INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

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 (UTM) to Conduct Material Characterization Mechanical Tests on Highway and Construction Materials**

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than 30.03.2015 (Extended) at 15:00 hrs at the following address:

**Dr. Krishna Prapoorna Biligiri & Dr. Nilanjan Mitra**  
Department of Civil Engineering, Indian Institute of Technology Kharagpur,  
Pin-721 302, West Bengal, India

Earnest money of **Rs. 70,000/-** is to be deposited in the form of Account payee Demand Draft in favour 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>
<thead>
<tr>
<th>Tender Reference</th>
<th>IIT/SRIC/CE/PAAA-ECI/KPB-NM/2014-2015/EQ/1, Dated: 02.02.2015</th>
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</thead>
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<tr>
<td>Price of Tender Document</td>
<td>NIL</td>
</tr>
<tr>
<td>Last Date and Time for submitting the tender document</td>
<td>30.03.2015 (Extended), 15:00 Hrs (Indian time)</td>
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<tr>
<td>Time and Date of Opening of Bids</td>
<td>30.03.2015 (Extended), 16:00 Hrs (Indian time)</td>
</tr>
<tr>
<td>Place of Opening tender offers</td>
<td>Department of Civil Engineering, Indian Institute of Technology Kharagpur – 721 302, West Bengal, India</td>
</tr>
<tr>
<td>Address of Communication</td>
<td>As stated above</td>
</tr>
<tr>
<td>Contact Telephone Numbers</td>
<td>+91-3222-282470 &amp; +91-3222 – 283430</td>
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<tr>
<td>E-mail:</td>
<td><a href="mailto:kpb@civil.iitkgp.ernet.in">kpb@civil.iitkgp.ernet.in</a> &amp; <a href="mailto:nilanjan@civil.iitkgp.ernet.in">nilanjan@civil.iitkgp.ernet.in</a></td>
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</tbody>
</table>
Detailed Specifications for Universal Testing Machine (UTM) to Conduct Material Characterization Mechanical Tests on Highway and Construction Materials

- Test procedures should comply with ASTM, AASHTO, CEN, and ACI standards
- Loading Frame: at least 150 kN two column frame with fully adjustable (motorized) work space up to a height of 800 mm or greater with (two-piece) integral climatic chamber; width of work space with 600 mm or better
- Bottom loading Actuator and load cell: 35 kN static or better, 30 kN dynamic, 20 Hz or better, double acting, fatigue rated, servo hydraulic actuator; Labyrinth bearings with +/- 50 mm stroke embedded with an internal LVDT; transducers load cell with +/-50 kN or better
- Hydraulic power supply: working pressure of at least 210 Bar with a variable flow pump of flow rate 20 liter/min or better; 10 kW, 3 phase, 380 V, 50 Hz motor; 4 L accumulator; low oil, over temperature and dirty filter indication; heat exchanger or air cooling (electric fan driven); capable of turning the pump on/off from the computer; low pressure adjustable from 10 to at least 210 Bar
- Control and Data Acquisition System (CDAS): high speed, digital servo-control, digital closed loop update sampling rate of 2.5 kHz or better; computer programmable, PID control algorithm; Adaptive Level Control (ALC) algorithm; force, position and on-specimen strain feedback control modes; simultaneous sampling of all channels; 16 Analog (+/-10 V) input channels or better; at least up to 64 times over sampling. High sampling rate; 20 bit digital resolution or better
- UTM should be housed in an environmental chamber for a range of -20 to +80 °C or better
- Software: pre-programmed files capable to run a range of international test methods; ability to modify and/or generate user specified files to suit specific requirements; programmable modules to guide the operator step-by-step to perform experiments; real time graphing of results and configurable real time transducer levels display
- Accessories for the UTM: pneumatic wedge grips (for flat specimen) suitable for attachment to the load cell; capacity of 1 Ton or better; compression platen (stainless steel hardened and chrome plated) of suitable diameter for load cell with swivel arrangement; base plate with LVDT and/or other instrument mounting facility; effective specimen thickness of 0 to 10 mm or better; flat jaw face of at least 50 x 50 mm; dimension of at least 230 x 220 x 260 mm
- Flexural fatigue test jig for running dynamic fatigue tests on concrete and/or asphalt beams of 100 x 100 x 400 / 500 mm and 150 x 150 x 600 / 700 mm; attachment fixtures for 3 and 4 point bending tests; grips for elastic-plastic fracture toughness testing and fatigue fracture test; crack tip opening displacement apparatus; and strain gauge extensometers of at least 50 mm gauge length; upper spherical seat for 100 kN and 200 kN or better; software to run dynamic and monotonic fatigue tests
- Tensile test jig for running tensile tests on concrete and/or asphalt materials with tensile head for 10 and 50 kN or others; flat grips 0-10 mm for 10 and 50 kN or others; round grips 5-12 mm for 10 and 50 kN or others; electronic extensometer; software to run tensile tests
- Power supply requirement should be suitable for Indian conditions
GENERAL TERMS & CONDITIONS

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

1. TENDER ARE INVITED 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 SUPERSCRIPTED ON THE ENVELOP.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL.

3. 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.

4. 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.

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

6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE), PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.


8. SCOPE OF SUPPLY: SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. PAYMENT TERMS FOR FOREIGN FIRMS

A) 100% PAYMENT THROUGH SIGHTDRAFT/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).
PAYMENT TERMS 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

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

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


13. 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.

14. 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.

15. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. 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.

17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. 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 ENCLOSLED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSLED AS PER FORMAT:-
COMPANY’S KEY PERFORMANCE

<table>
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<tr>
<th>DESCRIPTION</th>
<th>JAN. TO MARCH</th>
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<tr>
<td>GROSS REVENUE</td>
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<td>CAPITAL (ROIC)</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.

20. 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.

21. 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.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO DR. KRISHNA PRAPOORNA BILIGIRI & DR. NILANJAN MITRA, DEPARTMENT OF CIVIL ENGINEERING, INDIAN INSTITUTE OF TECHNOLOGY, KHALAGPUR - 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 Dr. Nilanjan Mitra, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 30.03.2015 (Extended)

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.

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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