

DOCUMENT**Open Competitive Bid (OCB)****For**

**Supply and Installation of
Materials 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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Separate Sealed Tenders are hereby invited from reputed Manufacturers or Authorised dealers for supply and installation of Lab 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):

- 1) Chemical Metallurgy Laboratory
- 2) Physical Metallurgy Laboratory
- 3) Corrosion and Environmental Degradation Laboratory
- 4) Material Testing and Processing Laboratory
- 5) Heat Treatment Laboratory

Last date of submission of tender along with EMD as specified in the bid document is on **09.08.2012 before 04 .00 pm.**

Interested parties can collect the Tender document for each laboratory from **25.07.2012 to 08.08.2012** against payment of Rs. 5,000/- towards the cost of Tender document fee (non-refundable) through D.D. from any Nationalized Bank payable to REGISTRAR, RGUKT at Hyderabad from the office of the RGUKT. For further details visit our website www.rgukt.in

Date: **25.07.2012**

Sd/
Registrar

Time schedule of various Short tender related events

Bid calling date	25.07.2012
Last date for sale of document	08.08.2012 at 05:00 P.M
Pre bid meeting	31.07.2012 at 11:00AM
Bid closing date/time	09.08.2012 at 04:00 P.M
Technical Bid Opening date/time	13.08.2012 at 02:00 P.M.
Price Bid opening date/time	14.08.2012 at 03:30 P.M
Bid Document fee	Rs.5,000/-
Contact person	Registrar, RGUKT
Reference No	RGUKT/Proc/MME/MTPL/T 19/2012

Registrar,
RGUKT

TENDER FORM

Not transferable

Reference. No. RGUKT/Proc/ MME/MTPL/T 19/2012

Dated 25.07.2012

Subject: Invitation of Tenders for Supply, installation and commissioning of Materials Testing and Processing Lab Equipments to the Metallurgical & 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 **09.08.2012 up to 4:00PM**

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 **34 pages of which pages from 6 to 17** are instructions and **page No.25** 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 super scribed "Tender for Supply, Installation & Commissioning of Materials Testing and Processing Lab Equipments to the Metallurgical & Materials Engineering Departments at the three campuses of RGUKT. The last date for submission of bid is **09.08.2012 and closing time is 04:00 PM.**
- C. The Sealed Tenders should be deposited in the Tender box kept in the office of Registrar, RGUKT, Hyderabad up to **04:00 P.M. on 09.08.2012.**

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.1,00,000/- by way of Demand Draft from any Nationalised Bank or by way of irrevocable bank guarantee from any Nationalised Bank only. DD/BG from other than Nationalised Banks will not be accepted.
Bid Validity Period	365 days from the date of opening of Financial bid
EMD Validity Period	90 days from the date of opening of Financial bid
Warranty Period	3 years
Variation in quantities/number of residents	+ 40 %
Period for furnishing performance Security Deposit	Within 10 days from date of receipt of award
Delivery Schedule	Bidder shall deliver the goods in one single lot within 30days from the date of award of the contract.
Performance security value	5% of contract value by way of irrevocable Bank Guarantee from any Nationalised Bank
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, commissioning 2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IIITs.
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 firms within India who are eligible to do business under relevant Indian laws as in force at the time of bidding, subject to meeting the pre-qualification criterion. They should provide 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
25 lakhs	50 lakhs
50 lakhs	1 crore
50-100 lakhs	2 corers
Greater than 100 lakhs	3 Crores

The bidder should have adequate experience in supply of such materials/ equipment as required in the tender. Bidder should furnish proof of having supplied such materials as required in the tender in the previous financial year ending 31st March 2012 as mentioned above . A certificate of the bidder's turnover in Rupees must be enclosed and be duly certified by a firm of chartered accountants. In this certificate the turnover of subject material during 2011-2012 (ending with 31.03.2012) must be covered.

