industries Corporation;
    - m) Directorate of Handicraft and Handloom; and
    - n) Any other body specified by the Ministry of MSME
  - ii. The benefit is also available to MSEs, who are having Udyog Aadhar Memorandum
  - iii. This benefit is available only for procurement of only goods produced and services rendered by MSEs and not for any trading activities by them.
  - iv. An MSE Unit will not get any purchase preference over another MSE Unit.
  - v. Procurement Preference is also extended to suppliers registered under "Make in India" and where the minimum local content is 50%, as per Public Procurement (Preference to Make in India), order, 2017.
26. **Warranty clause :** The items covered under this tender, shall be covered minimum **one year** on site comprehensive warranty . The warranty shall be given by the Original Equipment Manufacturer. If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including transporting cost both the ways
27. On selection, he/she shall be required to provide security deposit as performance guarantee for an amount of 10% of the purchase value of the equipment(s) in the form of Demand Draft, Fixed Deposit Receipt or Bank Guarantee from the Nationalized bank, which shall be valid for entire performance guarantee period plus 60 days, within 14 days from the date of communication Purchase Order.

**Sd/-  
(T.K. Anil Kumar)**

**DC SPUTTERING UNIT**  
**Technical Specifications**

1. DC Sputter Source – 1 No.

- 2 inch Diameter flexible sputter source with water cooling (indirect) arrangement
- Stainless steel design and built-in shutter
- High power Nd-Fe-B magnets
- Provision should be given for changing targets without breaking any internal seals.
- Provision for varying target-substrate distance

2. DC power supply

- Maximum power : 1000 Watt (1kW)
- Input voltage : 230 V single phase AC
- Output voltage 50 V DC to 1000 V DC variable with fine control
- Output current : 0 - 1 Amps variable with fine control
- Separate displays for voltage and current
- Protection against Output overload and short circuit
- Operating temperature : 5-50°C

3. Vacuum chamber:

- Construction material: SS 304 or better quality SS
- Design: D type with front opening, 4 inch view port on the front door
- Achievable vacuum:  $\leq 10^{-6}$  mbar
- Dimensions: 500 mm (H) , 400mm diameter or bigger with necessary ports for gauge, vent valve, pumping and gas inlet on the chamber
- SS chamber liner set may be provided. The liner should be easily removable
- Confocal facility for second magnetron/RF source

4. Vacuum System

Low Vacuum pump:

- Two stage direct drive rotary vacuum pump of reputed make
- Pumping speed:  $\geq 20$  m<sup>3</sup>/hr
- Achievable vacuum:  $5 \times 10^{-3}$  mbar or better



### High vacuum pump:

- Oil diffusion Pump of reputed make having 150mm nominal dia, with inbuilt baffle
- Pumping speed:  $\geq 650$  L/sec for nitrogen
- Facility for liquid nitrogen trap

### Ultimate vacuum

Minimum  $3 \times 10^{-6}$  mbar should be achieved

### Vacuum gauges and valves:

Digital vacuum gauge of standard make to measure vacuum in the range atmospheric pressure to  $10^{-6}$  mbar should be provided (pirani and penning gauges). Appropriate isolation valves, pipelines and air admittance valve have to be provided. Vacuum gauge should be calibrated against nitrogen.

#### 5. Substrate holder

- Capable of holding substrates with size 2 inch or more
- substrate rotation should be provided

#### 6. Control Panel Instrumentation

- Displays for Vac, vacuum gauges, substrate temperature and heating control, pump ON/OFF switches, DC power supplies. Display provision for MFC and thickness monitor
- Emergency power shut-down button/switch and Controllers with safety features

#### 7. Control system

- All the electrical control should be mounted in a separate console with appropriate safety devices.
- The diffusion pump should not start when the rotary pump is off. Diffusion pump should have a cut off mechanism in case of improper cooling. The rotary pump should have provision for venting in case of power failure.

#### 8. Installation and training

- Installation/commissioning of the instrument including training & demonstration of the system at C-MET, Thrissur, Kerala shall be arranged by the Party.

## Optional accessories

### 1. Sputtering target

Titanium target may be separately quoted. Diameter of the target should be 2 inch. Provision should be there to change the target at ease by the user

### 2. Mass Flow Controllers (MFCs):

Two mass flow meters of reputed make (for Ar and N<sub>2</sub> gases) to monitor and control gas flow during sputtering are to be provided. Calibration charts have to be provided for other gases. The flow rates required are 0-200 sccm.

### 3. Substrate Heater

- Substrate heating upto 500°C during deposition
- Temperature control with PID controller

### 4. Thickness Monitor

- Quartz crystal type

### 5. Chiller

A suitable chiller of reputed make may be quoted separately.

## Miscellaneous

- The necessary utilities (power lines, water and gas connections) should clearly be mentioned along with tender document
- Vendor should clearly indicate the basic system cost. The cost for optional system should be brought out separately in the quote
- List of critical spares for trouble free operation of the system for three years should be provided as optional
- The power/control unit and vacuum system should be mounted on frame with wheels for ease of movement
- Technical brochures for individual components should be provided. Technical drawing showing design and dimensions shall be provided
- Vendor should confirm incorporation of safety features for failure of water, power, temperature, operations of entire unit.
- Vendor should have fully equipped service centre for all parts/ components in south India
- List of organizations which have purchased similar equipment must be provided along with details of contact person. The vendor must have supplied at least three sputtering systems.
- A table showing compliance with the required specifications must be included.