

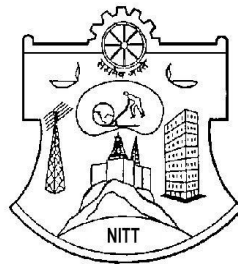
NATIONAL INSTITUTE OF TECHNOLOGY

TIRUCHIRAPPALLI – 15

Department of Civil Engineering

Web : www.nitt.edu

Phone : 0431 - 2503151



TENDER DOCUMENT

Quotation Notification No.: NITT/CE/PLAN/2011

Dated: 30.07.2012

Advt. No.: NITT/05/2012-13

- Name of the component : Listed in Section-3 of this document
- Quantity required : Listed in Section-3 of this document
- EMD Amount : NIL
- Delivery : 1. For equipments cost more than 5lakhs - 3 months*
2. For equipments cost between 2.00 and 5.00lakhs – 2 months*
3. For equipments cost less than 2.00lakhs – 1 month*
(*from the date of Purchase order)
- Last Date of submission of Tender : 30th August 2012 upto 3.00 p.m.
- Address for submission of Tender : The Head of the Department
Department of Civil Engineering
National Institute of Technology
Tiruchirappalli – 620 015
- Date of opening of bid : 30th August 2012 at 3.30 p.m

NOTE:

(1) Separate quotation should be submitted for each equipment.

(2) The bid cover should be duly superscribed with the following details.

(i) Quotation Notification Number

(ii) Quotation for the supply of

(iii) Date of opening and submit at the address given in the quotation Notice.



**NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI – 15**

DEPARTMENT OF CIVIL ENGINEERING

Quotation Notification No.: NITT/CE/PLAN/2011
Advt. No.: NITT/05/2012-13

Dated : 30.07.2012

NOTICE INVITING TENDER

The National Institute of Technology, Tiruchirappalli (NITT) is an autonomous body under MHRD, GOI, imparting Technical Education and engaged in Research Activities. It is proposed to procure the following component for the departmental academic/research activities.

Sealed Quotations under **two cover system** are invited for the following component subject to the following terms and conditions, from the reputed manufacturers or their authorized dealers so as to reach this office on or before scheduled date and time. The technical cover will be opened on the same day in the presence of bidders or their authorized agents who may choose to be present.

Name of the component : **Listed in Section-3 of this document**

Quantity required : **Listed in Section-3 of this document**

EMD : Rs. NIL

Time for completion of supply after placing purchase order :

- 1. For equipments cost more than 5lakhs - 3 months***
 - 2. For equipments cost between 2.00 and 5.00lakhs – 2 months***
 - 3. For equipments cost less than 2.00lakhs – 1 month***
- (*from the date of Purchase order)

Last Date of submission of Tender : **30th August** upto 3.00 p.m.

Tender to be submitted at the following address : **The Head of the Department
Department of Civil Engineering
National Institute of Technology
Tiruchirappalli – 620 015**

Place, Date and time of opening of bid :

Date: 30.08.2012

Time: 3.30 p.m

Venue: Admin Building, NIT Trichy-15

Note : The Institute shall not be responsible for any postal delay about non-receipt / non delivery of the bids or due to wrong addressee.

SECTION : 1 INSTRUCTION TO BIDDER

1. The bidder should give details of their technical soundness and provide list of customers of previous supply of similar items to Universities, Institutes or Government Departments/Undertakings/public sectors with contact details. The details of the agency/profile should be furnished along with the copy of all related documents.

1.1 Bids are to be submitted under two cover system.

Cover 1:

Cover 1 should contain the following:

- a. **Technical pamphlets**
- b. **Detailed technical specification**
- c. **The agency should furnish copy of license certificate for manufacture/supply of the item.**
- d. **The agency should furnish Income Tax PAN number**
- e. **Warranty period offered for the tendered item to be specified. If the warranty period is not conforming with the schedule of requirements given in section 3 of the document, the bid is liable to be treated as non-responsive and rejected.**
- f. **Duly filled up technical questionnaire, if any**
- g. **Duly filled up deviation schedules to technical specification**
- h. **Copy of supply orders completed (for the same machine/equipment) during the last three years.**
- i. **Testimonials from the other institutions on the performance of supplied machine (quoted machine/equipment) shall be included**
- j. **Supply to any government bodies must be included**
- k. **ISO/BIS certificate on the technical component of the machine/equipment, if any, shall be included. More weightage will be given for certified products.**
- l. **If the prices are revealed in the cover 1, the offer will be summarily rejected**

- 1.2 **The cover 1 shall be superscribed as 'Technical cover' duly indicating the Tender reference No. and the due date of opening.**

1.3 Cover 2:

Cover 2 should contain the following

Cover 2 shall contain Price only and shall be superscribed as 'Price Cover' duly indicating the Tender Reference No. and the due date of opening.

