

INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

Ground Floor, Block "A", Vishwakarma Government Engineering College Campus
Visat-Gandhinagar Highway, Chandkheda, Ahmedabad-382424. Tel/Fax No. +91 79 2397 2583

Date: 30th May, 2012

Tender No.: IITGN/MEMS/EQP/2012-13/0044
Last date: 29th June, 2012 on/before 05:00 PM

SUB: Invitation of sealed tender for Supply of RF Magnetron Sputtering System as per specifications shown in the Annexure - I.

Dear Sir,

Indian Institute of Technology Gandhinagar invites sealed tender for **Supply of RF Magnetron Sputtering System as per specifications shown in the Annexure - I** on the following terms & conditions:

1. If the supplier/firm is manufacturer/authorized dealer/sole distributor of any item, the Certificate to this effect should be attached.
2. The tender documents are to be in two parts as **Technical Offer and as Financial offer:**
 - a.) The Technical offer should include the detailed specifications of main equipment/item and its accessories. All items should be numbered as numbered for each instrument in the **Annexure-I**.
 - b.) The financial offer should include the cost of main equipment/item and its accessories numbered as in (a). If there is any separate cost for installation etc. that should be quoted separately. The total cost should be quoted in words as well as figures (typed or printed). Amendment should be avoided. Amendments, if any, should be duly initialed, failing which the offers are liable to be rejected.
 - c.) The two parts of the offer should be placed in separate sealed envelopes clearly marked "**Technical Offer**" & "**Financial Offer**". These two envelopes along with envelope for EMD and Tender Fee marked "**Tender Fee & EMD**" (total three envelopes) must be enclosed in one bigger envelope duly sealed and super scribed with tender number, name of the instrument/item and tender due date must be forwarded to the undersigned so as to reach him on or before the due date.

Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.

3. Fax and Email quotation are not acceptable.

4. Quotations should be valid for **120 days** from the tender due date. The quotation should clearly indicate the period of delivery, warranty terms etc. A minimum of one year warranty is required from the date of commissioning.

5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. The Suppliers should submit copies of suitable documents in support of their reputation, credentials and past performance.

6. The quotations should be given for the items in the same order as in the tender document.

7. Imported supplies should be delivered by air and quoted for CIP Ahmedabad.

8. The quantity shown against each item is approximate and may vary as per demand of the Institute at the time of placing order.

9. In case of payment through Letter of Credit (LC), ninety percent of the payment will be released after completion of the supply. The balance 10% of the payment will be released after satisfactory installation of the equipment.

10. IIT Gandhinagar is exempt from payment of Excise Duty and is eligible for concessional rate of Custom Duty. Necessary certificate will be issued on demand. IIT Gandhinagar will make necessary arrangements for the clearance of imported goods at the Airport. Hence, the price should not include these charges.

11. In the event of any dispute or difference(s) between the vendee IIT Gandhinagar and the vendor(s) arising out of non-supply of material or supplies not found according to the specifications or any other cause whatsoever relating to the supply or purchase order before or after the supply has been executed, shall be referred to the concerned authority of IIT Gandhinagar who may decide the matter himself or may appoint arbitrator(s) under the arbitration and conciliation Act 1996. The decision of the arbitrator shall be final and binding on both the parties.

12. The place of arbitration and the language to be used in arbitral proceedings shall be decided by the arbitrator.

13. All disputes shall be subject to Gandhinagar Jurisdiction only.

14. I.I.T. Gandhinagar has the right to accept the whole or any parts of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

15. The Tender/Bid will be open on **04.07.2012** at **03:00 PM**.

a.) The suppliers or their authorized representative may also be present during the opening of the Technical offer, if they desire so, at their own expenses.

b) Only those financial offers will be opened whose technical offers are found suitable by the expert committee appointed for the concerned instrument..

- c) No separate information shall be given to individual bidders. In incomparable situation, the committee may negotiate price with the qualified bidder quoting the lowest price before awarding the offer.