4. The bidder should furnish satisfactory performance certificate from the parties concerned to whom bulk supplies were effected, in case such supplies were made. RGUKT may contact any such parties to elicit details.
5. Bidder should be registered under 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.
6. All bidders shall also include the following information and documents with their tenders (in the Technical bid cover)
 - a) 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 Bid to commit the Bidder.

- b) Machinery/equipment owned by the bidder and number of employees.
 - c) Latest Income Tax returns and VAT/CST Returns filed.
 - d) 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 in support to their claim for eligibility in placing bid. **The tenders received without the above documents will be rejected.**

Requirement of Materials Testing and Processing Lab Equipments

S.No	Item	Total qty required
1	Brinell Hardness Tester	03
2	Charpy/Izod Impact tester	03
3	Fully Automatic Micro- hardness tester	03
4	Portable/ Laboratory Induction Melting Furnace	03
5	Laboratory double headed rolling mill	03
6	Digital Motorized Rockwell Hardness Tester	03
7	Notch cutter for Charpy Impact specimen	03
8	Computerised Vickers Hardness Tester	03

1. BRINELL HARDNESS TESTER

1. Brinell Hardness Tester for direct and accurate measurement of Brinell Hardness Number. The tester must have wide testing range for soft to hard materials. High accuracy and reproducibility of measurements at all loads should be provided.
2. Test Load Range : 500kgf to 3000kgf
 Max. Test Height : 410mm
 Scale least Count : 0.01mm
 Throat depth : 200mm
 Testing table : 200mm (1 No.) and anvils
 :70 mm dia with "V" groove for round specimens of 10 to 80 mm dia (1 No.)
 Ball indenter holder for 5 mm dia. Ball :1 No.
 Ball indenter holder for 10 mm dia.ball :1 No.
 Ball indenter WC ball 10mm dia.
 Calibrated Standard Test Block for 5mm dia. Ball indenter and 500 kgfload :1 No.
 Calibrated Standard Test Block for 10mm dia. Ball indenter and 3000 kgf load :1 No.

- The unit must include Operating instruction and maintenance manual (1 No. each),
- Spares: Microscope bulbs (12 No.), Fuses: (6 No.), Brinell Indenters (1 each of 5 mm and 10 mm dia (steel and WC)), standard test blocks and other consumables.
- Provision for easy and accurate reading of impression dimensions
- The equipment must be calibrated to give accurate and reproducible results.
Supplier has to prove that the machine is in calibration at the time of installation.
- Any additional feature (s) may be quoted separately by the bidder. This should not be the part of price of the unit.
- Relevant complete tool kit: 1 set.
- *Do not quote/bid for combined Brinell/Rockwell machine or any other combination. It should be straight Brinell only.*

2. Specification of Charpy/Izod Impact tester

Impact Energy	300J
Scale Range and Division Value of Scale Disk	0-300J the division value of each grid is 2J
Distance between Axis of Pendulum Shaft and Striking Center	750mm
Maximal Impact Speed	5.24m/s
Span of Test Sample Support	40 +0.2mm
Radius of Circular Arc in the End Part of the Test Sample Support	R1.25mm
Radius of Circular Arc of Impact Blade	R2-2.5mm,R8mm
Included Angle of Impact Cutter	30°±1
Thickness of Impact Cutter	16 mm
Specification of Test Sample	10×10×55 mm or 10x10x75
Precision of Force Transducer	≤±1%FS
Resolution of Angular Displacement Transducer	0.1°

3. Fully Automatic Micro- hardness tester

- a) Load range – 10 g to 1000g (optional 2 gms to 3000 gms)
- b) Dwell time 5 – 99 sec
- c) Automatic loading and releasing
- d) Microscope Magnification – 100 x , 400 x