Each Cover shall be sent in a double sealed cover. The inner covers (Cover 1 and Cover 2) should be sealed individually with the sellers's distinctive seal and superscribed with the tender reference no. and due date of opening. Both the inner covers shall be placed in a common outer cover which shall also be sealed with seller's distinctive seal and superscribed with the tender reference no. and due date of opening.

Mention "Kind Attention:....., and submit at the address given in the Notice Inviting Tender.

**Cover 1 - will be opened on the scheduled date and time mentioned in the tender enquiry.
Cover 2 - technically suitable offers alone will be opened on a date which will be intimated to the qualified bidders.**

1. The agencies should submit their rate as per the format given in Section 4 of the Notice Inviting Tender in this cover. Rate should be quoted in Indian Rupee. The rate should be quoted both in words and figures. All the pages of the bid should be signed affixing the seal. All corrections and overwriting should be initialed.
2. The tender will be acceptable only from the manufacturers or its authorized supplier.
3. The bid shall be in the format of price schedule given in Section 4. The contract form as per format given in section 5 shall be submitted. Incomplete or conditional tender will be rejected.
4. Details of quantity and the specifications are mentioned in Section 3 appended to this Notice Inviting Tender.
5. The item to be used is strictly according to the specification and subject to test by the Institute/concerned authorities. It must be delivered and installed in good working condition.
6. The Institute reserves the right to cancel or reduce the quantity included in the schedule of requirements at any time after acceptance of the tender with a notice. The Contractor/Supplier shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work/supply in full but he did not derive in consequence of the foreclosure of the whole or part of the works.
7. Performance Security of 5% of the contract value in terms of Bank guarantee by scheduled banks shall be given by the successful bidder for the total period of warranty.
8. **Validity of bids:** The rate quote should be valid for a minimum of 90 days. No claim for escalation of rate will be considered after opening the Tender.
9. **Imports:** In case, goods are to be imported, the Indian agent should furnish authorization certificate by the principles abroad for submission of the bid in response to this Notice Inviting Tender.
10. **Clarification of Tender Document:** A prospective bidder requiring any clarification of the Tender document may communicate to the contact person given in this notice inviting tender.
11. **Amendment of tender document:** At any time prior to the last date of receipt of bids, Institute may for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the Tender document by an amendment.
12. ***The Institute may at its own discretion extend the last date for the receipt of bids.***
13. The bids shall be written in English language and any information printed in other language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.
14. The Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids without assigning any reasons there for. The decision of the Institute Purchase Committee is final in all matters of tender and purchase.
15. The bidder should give the following declaration while submitting the Tender.

DECLARATION

I/we have not tampered/modified the tender forms in any manner. In case, if the same is found to be tampered/modified, I/we understand that my/our tender will be summarily rejected and full Earnest Money Deposit (EMD) will be forfeited and I/we am/are liable to be banned from doing business with NIT, Trichy and /or prosecuted.

Signature of the Bidder :

Name and Designation :

Business Address :
.....
.....

Place :

Date :

Seal of the Bidder's Firm

16. Any other details required may be obtained from the contact person given in the notice inviting tender during the office hours.

SECTION : 2 CONDITIONS OF CONTRACT

1. The rates should be quoted in Indian Rupee F.O.R. NIT, Trichy for supply within India.
2. In case of import both CIF and / or FOB rate should be quoted. All components of expenditure to arrive at Chennai need to be explicitly specified.
3. The bidder shall indicate the excise duty exemption for the goods if applicable
4. The Institute is eligible for customs duty and excise duty exemption.
5. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any.
6. Rate quoted should be inclusive of Testing, commissioning and installation of equipment and training.
7. **Payment** : No advance payment will be made. Payment will be made only after the supply of the item in good and satisfactory condition and receipt of performance security by supplier. In case of imports, the payment will be made through LC after installation and performance security need to be submitted at the time of LC commitment.
8. Guarantee and Warrantee period should be specified for the complete period conforming to the section 3 of this tender document.
9. Period required for the supply and installation of item should be specified conforming to the section 3 of this tender document.
10. In case of dispute, the matter will be subject to Tiruchirappalli, Tamil Nadu Jurisdiction only.