16. In case the supplier requires any elucidation regarding the tender documents, they are requested to contact to the Assistant Registrar (M.M.) through e-mail, purchase@iitgn.ac.in on or before **4:00 PM, 29.06.2012**.

17. A demand draft of **Rs. 1000/- (Rupees One Thousand Only)** towards non-refundable tender fee and a demand draft of **Rs. 74,000/- (Rupees Seventy Four Thousand Only)** at the rate of 2% of the tender value towards refundable EMD from a Nationalized bank in favour of "IIT Gandhinagar" payable at Ahmedabad placed in a separate envelope marked "**Tender Fee & EMD**" should accompany tender bid documents. Both the demand drafts should be valid for 180 days. Without the Tender Fee and EMD the bid will not be considered.

The EMD of the successful bidder will be returned to them without any interest after completing the successful installation. The earnest money of unsuccessful bidders will be returned to them without any interest within fifteen working days after awarding the offer.

18. All tender documents should have to be forwarded through speed post or registered post, courier to the following address so as to reach the following address on/before **05:00PM, 29.06.2012**.

Assistant Registrar (M.M.)

Indian Institute of Technology Gandhinagar,
Vishwakarma Government Engineering College Campus,
Ground Floor, Block " A " ,
Visat-Gandhinagar Highway, Chandkheda
Ahmedabad 382424
Tele/ Fax No. +91 79 2397 2583

Other Terms & Conditions:

1. Pre – Qualification Criteria:

- a. Bidders should be the manufacturer / authorized dealer. Letter of Authorization from Manufacturer on the same and specific to the tender should be enclosed.
- b. An undertaking from the original Manufacturer is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.

2. Performance Guarantee Bond:

- a. Performance Guarantee Bond is mandatory.
- b. Successful supplier/ firm should submit performance guarantee as prescribed and to be received in the office of Assistant Registrar, Materials Management Division before the date of commencement of supply or 30 days from the date of acceptance of the purchase order, whichever is earlier. The performance guarantee bond to be furnished in the form of Bank Guarantee as per given proforma of the tender documents, for an amount covering 10% of the value of quantity of material on landed cost basis.
- c. The Performance Guarantee Should be established in favour of “ IIT Gandhinagar” through any Nationalized Bank Situated at Ahmedabad/Gandhinagar with a clause to enforce the same on their local branch at Ahmedabad.
- d. Validity of the performance guarantee bond shall be for a period of five years from the date of issue of installation & commissioning.

3. Delivery: The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within one week of delivery unless otherwise prescribed.

4. Penalty: If the suppliers fails to deliver and place any or all the Equipment or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to the maximum of 10% of total order value will be deducted.

5. Training: Suppliers need to provide adequate training at IIT Gandhinagar to the nominated person of IIT Gandhinagar at their cost. IIT Gandhinagar will not bear any training or living expenditure in this regard.

6. Installation & Warranty Declaration: Suppliers must give the comprehensive onsite warranty as required from the date of successful installation of Equipment against any manufacturing defects. In the installation report the model number of instrument and all spares parts numbers should be in the line of purchase order. And suppliers must be written in the warranty declaration that “everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specification and shall be complete enough to carry out the experiments, as specified in the tender document.”

Any deviation in the material and the specifications from the accepted terms may liable to be rejected and the suppliers need to supply all the goods in the specified form to the satisfaction / specifications specified in the Purchase order and demonstrate at the their own cost.

Sd/-
Assistant Registrar (M.M)

PARTICULARS TO BE FILLED BY THE SUPPLIER

1. Name of the Supplier:

2. Complete Address of the Supplier:

3. Availability for demonstration of instruments at IIT Gandhinagar: Yes / No [Please ✓]

4. Cost of the Tender enclosed: Yes/No [Please ✓] If yes,

a.) Name of the Bank _____

b.) Amount (₹) _____

c.) Demand Draft No. _____

5. Earnest Money Deposit enclosed: Yes / No [Please ✓] if Yes,

a.) Name of the Bank _____

b.) Amount (₹) _____

c.) Demand Draft No. _____

d.) Last Validity date of the enclosed DD _____

6. Communication details of the concerned contact person to whom all references shall be made regarding this tender enquiry. [NOTE: Any changes after submission of Tender documents kindly update IIT Gandhinagar]

a.) Full Name :

b.) Complete Postal Address:

c.) Telephone No.:

d.) Fax No.:

e.) Mobile No.:

f.) E-mail:

g.) Website Address:

PARTICULARS FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of Two Hundred)
(TO BE ESTABLISHED THROUGH ANY OF THE NATIONALISED BANKS
(WHETHER SITUATED AT AHMEDABAD OR OUTSTATION) WITH A CLAUSE TO
ENFORCE THE SAME ON THEIR LOCAL BRANCH AT AHMEDABAD. BONDS
ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.)

To,

The Asst. Registrar (MM),
Indian Institute of Technology Gandhinagar
VGEC Campus, Chandkheda,
Ahmedabad – 382424

LETTER OF GUARANTEE

WHEREAS Indian Institute of Technology Gandhinagar (Buyer) have invited Tenders vide Tender No..... Dt. for purchase of AND WHEREAS the said tender document requires the supplier/firm (seller) whose tender is accepted for the supply of instrument / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of **“Indian Institute of Technology Gandhinagar”** in the form of Bank Guarantee for Rs [10% (ten percent) of the purchase value] which will be valid for five years from the date of installation & commissioning, the said Performance Guarantee Bond is to be submitted within 30 (Thirty) days from the date of Acceptance of the Purchase Order.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said supplier/firm (seller) failing to abide by any of the conditions referred to in tender document / purchase order / performance of the instrument / machinery, etc. this Bank shall pay to Indian Institute of Technology Gandhinagar on demand and without protest or demur Rs (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology Gandhinagar (Buyer) as to whether the said supplier/firm (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the supplier/firm (Seller) and/ or Indian Institute of Technology Gandhinagar (Buyer).

Notwithstanding anything contained herein:

a. Our liability under this Bank Guarantee shall not exceed Rs.
(Indian Rupees only).

a. This Bank Guarantee shall be valid up to(date) and

c. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Gandhinagar serve upon us a written claim or demand on or before(date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at

.....
.....
.....

(Address of local branch).

Yours truly,

Signature and seal of the guarantor:

Name of the Bank:

Complete Postal Address:

Date:

Annexure-I

- **Name of the Equipment/Item:** RF Magnetron Sputtering System
- **Required Quantity:** 01 No.
- **Technical Specifications for RF Magnetron Sputtering System**

Specifications:

1. Completely stand alone model.
2. The instrument should have configuration and accordingly the sputter sources and substrate holders should be designed.
3. The instrument should be able to deposit any combination of metals, metal alloys, composites, semiconductors, insulators on semiconductor/glass/metal/alloy substrates in a single run.
4. The instrument should have provision to accommodate targets of 2” diameter.
5. The instrument should have two magnetron sputtering sources placed in a confocal configuration for co-deposition as well as for multilayer deposition without breaking the vacuum.
6. The instrument should have water cooling arrangement to the magnetron sources to ensure uniform cooling of the target during sputter deposition.
7. The quoted magnetron sources should be compatible with any of the DC, pulsed DC and RF power supply.
8. Two RF power supplies of 300 Watt each at frequency of 13.56 MHz with auto matching network (reputed make, such as, SEREN/ Advanced energy/ Comdel or equivalent for both the RF generator and RF Matchbox) should be connected to each of the sources.
9. The instrument should have field upgradability to connect any of the two magnetron sources to DC and/or pulsed DC power supply.
10. The instrument should have provision to accommodate substrates of any size $\leq 2'' \times 2''$.
11. The instrument should have provision for substrate heating up to 600°C with temperature uniformity over the 2''X2'' substrate being $\leq \pm 5\%$.
12. The heating element used for substrate heating in item (11) should be compatible with vacuum, plasma and/or reactive environment.
13. The instrument should be able to provide thickness uniformity of $\leq 5\%$ over the 2''X2'' substrate for the sputter deposition of any one or combination of metals/metal alloys/composites/semiconductors/insulators.
14. The instrument should have provision so that the specimen holder can provide in situ tilt, rotation while heating and distance adjustment from the target.
15. The vacuum chamber should be made of electro-polished SS 304 material along with optical view port for plasma viewing with shutter arrangement to avoid material deposition on the view port.
16. The instrument should be able to achieve vacuum better than 2×10^{-6} Torr in less than 30 minutes of pumping time from atmosphere.

