


Addendum to the Advertisement of Tender Invitation

	<p>NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA-769008 (ODISHA) An Institute of National Importance under Ministry of HRD, GOI</p>
<p style="text-align: center;"><u>ADDENDUM NOTICE</u></p> <p>Tender Notification No: NITR/MN/HOD/15/M/3156 Date: 26.03.2015 The National Institute of Technology, Rourkela invites sealed bids from eligible bidders for supply of Dynamic Rock Testing System. Last date of Submission of Bid: 30.06.2015 at 03.00 PM * Opening date of Technical Bid: 30.06.2015 at 04.00 PM ForDetails: http://nitrkl.ac.in/Jobs_Tenders/9Equipment/Default.aspx Contact: (i) Prof. Manoj Kumar Mishra, Asso Prof. (MN); Ph: 0661-2462602; Email: mkmishra@nitrkl.ac.in</p> <p style="text-align: right;">REGISTRAR</p>	

***The previous process has been cancelled and extended. The bidders who have applied earlier need to apply afresh for consideration as per revised criteria. The *already applied* documents shall not be opened in the tender process and can be obtained from the Prof. concerned against a written statement.**



**National Institute of Technology, Rourkela-769 008, Odisha
Department of MINING Engineering**

Tender Notification No.: : NITR/MN/HOD/15/M/3156

Dated: 26.03.2015

Name of the component : **DYNAMIC ROCK TESTING SYSTEM**

Quantity required : 1 No.

EMD Amount : **Rs.2,00,000.00**

Delivery : Within 06 months from the date of order

Last Date of submission of Tender : June 30, 2015, 3.00 p.m.

Address for submission of Tender : The Director National Institute of Technology Rourkela – 769 008, Odisha, India **With Kind Attention to:** Prof. H K Naik, H.O.D, Department of Mining Engineering

Date of opening of technical bid : June 30, 2015 4.00 p.m

Date of opening of price bid : *Technically and commercially qualified bidders will be intimated later.*



National Institute of Technology, Rourkela-769 008, Odisha
Department of MINING Engineering

Tender Notification No.: : NITR/MN/HOD/15/M/3156

Dated:26.03.2015

NOTICE INVITING TENDER

The National Institute of Technology, Rourkela (NITR) 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 **DYNAMIC ROCK TESTING SYSTEM**

Quantity required: 1 No.

EMD Amount: **Rs.2,00,000.00** (to be converted to Bid security and shall be returned after successful delivery and installation)

Delivery: Within **06** months from the date of order

Performance Security to be given by Successful bidder after release of purchase order (in Rupees) : Rs 3,00,000.00 (to be released after expiry of warranty period)

Warranty: Two years of comprehensive warranty from the date of installation, commissioning and acceptance by NITR.

Minimum numbers of orders within last 5 years in Indian institutes: Minimum 10 of similar equipment.

Last Date of submission of Tender : 30-06-2015; 3.00 p.m.

Address for submission of Tender : The Director, National Institute of Technology, Rourkela 769 008 **With Kind Attention to:** Prof. H K Naik, H.O.D, Department of Mining Engineering.

Place, Date and time of opening of technical bid: Department of Mining Engineering; 30/06/2015, 4.00 p.m

Opening of price bid: *Technically and commercially qualified bidders will be intimated later.*

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 INSTRUCTIONS 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 should be divided into two parts:

Cover 1: Cover 1 should contain the following:

- a. EMD by Demand Draft drawn on any scheduled bank in favor of "The Director, NIT, Rourkela" payable at Rourkela should be submitted. EMD shall bear no interest. Any bid not accompanying with EMD is liable to be treated as non-responsive and rejected.
- b. Technical pamphlets
- c. Detailed technical specifications
- d. The agency should furnish copy of license certificate for manufacture/supply of the item.
- e. The agency should furnish Income Tax PAN number
- f. Warranty period offered for the tendered item to be specified. If the warranty period is not conforming with the schedule of requirements given in the bid document, the bid is liable to be treated as non-responsive and rejected.
- g. Duly filled up technical questionnaire, if any
- h. Duly filled up deviation schedules to technical specification
- i. Copy of orders completed during the last five years along with the list of customers.
- j. If the prices are revealed in the cover 1, the offer will be summarily rejected
- k. Commitment for quick service in case of any break down.
- l. List of spares and consumables to be supplied
- m. Details about service centers and number of service engineers available in each center in India.