SECTION : 3 SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS

Sl. No.	Name of Equipment	Specification	Number Required
1	Computer Controlled Universal Testing Machine (UTM)	<p>Computerized UTM with microprocessor panel. Auto ranging with digital display of Load and Deformation. Supplied with standard accessories for Tension, Compression and Transverse Tests. UTM should have microprocessor based measuring/controlling system. Load & Displacement curve should be displayed in computer. All sensors and devices should be branded and certified by competing authorities. UTM must ensure the accuracy and repeatability over a long period.</p> <p>Maximum Capacity: 1000 – 1200 kN</p> <p>Measuring resolution</p> <ol style="list-style-type: none"> 1. Upto 20 to 25% of machine capacity, resolution should be 50N 2. Above 20 to 25% of the machine capacity, resolution should be 100N <p>All the test procedure must be in accordance with Bureau of Indian Standards.</p> <ul style="list-style-type: none"> • UTM must be Pace setting enabled for displacement controlled testing at desired speed. • Online plotter with a capability of plotting graphs between measurements must be available. • UTM shall be capable of predicting post failure behavior through displacement control. • Computerized data acquisition system with a minimum sampling frequency of 10Hz. • Machine accuracy should be $\pm 0.5\%$ • Servo controlled system for stress&strain rate with proportional valve. <p>Max. clearance for Tension test: 850 - 1000mm Max. clearance for compression test: 850-1000mm Ram Stroke: 250 – 350mm Minimum clearance between columns: 750 – 1000mm</p> <p>FOR TENSION TEST Clamping Jaws for round specimens: 0 - 60 mm dia Clamping Jaws for flat specimens: 0 - 60 mm Width of specimen (Max.): 75 – 100 mm</p> <p>FOR COMPRESSION Diameter of platens: 250mm (Approx)</p> <p>FOR TRANSVERSE TEST Diameter of rollers: 50mm (Approx) Length of Rollers: 170mm (Approx) Span between the rollers (adjustable): 800mm (Approx)</p> <p>ACCESSORIES TO BE INCLUDED IN THE PRICE.</p> <ul style="list-style-type: none"> •Bend re-bend attachment. •Computer complete with Monitor, Keyboard necessary control software. •Roller support for Leaf Spring Testing. •Shear Test Attachment <p>Suitable for size 5 mm, 6mm, 10mm, 12mm, 16mm, 20mm</p>	ONE

		<p>diameter.</p> <ul style="list-style-type: none"> • Electronic Extensometer Gauge length of 50mm and + 50% measuring range sensitivity of 1 micron. It can be used for round and flat specimens. <p>ACCESSORIES TO BE QUOTATED ITEMWISE.</p> <p>Load Stabilizer Suitable for stabilizing load at any particular point for about 10 minutes.</p> <ul style="list-style-type: none"> • Brinell Hardness Test Attachment Attachment suitable to carry out brinell Hardness Test complete with 5 mm or 10mm ball indenters. • Wire Rope Test Attachment Suitable to carry out Tensile Test on wire ropes upto 10mm. • Bolt Test Attachment Attachment to accommodate bushes to test threaded and collar type specimens from 4mm to 20mm and from 4mm to 20mm: <p>NOTE: for the same specification, separate quotation and technical specification is requested for Analog Universal Testing Machine. The Director, NIT Trichy reserve the right to choose or discard any UTM purchase.</p>	
2	Flat Type Compression Load Cell	<ol style="list-style-type: none"> 1. Standard Capacity – 100 tons 2. Nominal output – 2.0mV/V±0.1% 3. Non-Linearity – < ± 0.3% FSO (Full scale Output) 4. Hysteresis – < ± 0.1% FSO 5. Non-Repeatability – < ±0.1% FSO 6. Creep (30min) – < ± 0.06% FSO 7. Zero Balance – ≤ ± 2% FSO 8. Input Resistance – 770 ± 2.0 Ohms 9. Output Resistance – 700 ± 2.0 Ohms 10. Insulation Resistance – ≥ 1000Mega Ohms 11. Cable Length – 10m (4 core cable) 12. Temp Compensated range – 0 - 60°C 13. Temp Effect on Output – ≤ ±0.0015% FSO/°C 14. Temp Effect on Zero – ≤ ±0.0040% FSO/°C 15. Material of Construction – Alloy Steel 16. High Precision with Built in Mechanical Overload protection 17. Environmental protection as per standards <p>Instruction Manuals</p>	ONE
3	Digital Level with Fibreglass Barcode Stave	<p>Height accuracy</p> <ol style="list-style-type: none"> (i) Electronic measurements – 1.5 mm (ii) Visual measurements – 2.0 mm <p>Distance Accuracy – 10 to 50 m</p> <p>Measuring range – 1.6 to 100 m</p> <p>Measuring time</p> <ol style="list-style-type: none"> (i) Single, Repeat or Average mode – Less than 3s (ii) Tracking mode – Less than 1s <p>Telescope</p> <ol style="list-style-type: none"> (i) Magnification – 28x (ii) Image – Erect 	ONE

