

DOCUMENT

Open Competitive Bid (OCB)

For

**Supply and Installation of
Material Testing and Processing Lab equipments
of**

**Metallurgical & Materials Engineering Dept.
at the three campuses of**

**Rajiv Gandhi University of Knowledge
Technologies**

Proprietary & Confidential



**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE
TECHNOLOGIES**

**Ground Floor, Vindhya C4 Building,
IIIT-H Campus, Gachibowli
HYDERABAD- 500 032**

Phone: 040-23001830

Proprietary & Confidential

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News paper advertisement

Short Tender Notice



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TECHNOLOGIES

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Gachibowli, HYDERABAD- 500 032

Phone: 040-23001830

Separate Sealed Tenders are hereby invited from reputed Manufacturers or Authorised dealers for supply and installation of equipments for the following labs of Metallurgical & Materials Engineering Departments at the three campuses of RGUKT located at Basar (Adilabad District), Nuzvid(Krishna District and RK Vally (YSR Kadapa District) of Andhra Pradesh:

- i) Materials Testing and Processing Laboratory
- ii) Heat Treatment Laboratory
- iii) Corrosion and Environmental degradation Laboratory

Last date of submission of tender along with EMD as specified in the bid document is on 07.07.2012 before 03.00 pm.

Interested parties can collect the Tender document for each laboratory separately from the office of the RGUKT from 28.06.2012 to 06.07.2012 against payment of Rs. 5,000/- towards the cost of Tender document fee (non-refundable) through D.D. payable to REGISTRAR, RGUKT at Hyderabad. For further details visit our website www.rgukt.in

Date: 28.06.2012

**Sd/-
Registrar**

Time schedule of various Short tender related events

Bid calling date	28.06.2012
Last date for sale of document	06.07.2012 at 05:00 P.M
Pre bid meeting	02.07.2012 at 03.00PM
Bid closing date/time	07.07.2012 at 03:00 P.M.
Technical Bid Opening date/time	07.07.2012 at 03:30 P.M.
Price Bid opening date/time	09.07.2012 at 03:30 P.M.
Bid Document fee	Rs.5,000/-
Contact person	Registrar, RGUKT
Reference No	RGUKT/Proc/MME/MPTL/T 11/2012

Registrar,
RGUKT

TENDER FORM

Not transferable

Reference: No. RGUKT/Proc/MME/MPTL/T 11/2012

Dated:28.06.2012

Subject: Invitation of Tenders for Supply, installation and commissioning of Material Testing and Processing Lab Equipments to the Metallurgical and Materials Engineering Departments at three campuses of RGUKT located at Basara (Adilabad Dist), Nuzvid (Krishna Dist) and RK Valley (YSR Kadapa Dist) of Andhra Pradesh.

Last date and time for submission of the TENDER AT RGUKT, Vindhya-C4, IIIT Campus, Gachibowli, HYDERABAD is **07.07.2012 up to 3:00PM**

Dear Sir/Madam,

- A. RGUKT invites sealed tenders comprising technical bid and price bid separately from reputed manufacturers (or) authorized dealers for three RGUKT IIITs located at Basara (Adilabad Dist), Nuzvid (Krishna Dist) and R K Valley (Kadapa Dist) of Andhra Pradesh.
- B. The Tender form consists of 30pages of which pages from 6 to 22 are instructions and page No.23 contains the format for financial bid. The duly completed Technical Bid together with a copy of the bid document (this tender) signed on all pages by the Bidders authorized signatory and the Price Bid should be kept in separate sealed covers. These sealed covers must be submitted in a sealed master envelope superscribed "Tender for Supply , Installation & Commissioning of Material Testing and Processing Laboratory Equipments to the Metallurgical and Materials Engineering Department at the three campuses of RGUKT. The last date for submission of bid is **07.07.2012 and closing time is 03:00 PM.**
- C. The Sealed Tenders should be deposited in the Tender box kept in the office of Registrar, RGUKT, Hyderabad up to **03:00 P.M. on 07.07.2012.**

For any clarification and further details on the above tender please contact by Telephone No: 040-23001830 or Contact in Person during office hours.