1.2 The cover 1 shall be super-scribed as "Technical Bid" 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 Bid" 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 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: Prof. H K NAIK", 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 of the technically and commercially **qualified bidders** alone will be opened on a date **which will be intimated later to those bidders only.***

2. The agencies should submit their rate as per the format given in Section 3 of the Notice Inviting Tender in this cover. Rate should be quoted in foreign currency for imported items and in Indian Rupee for indigenous items. 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.
3. The tender will be acceptable only from the manufacturers or its authorized supplier.
4. The bid shall be in the format of price schedule given in Section 3. The contract form as per format given in section 4 shall be submitted. Incomplete or conditional tender will be rejected.
5. Details of quantity and the specifications are mentioned in technical specifications appended to this Tender.
6. 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.
7. 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.
8. Performance Security of nil of the contract value in terms of Bank guarantee of any scheduled banks shall be given by the successful bidder for the total period up to three months beyond the warranty period.
9. **Release of EMD:** The EMD shall be released after receipt of performance security from successful bidder.
10. **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.
11. **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.
12. **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.

13. ***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.

14. L. D. of the institute (Bank side of POs)

15. This institute is liable to pay Customs Duty in concessional rate under Notification No. **39/96 dated 23rd Jul 1996 & Amended by 60/96 dt 22nd Aug 1996** and exempted of Excise Duty under Notification No. **10/97 Central Excise dated 01 Mar 1997**. However, prices should be quoted indicating clearly customs/Excise Duties. If agreed, the necessary exemptions certificate may be provided.

16. ***The Institute may at its own discretion extend the last date for the receipt of bids.***

17. 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.

18. The Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids without assigning any reasons therefore. The decision of the Director is final in all matters of tender and purchase.

19. The bidder should give the following declaration while submitting the Tender.

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

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, Rourkela and /or prosecuted.

Signature of the Bidder :

Name and Designation :

Business Address :
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Place:

Date:

Seal of the Bidder's Firm

SECTION: 2 CONDITIONS OF CONTRACT

1. The rates should be quoted in Indian Rupee FOR NIT, Rourkela for supply within India.
2. In case of import both CIF and / or FOB rate should be quoted.
3. The Institute is eligible for excise duty exemption and concession customs duty.
4. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any.
5. Rate quoted should be inclusive of Testing, commissioning and installation of equipment and training. In this bid the components should be shown categorically.
6. 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 (if applicable) by the supplier. In case of imports, the payment will be made through LC and performance security need to be submitted before LC commitment (if applicable).
7. Guarranty and Warranty period should be specified for the complete period mentioned in this tender document.
8. Period required for the supply and installation of item should be mentioned in this tender document.
9. In case of dispute, the matter will be subject to Rourkela, Orissa Jurisdiction only.

SECTION: 3 PRICE SCHEDULE

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

- 1. Component Name :
- 2. Specifications (confirming to Section 5 of Tender document – enclose additional sheets, if necessary) :
- 3. Currency and Unit Price :
- 4. Quantity :
- 5. Item cost (Sl.No.3 & Sl.No.4) :
- 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 should be mentioned in Technical and Financial bid :
- 8. Delivery Schedule :
- 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
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Place:

Date:

Seal of the Bidder's Firm

SECTION: 4 CONTRACT FORM

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

1. (Name of the Supplier) hereby abide to deliver the by the delivery schedule mentioned in the 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, Rourkela during this period.