		<p>(iii)Field of View – 1°20’ (iv)Stadia Ratio – 100 (v) Stadia additive constant – 0 Horizontal circle Graduation – 1° Data storage – 2000 points maximum, upto 20 jobs Water Resistant Power Supply (i) Battery – Rechargeable Li-ion Battery (ii) Working duration – More than 8.5 hours Charging time – Less than 2 hours Instrument should come with (i) Internal battery, charger, power cable, downloading cable, dust cover, tool kit, operators manual and a carrying case (ii) Fibreglass Bar Code Stave – 1 No. (iii) Software Program for data transfer and processing facilities</p>	
4	Rotational Viscometer (BROOKFIELD)	<p>Brookfield viscometer, capable of measuring viscosity for non-Newtonian fluids with the following range: 200 cP (minimum) to 80 × 106 cP (maximum). The viscometer should be able to run in the speed range of 0.01 to 200 revolutions per minute. The entire viscometer should be supplied with 6 number of spindles, spindle case, DV loader program, viscometer stand, guard leg and carrying case. Additional accessories: 1. Cylindrical spindles: RV-1, LV-2C and LV-3C. 2. RHEOCALC software to control the instrument as well as for data acquisition and analysis of data. The software supplied will be installed in one of our computer and it should be compatible with the viscometer and the accessories supplied. 3. THERMOSEL: This should consist of an Alignment bracket, SC4-21 spindle (8 mL sample volume), thermo container with safety guard and insulating cap, extracting tools, cooling plug, temperature controller with RTD probe, 1 removable sample chamber and 5 disposable sample chambers. This should also be controlled by the RHEOCALC software and the necessary cables (HT-106) are required to be supplied. 4. Small sample adapter: Small sample adapter with SC4-21 spindle and SC4-13R(P) sample chamber with water jacket. 5. Temperature bath (TC502 series): TC502P model with capability to be controlled by the RHEOCALC software and the necessary RS232 interface.</p>	ONE
5	Universal automatic compactor	<p>As per IS 2720 Universal Automatic Compactor Motor driven mechanical compactor for soil compaction in 100mm to 150mm diameter moulds. Rammer: circular faced 50mm diameter adjustable to 2.6Kg and 4.9Kg weight. Drop: Adjustable to 310mm and 450mm The equipment shall be suitable for operation on 220V, 50Hz,</p>	ONE

		single phase, AC supply.	
6	Static cone penetrometer, 30kN capacity, hand operated	<p>As per IS 4968 Part-3</p> <p>Penetration cone: steel, 60° angle 10cm² base area with friction jacket – 1 no.</p> <p>Mantle tube: non-uniform and uniform, 36mm OD at two ends and reduced dia. in between with sounding rod, working length 1m – 15 nos.</p> <p>Load measuring head: with automatic cut-off valve, and oil can</p> <p>Pressure gauge: 0-160kg/cm² – 1no.</p> <p>Pressure gauge: 0-60kg/cm² – 1no.</p> <p>Screw anchor with bolt – 4nos.</p> <p>Anchor Driving handle – 1no.</p> <p>T-rod – 1 no.</p> <p>Spanner set – 1 no.</p> <p>Extension pipe: 0.5m long for anchor driving handle – 4 nos.</p>	ONE
7	Relative density apparatus	<p>As per IS 2720 Part-14</p> <p>Vibratory Table: Steel table with a cushioned steel vibrating deck. Frequency 3600 vibrations per min under 115kg load. Suitable for operation on 415V, 50Hz, 3 phase, AC supply.</p> <p>Cylinder Metal Unit weight mould: 3000ml and 15000ml capacity.</p> <p>Guide sleeve with clamp assembly: for both the moulds.</p> <p>Surcharge phase plate: for both the moulds</p> <p>Handle</p> <p>Surcharge weight for 3000ml mould: The total weight together with surcharge base plate and handle shall be equivalent to 140g/cm³ and the same for 15000ml mould.</p> <p>Dial gauge holder</p> <p>Dial gauge: 25mm travel, 0.01mm least count, with an extension piece.</p> <p>Calibration bar: 75x300x3mmmm</p>	ONE
8	CBR test apparatus (automatic)	<p>As per IS 2720 Part-16</p> <p>Laboratory California Bearing ratio Test Apparatus, Motorized, 3 speed.</p> <p>Load Frame: 50kN capacity, three speed-1.25, 1.5 and 2.5mm per minute.</p> <p>Gun metal mould: 150mm ID x 175mm H</p> <p>Gun metal base plate, extension collar (150mm ID x 50mm high).</p> <p>Penetration Piston: 50mm face diameter</p> <p>Circular metal spacer disc. With detachable handle, 148mm dia. x 47.7mm high</p> <p>Annular metal weight: 2.5kg, 147mm dia. with 53mm dia. central hole</p> <p>Slotted metal weight: 2.5kg, 147mm dia. with 53mm dia slot</p> <p>Perforated plate: 148mm dia. with adjustable stem and lock nut</p> <p>Cutting collar</p> <p>Rammer: 2.6kg, 310 mm controlled drop</p> <p>Rammer: 4.9kg, 450mm controlled drop</p> <p>Proving Ring: capacity 50kN</p>	ONE