Thanking you

Yours faithfully,

Registrar,
RGUKT

STATEMENT OF IMPORTANT LIMITS/VALUES RELATED TO BID

Item	Description
EMD	Rs.3,00,000/-
Bid Validity Period	60 days from the date of opening of commercial bid
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Warranty Period	3 years
Variation in quantities/ number of residents	<u>± 40 %</u>
Period for furnishing performance Security Deposit	Within 10 days from date of receipt of award
Delivery Schedule	Bidder must be prepared to deliver and install the enclosed list of Equipment within 120 days from the date of award of the contract.
Performance security value	5% of contract value
Performance security validity period	38 months from award of contract (including 30 days of installation period)
Period for signing the order Acceptance	Within 7 days from date of receipt of notification of award

Payment terms	
On delivery at user site	<p>Payment for goods and services shall be made in Indian rupees as follows.</p> <ol style="list-style-type: none">1. 80% of payment will be paid after installation, commissioning2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IITs.
Maximum Liquidated Damages for late deliveries	<p>For delays:- If the supplier fails to deliver any (or) all of the goods or perform the services within the time period specified in the contract the purchaser shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 0.25% of the contract value per day until actual delivery or performance up to a maximum deduction of 10% of the delayed goods or services contract price. Once the maximum deduction is reached, the purchaser may consider the termination of the contract duly forfeiting the performance security etc.,</p>

ELIGIBILITY CRITERIA

1. This bid is open to all business establishments registered within India, and those Foreign firms which have distributor/ authorized dealer agencies in India are eligible to do business under relevant Indian Laws as in force at the time of bidding. However all firms must meet the pre-qualifications criteria. They should provide a List of customers of previous supply of similar/ same items to IITs, NIT's or Central Universities or any Academic Institute of National Repute with contact details. Copies of orders received from the reputed firms on bidding firm need to be submitted.
2. The bidder should have Servicing facility or work shop with in India so the provision of service is possible at a short notice and without incurrance of delay.
3. The Bidding firm should have minimum turnover as follows:

Bid Value offered against the tender call	Last financial year's business turnover
50 lakhs	1 crore
50-100 lakhs	2 corers
Greater than 100 lakhs	3 Crores

4. The bidder should furnish satisfactory performance certificate from the parties concerned to whom bulk supplies were effected of same or similar items, in case such supplies were already made. RGUKT may contact any such parties to elicit details.
5. Bidder should have been registered under Sales/ VAT Act/CST Act with the relevant State Sales Tax Authorities. He should furnish along with the bid document, the relevant VAT/CST Registration Document and PAN / TAN Card copies. Copies of the latest VAT/CST returns of bidding firm should be submitted.
6. Each and Every equipment's supplied should be conform to standard specification of ISI or equivalent international standards agencies. All bidders shall also include the following information and documents with their tenders (in the Technical bid cover)
 - 6.1. Copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the bidding firm/entity; written power of attorney of the signatory of the firm to commit the Bidding.

- 6.2. Machinery/equipment owned by the bidder and number of employees.
 - 6.3. Latest Income Tax Saral form / Return that was filed.
 - 6.4. List of Present Clientele with contact addresses & telephone numbers
7. All the certificates furnished along with technical bids should be attested by a Gazetted Officer, counter signed by bidder along with their seal.

The bidders must submit all relevant documentary evidence to support their claim for eligibility in placing bid. **The tenders received without the above documents will be rejected.**

Requirement

200kN Servo Hydraulic Universal Testing Machine

S.No	Item	Total qty required
1	20 Ton Servohydraulic Universal Testing Machine, grips, extensometer, and other accessories,	3

Specifications for 200kN Servo Hydraulic Universal Testing Machine

1. Loading Frame:

- \pm 200kN Dynamic Capacity Fatigue Rated Two Column Self reacting Load Frame
- Total Day Light: 1200mm or more
- Minimum daylight: 300mm
- Space between columns: 600 mm or more
- Hydraulic Lifts & Clamps
- Frame Stiffness should be 600MN/m or better
- Load frame mounted LCD Based touch screen control panel for Power Pack On/Off, Emergency Stop, Actuator Jog Up & Down Slow & Fast, Crosshead position Up & Down, Locking and Unlocking at any desired position, Hydraulic Grips Close & Open etc.
- Hard chrome coated Columns
- Load Frame should be of Free Standing type and should not require foundation