17. The instrument should be able to achieve ultimate vacuum in the range of 10^{-7} Torr in a clean and dry atmosphere.
18. The instrument should be connected to turbo molecular pump (of reputed make, such as PFEIFFER/ LEYBOLD or equivalent) and rotary pump (of reputed make, such as PFEIFFER/ LEYBOLD or equivalent) to achieve the desired vacuum level mentioned in items (16) and (17).
19. The instrument should have suitable vacuum gauges (reputed make, such as, PFEIFFER/ LEYBOLD/ INFICON or equivalent) to measure the chamber pressure at the start of any of the pumping systems as indicated in item (18).
20. Demonstrable leak rates better than 1×10^{-9} torr lit/sec for the quoted sputtering unit by using Helium Mass Spectrometer Leak Detector.
21. The instrument should have provision to carry out reactive sputtering in oxygen, nitrogen and reducing atmosphere.
22. The equipment should have provision for Mass Flow Controllers to control the flow of Argon, oxygen and nitrogen into the sputtering chamber.
23. Possibility of freedom to design novel sputtering experiments.

Accessories:

1. The vendor should quote for suitable capacity water chiller with pipelines, inlet/outlet valves, compressor, gas cylinders (Argon, oxygen and nitrogen), regulators and suitable capacity UPS/voltage stabilizer for the operation of the sputtering unit. These accessories should be integrated with the main equipment by the vendor. Necessary UPS (0.5 KVA, 30 minutes backup) to run the computer of the sputtering unit must be quoted optionally along with any other requirements.

Terms and conditions:

1. Warranty:

The complete instrument and accessories excluding consumables should be under warranty for a period of three years from the date of installation. Extended warranty is preferable. In case of breakdown during the warranty period, a competent service engineer of the supplier should make as many visits as are necessary to rectify the problem and replace the faulty parts. But it should be repaired within 48 hours from the date and time of complaint lodged by the user. The supplier should provide all spares required for making the instrument operational.

All the warranty replacement part should be dispatch on DDP (free domicile) at site. IIT will return defective parts after replacement.

AMC: Please also mention the financial involvement for two years on site Annual Maintenance after normal Warranty.

2. Reinstallation:

IIT Gandhinagar is presently situated in its temporary campus (VGEC campus, Chadkheda, Ahmedabad). Near future we will move to our own campus in Gandhinagar. Vendor should take the responsibility of moving the instrument from present location and reinstalling the same in our own campus as and when it is required.

3. Maintenances:

Vendor should be easily accessible and available on demand within 24 hours of any problem in the instrument. Two compulsory visits per year for maintenance must be included for the initial 3 years after installation.

4. Training and demonstration:

Vendor should provide us training on operation and application at IIT Gandhinagar after installation.

5. User list with contacts:

Vendor should provide us detail list of installations in India with all contact details and model details and modules available so that IIT Gandhinagar can approach the contact person for any feedback.

6. Spares:

The supplier of the instrument must confirm in writing that the spares for the entire instrument will be available for a period of at least ten years after the installation of the instrument.

7. Manual:

One set of operating manual, service manual, maintenance and safety instructions, recommended recurring spare parts list, mechanical and electrical drawings, part lists, air, water and electrical diagrams (in English) should be provided with the instrument.

8. Demonstration and standards:

Appropriate test gratings must be provided for calibration in all ranges and appropriate Specifications for optimum performance should be clearly mentioned. Specifications quoted should be demonstrable on site at the time of installation. Standard specimens for all modes must be supplied.

Quote must have a compliance report on all the above points.