		Dial Gauge: 25mm travel, 0.01mm least count Metal tripod for dial gauge	
9	Pendulum Impact testing machine	For conducting Charpy Impact test and Izod Impact test Should comply with the requirements of IS 3766 Specifications: Maximum Capacity : 300 J/170 J Minimum Scale Graduation : 2J	ONE
10	Rockwell hardness testing Machine	Should comply with requirement given in IS 1586 Total test force(N): 60Kg, 100Kg, 150Kg Measuring Range: HRA 20-88 / HRB 20-100 / HRC 20-70	ONE
11	Brinell hardness testing Machine	For determining Brinell Hardness of ferrous and non ferrous metals. Should comply with the requirements of IS 2281 Force diameter ratio 1-30 Nominal diameter of the ball should be 2.5mm, 5mm and 10mm Measuring Range > 200 BHW	ONE
12	Vickers cum Brinell hardness testing Machine	To measure Vickers Hardness for ferrous and non ferrous metals Should comply with the requirements of IS 1754 Specifications: Test Force 0.01 - 100 kg Measuring Range HV 0.01 - HV 100	ONE
13	Fatigue Testing Machine	Maximum bending moment: 400 Kg/m Range Kg.: 100, 200, 300, 400 Kg Gripping diameter of test specimen: 12 mm Testing diameter of: 8 mm Length of test specimen 226 mm Rotating speed of applied test specimen : 4200 RPM Accuracy of applied bending moment. 4.1%	ONE

Warranty period required : Three year

Delivery schedule expected after release of purchase order

1. For equipments cost more than 5lakhs - 3 months*
 2. For equipments cost between 2.00 and 5.00lakhs – 2 months*
 3. For equipments cost less than 2.00lakhs – 1 month*
- (*from the date of Purchase order)

SECTION : 4 PRICE SCHEDULE

[To be used by the bidder for submission of the bid]

- 1. Component Name :
- 2. Specifications (confirming to Section 3 of Tender document-enclose additional sheets if necessary) :
- 3. Currency and Unit Price :
- 4. Quantity :
- 5. Item cost (Sl.No.3 & Sl.No.4) (in Indian Rupee) :
- 6. Taxes and other charges :
 - (i) Specify the type of taxes and duties in percentages and also in figures
 - (ii) Specify other charges in figures
- 7. Warranty period (confirming to the Section 3 of Tender document. This should be mentioned in Technical bid also in order to get qualified for Financial bid) :
- 8. Delivery Schedule (confirming to the Section 3 of Tender document) :
- 9. Name and address of the firm for placing purchase order :
- 10. Name and address of Indian authorized agent (in case of imports only) :

Signature of the Bidder :

Name and Designation :

Business Address :

.....

.....

Place :

Date :

Seal of the Bidder's Firm

SECTION : 5 CONTRACT FORM

[To be provided by the bidder in the business letter head]

1. (Name of the Supplier's Firm) hereby abide to deliver theby the delivery schedule mentioned in the Section 3 tender document for supply of the items if the purchase order is awarded.
2. The item will be supplied conforming to the specifications stated in the tender document without any defect and deviations.
3. Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NIT, Trichy during this period.

Signature of the Bidder :

Name and Designation :

Business Address :
.....
.....

Place :

Date :

Seal of the Bidder's Firm