Signature of the Bidder :

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Name and Designation :

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Business Address

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Place:

Date:

Seal of the Bidder's Firm

DYNAMIC ROCK TESTING SYSTEM

ONE Digitally controlled, closed Loop, servo-hydraulic Static and Dynamic Lading system for rock materials consisting of the following specification:

Load Frame:

- Capacity: +/- 600 kN or more, Static and dynamic weather resistant Load Frame
- Horizontal Clearance (space between two columns): 500 mm or more
- Vertical Clearance (Cross head to base platen): 1200 mm or more
- Total load frame height: adequate for conducting experiment (about 3000 mm)
- Load frame of adequate factor of safety and high stiffness (1100kN/mm or more)
- Hydraulically operated, fitted with hydraulic lifts for adjustment of upper cross head at variable heights and hydraulic clamps
- Frame should be of self-reacting type and free from self-induced shock and vibrations

Servo system Hydraulic actuator assembly

- Integral with lower platen. Capacity 600 N, Hydraulic actuator (preferably mounted on the frame for compactness)
- Double ended, double acting, equal area servo at a rated pressure of about 210 bar
- Total stroke +/- 100 mm (minimum) with hydraulic cushion of 5 mm at both ends
- Fitted complete with LVDT stroke transducer, servo-valve, filter, accumulator and actuator electronic system for signal conditioning and control, etc
- ± 50 mm digital encoder
- Readout resolution of stroke: 0.001mm or finer
- Accuracy of encoder: about $\pm 0.5\%$ or better of read out value
- Minimum speed of the actuator piston: 0.01 mm/min or better
- Maximum speed of the actuator piston: 120 mm/min or better
- Loading rate: 0.001kN/sec to 10 kN/sec in ramp mode and 0.01 Hz to 10 Hz in cyclic mode (pl quote for other ranges also)
- Suitable servo-valves and hoses

Power pack Assembly:

- Water cooled power pack of sufficiently rated (Quote for a wide range of power pack systems with supporting documents e.g.A-F curves separately) capacity,
- Oil level, temperature, filter and pressure, power level, over load, filter blockage warning besides facility for emergency stop for pump
- Include the quality and quantity of oil required and complete fill of oil at the time of supply
- Pressure transducer with power pack sense and display
- High efficiency motor (min. 1.5 KW or more) with pump, tripping against over load, over temperature, low oil level, filter clogging, phase failure, etc.
- Compact design with in-built cooling arrangement
- Facility for remote as well as local operation

With Load cell of 600 kN or more load capacity

- Load cell of 600 kN capacity or more with low deflection - high stiffness
- Axial, Dynamic Fatigue rated force transducers with an over load capability of minimum 150% without mechanical failure
- Accuracy $\pm 0.5\%$ of read out value down to 1/100 of capacity or better
- Non repeatability $\pm 0.10\%$ of FS
- Non linearity $\pm 0.15\%$ of FS
- Internal reference for auto and or user controlled calibration
- Multiple Safety arrangement at places for overloading without zero shift, without any physical damage, etc.

Test controller

- Digital closed loop controller of high density design with 32 bit or more Digital Signal Processor (DSP)
- 40 KHz 32 bit or more digital loop update for closed loop controller
- High frequency data sampling (40 KHz or more)
- 32-bit or more data acquisition system from all the channels
- Digital I/O control with pump control and 8 channel sense
- Provision for full amplitude and mean level control
- Control of hydraulic grip should be disabled during test running
- Actuator control from PC be disabled when local frame mounted controls are enabled and vice-versa

Window based software with

- Software for real time control of the test system for both static and dynamic process
- Global machine files to access system, default settings and saved test setups by users
- Console panel with live display of all control and feedback channels
- Stroke control, load control, strain control or any derived channels. Should offer bump less switching of control mode from one to other
- Calibration panel to calibrate all sensors and transducers as well as facility for auto calibration, auto zero features for all channels
- Servo tuning panel with display of set point and feedback signal, command and error signal. Saving of PID gains for all channels and recall for future use
- Data acquisition panel to set up, monitor and save test data in different modes with data capture rates up to 1000 Hz or more
- Display of set point and feedback signal, command and error signal
- Ability to create ramp, Square, Sine and Triangle waveforms
- Adoptive control for auto gain adjustments depending on the material stiffness

Compression test accessories

- Loading capacity of 600 kN or more with platen diameter about 200 mm and should come with spherical seating at both ends for improved alignment. Also include one additional pair of spherical seating.

