INVITATION FOR TENDER FOR SUPPLY OF UNIVERSAL TESTING MACHINE

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following equipment:

Universal Testing Machine

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months from the date of opening of this tender. Please ensure that your quotation reaches this office not later than 26 March 2015 at 11:00 hrs at the following address:

Chairman, Purchase Committee
Materials Science Centre,
Indian Institute of Technology,
Kharagpur 721 302 (India).

Earnest money of Rs. 70,000/- is to be deposited in the form of Account payee Demand Draft in favor of IIT Kharagpur, payable at Kharagpur, India. Any Bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.


<table>
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<tr>
<th>Tender Reference</th>
<th>IIT/MSC/DP/EQ-6/14-15, dated 10 November 2014</th>
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<tbody>
<tr>
<td>Price of the Tender papers</td>
<td>Nil</td>
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<tr>
<td>Last date and time for receipt of technical/commercial bids in separate sealed envelopes</td>
<td>26 March 2015 at 11:00 hrs</td>
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<tr>
<td>Time and date of opening of bids</td>
<td>26 March 2015 at 16:00 hrs</td>
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<tr>
<td>Place of opening Tender offers</td>
<td>Materials Science Centre, Indian Institute of Technology, Kharagpur 721 302, West Bengal, India</td>
</tr>
<tr>
<td>Address of communications</td>
<td>As stated above</td>
</tr>
<tr>
<td>Contact telephone numbers</td>
<td>+91 3222 282273</td>
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Detailed technical specifications are given below:

**Specifications for Universal Testing Machine**

Universal Testing Machine is to be used for tensile, compressive and flexure strength measurements of ceramic, semiconducting and polymer samples in the form of fibre (1-d), film (2-d), and bulk (3-d). The framed specifications are as follows.

Load capacity 10N to 50,000N. If single load cell is not available then multiple cells may be quoted. It should be possible to mount the smaller load cell on top of the bigger one to save time. The load cell(s) must have overload protection.

1. Vertical and horizontal test space should at least be 170±1 cm and 60±1 cm respectively.
2. Test speed 0.001(±0.0001) to 500 (±10) mm/min. The user should be able to select any speed within this range. The drive motor must be maintenance free AC servo motor.
3. After measurement, the minimum return speed of the load cell should be 1000 mm/min.
4. The load accuracy should be 0.5% or better.
5. The speed accuracy should be 0.1% or better.
6. Positional accuracy should be ±0.002 mm or better.
7. For tensile, compressive and flexure measurements, the tensometer must operate in non-contact mode. Minimum measurement range is 30 cm (±1cm) or better with resolution around 1.0μm or better. The extensometer should be able to measure both longitudinal and transverse strain and have a field of view at least 90 mm with a resolution of 0.5 μm or better. It should continue to measure the elongation until specimen break with a field of view not less than up to 450 mm.
8. The machine should be equipped with suitable grips for ceramics, semiconductor and polymer samples. For compressive, 3, and/or 4 point flexure tests, required accessories must be quoted. The quoted grips should be fully compatible to the load cells specified for different types of samples. We will investigate the tensile strength of fibers (natural or manmade) and fiber mats. Preferably pneumatic grips must be quoted with the appropriate load cell to test fiber samples.
9. The machine should be operatable at 220V (±10%), 50/60 Hz single phase power.
10. The machine should be interfaced with a desk-top PC (to be provided in the scope of supply). We need plug and play type equipment without the complexity of separate interface card. The PC should have necessary software loaded for instrument control, data acquisition and data analysis. A printer should also be quoted. Data acquisition rate should at least be 2 KHz and data sampling frequency at least 300 KHz or better. The associated software should display real time load extension curve and store it simultaneously for further analysis. The data analyses software should have unlimited
licensure and one should be able to use it independently in his/her own computer. Any future upgrade of the software should be free of cost.

11. The machine should be equipped with safety features both in software as well as in hardware to stop the equipment immediately in emergency.

12. The bidder has to submit at least three reference names with contact number where they supplied similar machine in IITs or other reputed institute of National importance. If asked the bidder must be ready to provide demonstration at the customer place where similar machine has already been installed.

Optional items:
1. A sample holder with suitable cooling and heating assembly in a temperature range -80°C to 250°C (or better).
2. The equipment must have transparent protective shield between sample and user.

Note: As much as practicable all the equipment accessories must be manufactured by the Principal company itself.