Actuator:

- Fatigue rated double acting, double ended actuator with an integrated manifold
- \pm 200kN Fatigue Rated Dynamic Load Capacity
- \pm 75mm (total 150mm) Stroke with built in LVDT or Encoder
- Actuator should have LVDT or Encoder for displacement measurement with resolution of 0.001mm and accuracy of \pm 0.5%
- Optimized design for high stiffness and low fluid consumption
- High side load carrying capabilities
- Hydraulic cushions at either end
- Low friction and wear resistant
- Should be capable of achieving frequencies from 0.001 to 50Hz cyclic load applications.
- Suitable rate servo valve for conducting Tensile, Compression, 3 – Point bend, Low cycle fatigue, fatigue crack growth rate and fracture mechanics tests in Stroke, Load & Strain control modes as per ASTM standards

- Anti Rotation Assembly

2. Load Cell:

- $\pm 200\text{kN}$ Dynamic Capacity Load Cell
- $\pm 0.5\%$ accuracy of read out value down to $1/500^{\text{th}}$ of capacity as per ASTM E4 or ISO 7500
- 200% Safe Over Load Capacity and 100% Side Load Capacity
- 350 Ohm Strain Bridge design
- Linearity: $\pm 0.15\%$ of Full Scale or better
- Hysteresis: $\pm 0.1\%$ of Full Scale or better
- Fatigue Life: 10^7 or better

3. Hydraulic Power Pack:

- Suitable flow rate Hydraulic Power Pack for Constant Pressure (210 bar) Hydraulic Oil Supply to meet the test requirements mentioned above
- Servo Controlled type
- Safety features to trip at Over Temperature, Low Oil Level, Filter Clogging, Power Failure, Motor Over Load etc.

4. Control Electronics:

- Digital Signal Processor (DSP) based closed loop controller
- 24 bit Control Electronics
- 32 Bit Data Acquisition on the control and feedback channels
- Simultaneous Data acquisition rates of 5kHz or better on all primary channels
- Feedback loop update rates of 5kHz or better
- Digital Input and Output lines min. 8 Nos
- Provision for 4 Analog Output channels to deliver $\pm 10\text{VDC}$
- Provision for 4 Analog Input channels to accept $\pm 10\text{VDC}$
- Should readily accept 4 Primary Channels i.e, Position, Load, Strain1 & Strain2
- Auto Calibration and Digital Auto Zero capability
- Easy Downloadable Firmware for Future Up gradations, with out making any changes in the controller
- Controller should be capable of conducting all the Tests mentioned above
- Should be capable of acquiring data from all control and feed back channels

5. Software:

- Windows Vista/7.0 based Software, facilitating basic operation of the UTM
- Software should be capable of conducting Tuning of all control channels with PID gain control adjustment
- Should be capable of acquiring data from all control and feedback channels at 5KHz
- Servo Loop Update and Simultaneous data acquisition rate of min 5 KHz
- Should provide Position control, Load Control and Strain control by default
- Automatic and Manual settable Data Acquisition rates for different test applications
- Electronic Safety Limit (user settable) Interlocks on all control channels to protect Transducers and Machine from over loading and over travelling
- All safety Parameters like, Over Temp of Oil, over and Under Pressure of oil, Emergency Stop, Filter Clog Indication, Power Failure Indication, Motor over load to be monitored by the software and should be displayed accordingly
- Should be capable of applying cyclic loads or strains in different waveform modes like, Sine, Square, Triangular and Ramp in Stroke, Load And Strain control modes
- Adaptive Control feature
- Should be capable of creating User defined Non Standard waveforms with Dwell times.
- All soft wares required to conduct Tensile, Compression, 3-point bend as per relevant ASTM Standards
- Advanced data filtering options on all feedback channels.
- General purpose application to create user defined test profiles.
- Advanced graphics to view all feedback and set points on single and multiple graphs.
- Graphical display of Load Vs Displacement, Stress Vs Strain, load vs time, displacement vs time etc should be available
- Software packages for conducting Tensile, Compression, 3-point bend, Low cycle fatigue, Fatigue crack growth rate, K1c and J1c Fracture mechanics tests as per relevant ASTM standards
- Software offered should be capable of generating the final test report including Raw Data in the general purpose MS Office (Ex: Excel) format