Enclosure for the test controller

- Safe enclosure, preferably see-through tough tinted plexi glass or equivalent

Extensometers (two sets needed)

- User controlled Accessory/Unit for axial and lateral or circumferential strain measurement for sample size from 40 to 54 mm specimen with ± 0.5 % accuracy and ± 0.25 % non-linearity
- Axial Strain measurement upto ± 3 mm or more; lateral measurement about 5 mm

Temperature and Noise Measurement system

- Non- contact type accessories to measure noise as well as temperature of the test specimen excluding room environment (max temp is about 150^o C)

Triaxial Cell (PI quote separately)

- High pressure triaxial cell with spherical seating, etc. to accommodate 54.7 mm sample at maximum pressure of 15 MPa

Load Cell for Soft rock or soil (PI quote separately)

- One extra load cell of 50 kN capacity to test soil or soft rock under unconfined condition and one extra LVDT of ± 5 mm range

Test application software and System

- Software should address the ASTM standard for rock testing
- Tests to be conducted at stroke control, load control, stress control, or strain control modes with capability to obtain Online stress, peak load, percentage elongation computation,

temperature and noise of sample, etc

- Graphical display of Load Vs Displacement, Load Vs strain, Stress Vs Strain, Load Vs Time, Displacement Vs Time, Load vrs Temperature, Load vrs Noise, etc
- Software should be able to display the calculated poisson's ratio, modulus, stress, strain, etc values
- Computer System and monitor of adequate specification: advanced processor, enough ram, 1 TB hard drive, etc. and power backup for 30-45 minutes, colour laser printer and operating software. NIT R shall has the licensed windows and office software.
- Test application program should be given in a CD/DVD with a well written user friendly operating manual

Additional Points: Please include the following

- i. The party/vendor/manufacturer may be requested for a presentation of the product(s) during technical evaluation for clarification if any, without cost to NIT Rourkela
- ii. Contamination insensitive design
- iii. Easily accessible switches to facilitate major control operations as hydraulic On/Off, low/high pressure, actuator jog up/down, grip control, etc.
- iv. Emergency control measures to release pressure should also be there
- v. Alternate or higher specification may be mentioned clearly and prices quoted separately
- vi. Accessories or additional parts' prices should be mentioned separately
- vii. Onsite installation, demonstration and training is necessary with all necessary items for installation
- viii. Service centre location preferably be in eastern region of India. Details of service personnel need to be mentioned with calibration facility
- ix. List of users, specifically from technical institute of repute with certification if any
- x. The Annual Maintenance Cost starting at the end of two year warranty period.
- xi. ISO 9000 or equivalent international certification
- xii. Spares: Commitments to supply spares for at least 10 years to be ensured. Separate Spare kits should be quoted as optional items.
- xiii. **INSTALLATION AND COMMISSIONING:** The instrument to be installed tested and commissioned by representative of supplier in India at premises to the satisfaction of user.

AFTER SALES SERVICE:

1. Product support for period of minimum five years after warranty period, to be ensured by vendor/supplier.
2. Relevant software/hardware information in case of updating of the model of the supplied system should be provided.
3. Minimum two year comprehensive warranty should be offered.

TRAINING:

The supplier should provide the training on the site of installation.

Additional Commercial Terms and Conditions

- 1) Warranty (2 years comprehensive warranty) from the date of installation, commissioning and acceptance by NITR.
- 2) Mean Time to rectify the problem (desirable: within 5 working days)
- 3) Installation: Vendor to arrange for installation as per the specifications. NIT-R will provide empty laboratory with electrical points and piped water points. All the other infrastructural facilities to run the instrument, viz., UPS with 30-45 min backup, etc. have to be provided by the vendor. Installation of all the units as specified in the tender documents should be completed by qualified experts from the manufacturers end and not by their representatives, within 30 days of arrival of the equipment at NIT-R. During installation those experts will also train few Faculty, technical assistant, and students of NIT-R.
- 4) Installation site preparatory works like site testing, necessary electrical and civil works (if any) have to be supervised by the vendor.
- 5) Installation certificate will be signed after satisfactory observation of the performance of the installed system after complete installation.
- 6) Up gradation of the software for the next 10 years free of cost.
- 7) All the necessary documents including operation manuals of the equipment and other accessories as specified in the Tender have to be supplied in printed version and soft version.