Installation, commissioning & AMC: (should be included in the quotation & compliance statement)

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| 1. | Installation, Commissioning and Training | a. The delivery should be considered complete only after successful commissioning of the instrument  
b. The pre-installation requirements should be communicated to IIT Kharagpur well in advance of the installation  
c. The Installation, commissioning and training should be done only by well trained factory engineers  
d. The supplier should provide training to at least two candidates at the installation site to make them familiar with smooth operation of the instrument |
| 2. | After-sales Service | a. The supplier should provide a prompt after-sales service such as regular maintenance, troubleshooting and fixing  
b. The list of service centers in India should be included. |
| 3. | Warranty | Must have three years comprehensive warranty. |
| 4. | Annual Maintenance Cost | Quote as optional:  
Include the cost of annual maintenance for each year for five years after the three-year comprehensive guarantee/warranty period. Provide the amount and the terms. Note that those providing better after sales service and support with proven track record will be given preference |
GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDER ARE INVITED IN DUPLICATE SETS COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY’S / FIRM’S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

2. TECHNICAL CATALOGUE/LEAFLET/FLIERS FOR THE MACHINE AS WELL AS ITS ACCESSORIES SHOULD BE ENCLOSED WITHOUT FAIL.

3. PROVIDE A COMPLIANCE STATEMENT WITH RESPECT TO THE SPECIFICATIONS MENTIONED ABOVE.

4. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

5. PRICE BIDS FOR FOREIGN FIRMS: PRICES ARE TO BE QUOTED ON ‘EX-WORKS’ DULY PACKED OR ON “FCA/FOB” INTERNATIONAL PORT” BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

I) EX-WORKS PRICE
II) PACKING & FORWARDING
III) FREIGHT
IV) ANY OTHER RELEVANT EXPENSES.
V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

**PRICE BIDS FOR INDIAN FIRMS:** PRICES ARE TO BE QUOTED ON F.O.R., IIT Kharagpur, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

6. **PERIOD OF VALIDITY:** BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.

7. INDIAN AGENT'S ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENT IN INDIAN RUPEES ONLY AND NOT IN **FE**).

8. **THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:**

9.1. FOREIGN PRINCIPAL’S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

9.2. COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

9.3. **PLEASE ENCLOSE THE DOCUMENT(S) RELATED TO THE ENLISTMENT OF THE INDIAN AGENT WITH DIRECTOR GENERAL OF SUPPLIES & DISPOSALS (DGS & R) UNDER THE COMPULSORY REGISTRATION SCHEME OF MINISTRY OF FINANCE.**
10. AN UNDERTAKING THAT THE VENDOR WILL SUPPLY ALL THE SPARES AND SERVICES FOR THE EQUIPMENT FOR AT LEAST 5 YEARS FROM THE DATE OF COMMISSIONING WITH UPGRADEATION OF SOFTWARES, IF ANY.


12. **SCOPE OF SUPPLY**: SHOULD INCLUDE FREE INSTALLATION, COMMISSIONING AND & TRAINING COST. THE BIDDER SHOULD HAVE FACTORY TRAINED ENGINEER TO INSTALL THE EQUIPMENT.

13. **PAYMENT TERMS**

13.1. FOR FOREIGN FIRMS

A) 100% PAYMENT THROUGH SIGHT DRAFT/FOREIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

13.2. FOR INDIAN FIRMS

A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

B) ENSURE MENTIONING

i) BANK DETAILS OF THE BENEFICIARY AND PAN NUMBER

ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED
(IN BOTH THE CASES ABOVE, INSTITUTE MAY PAY 90% ON DELIVERY OF THE ITEMS/STORES AND THE REMAINING 10% AFTER SATISFACTORY INSTALLATION & PERFORMANCE).

14. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

15. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.


17. LIQUIDATED DAMAGES: THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

18. PATENT RIGHTS: THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

19. ONLY THOSE BIDDERS WHO’S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.
20. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.

21. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

22. LATE TENDER, i.e. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

23. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.

C) BANKER’S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY’S KEY PERFORMANCE

<table>
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<tr>
<th>DESCRIPTION</th>
<th>JAN. TO MARCH</th>
<th>APRIL TO JUNE</th>
<th>JULY TO SEPT</th>
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<tr>
<td>GROSS REVENUE</td>
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<td>PROFIT BEFORE TAX</td>
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D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.
24. **WARRANTY / GUARANTEE**: THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR **36 MONTHS** AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION INDICATED IN THE CONTRACT.

25. **ANNUAL MAINTENANCE CONTRACT**: QUOTE THE COST OF ANNUAL MAINTENANCE FOR EACH YEAR FOR FIVE YEARS AFTER THE THREE-YEAR COMPREHENSIVE GUARANTEE/WARRANTY PERIOD AS OPTIONAL ITEM. NOTE THAT THOSE PROVIDING BETTER AFTER SALES SERVICE AND SUPPORT WITH PROVEN TRACK RECORD WILL BE GIVEN PREFERENCE.

26. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO’S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

27. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED TO CHAIRMAN (PURCHASE COMMITTEE), MATERIALS SCIENCE CENTRE, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302 AND ACKNOWLEDGEMENT TO BE OBTAINED.

**IMPORTANT**

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.
3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.

4. For any query pertaining to this bid document correspondence may be addressed to PROF. S. BASU MAJUMDER at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 26.3.2015

1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
2) Fax, e-mail Tender will not be accepted. Duplicate Bid document must be submitted in a separate closed cover.
3) The General Terms and Conditions as stated above relate to supply of stores / equipments /assets etc. and for specific service other terms and conditions of the Institute will apply.

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