6. Standard Accessories:

1. Room Temperature Hydraulic Wedge Grips of 200kN for Tensile tests of:
 - a. Flat samples of 0-22mm thickness & 50mm width

- b. Round samples of 3-22mm Diameter
 - c. Should accommodate sample gage length from 0-100mm
2. Room Temperature Axial Extensometer for tensile tests with:
 - a. 25mm Gage Length & travel of 50% of gage length
 - b. Resolution of strain measurement display: 0.001mm
 - c. Full bridge 350 ohm strain gage based
 - d. Accuracy of $\pm 0.5\%$ of read out value as per ASTM E 83
 - e. Linearity of 0.15% of full scale
3. Room temperature compression platens of 150mm Dia for 200kN
4. Room temperature 3-point bend fixture of 200kN with span continuously adjustable from 25mm to 300mm and roller diameter 10mm
5. Room temperature shear test fixture as per ASTM D 5379 for 10kN
6. Room temperature Self Aligning type Low cycle fatigue grips of 100kN load capacity for threaded samples of M10, M12 & M16 dia
7. Room Temperature Axial Extensometer for LCF tests with:
 - a. 12.5mm Gage Length & travel of $\pm 20\%$ of gage length
 - b. Resolution of strain measurement display: 0.001mm
 - c. Full bridge 350 ohm strain gage based
 - d. Accuracy of $\pm 0.5\%$ of read out value as per ASTM E 83
 - e. Linearity of 0.15% of full scale
8. Room temperature CT grips for fatigue crack growth rate, K1c and J1c tests for CT sample width 50mm & thickness 25mm as per ASTM standard for 200kN
9. Room temperature CT grips for fatigue crack growth rate, K1c and J1c tests for CT sample width 25mm & thickness 1.25mm as per ASTM standard for 100kN
10. Room temperature COD gage for fracture mechanics tests with:
 - a. 10mm Gage Length & travel of + 4mm
 - b. Resolution of strain measurement display: 0.001mm
 - c. Full bridge 350 ohm strain gage based
 - d. Accuracy of $\pm 0.5\%$ of read out value as per ASTM E 83
 - e. Linearity of 0.15% of full scale

7. Personal Computer System:

- Pentium Core II Duo Processor or later
- 500GB Hard Disk Drive, 4GB RAM, 18" Monitor
- DVD writer, Key board, Mouse, SVGA adaptor card
- Windows Vista / 7.0 operating system and MS Office installed
- HP Laser Jet Printer with UPS

8. General Requirements & Qualification Criteria

- Bidding Firm offering the product should have ISO 9001 Accreditation certification.
- Bidding Firm, offering the product, should have supplied similar type of test systems for a several years to government establishments, defense organizations & National higher learning institutions like IITs, IISC etc., in India
- Bidding Firm offering the product should submit list of supplies made by it, during last two years with complete contact details of the end users such as phone number, fax number, e-mail ID etc. It should submit copies of order placed by such organizations and user certificates for goods of same/similar nature.
- Bidding Firm offering the Product should have a Local Service Support Facility, preferably in Hyderabad, and should submit address and contact details
- Bidding Firm should give an Undertaking that, an interrupted service support will be given for a minimum period of 10 years with unbroken availability of spares supply.
- Bidding Firm should give an undertaking that, the Software upgrades if any, during the warranty period of three year, should be supplied free of charge
- Bidding Firm should offer pre-dispatch inspection free of charge at their factory premises for 2 users for 3 days and post installation training at our three laboratories in different campuses to 2 users for 5 days.

NOTE

A complete set of bidding documents may be purchased by interested bidders from the RGUKT contact person upon payment of the bid document price which is non-refundable. Payment of bid document price should be by demand draft / cashier's cheque or certified cheque drawn in favor of "Registrar , Rajiv Gandhi University of Knowledge Technologies " and payable at Hyderabad (India).