- e) Measurement of indentation – Digital Fillar eyepiece
- f) Max. measurement length – 175 microns
- g) Max. Height of specimen – 65 mm
- h) Max. Depth of specimen – 85 mm
- i) LCD touch screen
- j) Auto-turretting, Auto – load selection, Auto motorized x-y motion and Motorized Z motion
- k) Manual over riding option to all the automations for any in- service failure
- l) Computer interface for single as well multiple indentation measurement and direct plotting the hardness graph / profile .Programming the profile in straight and also zig-zag way.
- m) Power Supply - AC 230 V

4. Portable/ Laboratory Induction Melting Furnace

Shall have

- Fully automatic control.
- Automatic power regulation.
- PID controller for temperature and digital temperature indicator
- Feather touch controls.
- Simple in operation.
- All safety precautions provided.
- Lower power consumption.
- Reduced metal loss on remelting
- Continuous melting of metal with chilling plant provided
- Perfect mixing of alloys due to auto stirring

Technical Specifications:	
Power Supply	Three Phase
Voltage	415v 50Hz
Absorbed Power	Up to 15 kw
Capacity of Crucible	5 Kg of liquid Copper
Maximum Temperature	Ability to melt both ferrous and nonferrous metals
Melting Time	20-30 min.
Temperature Measurement	Digital/ Thermocouple type
Cooling Water Temperature	20 to 35 degree

Water Pressure	4 Bar
Maximum Water Flow	Commensurate with cooling requirements
Chilling Unit	Capacity As required

5. Laboratory double headed rolling mill

Features

- **Double headed Unit to facilitate rolling of sheet on one side and rod rolling on the other.**
- **Chilled cast iron rolls of high surface hardness**
- **Adjustable Screw down mechanism to keep the roll gap constant during rolling**
- **Gear box coupled with suitable pinion drive to transfer the drive from motor to the rolls**
- **Gears made of EN24**
- **Lubricated gear drive to eliminate the friction and noise**

Technical specifications

1. **Roll width : >150 mm**
2. **Roll diameter : 75- 101 mm**
3. **Wire grooves : 0.71 to 12 mm**
4. **Maximum sheet width that can be rolled : 150 mm**
5. **Rolls made of : Case hardened High carbon chromium steel**
6. **No of half round grooves : 2**
7. **Roll speed : One or two fixed speeds**
8. **Lubricating system : Automatic**
9. **Power input supply : 3-Phase AC 50Hz**
10. **Power rating : 4 to 6 H P**

6. Technical specifications of Notch cutter for Charpy Impact specimen

1. **Specimen size: 10×10 (7.5 or 5) × 55mm**
2. **Notch type : V: depth 2mm, 45°±2, r=0.25mm±0.025mm**
 U2: depth 2mm, width 2mm, r=1mm±0.05mm
 U3: depth 3mm, width 2mm, r=1mm±0.05mm

U5 : depth 5mm, width 2mm $r=1\text{mm}\pm 0.05\text{mm}$

3. Broacher travel : $340\pm 10\text{mm}$
 4. Speed : 2-3m/min
 5. Lubrication system: lubricating oil circulation, oil is adjustable
 6. Power requirements : 3-phase, 5-line, AC $380\text{V}\pm 10\%$, 50Hz
- Remark: Broacher (notch blade) has to be ordered by customer.

7.SPECIFICATIONS OF DIGITAL MOTORISED ROCKWELL HARDNESS TESTER

- Motorized automatic operating cycle of loading/dwell/unloading.
- Preliminary Test Force (Load) - 98.07N (10kgf)
- Total Test Force (Load) - 588.4, 980.7, 1471N (60, 100, 150 kgf)
- Test Load Selection: Motorized as well as manual.
- Automatic weight selection and automatic zero setting gauge for very soft to very hard materials.
- Set position with LED bar indicator.
- Option to override the motorized testing and do the test entirely manually should be available.
- Large size scale display for reading with 0.1 Rockwell hardness number Resolution.
- Parallel output for connecting printer to get results indicating serial number of tests, load, hardness scale, hardness value and high / good / low indication.
- Operating Instruction and maintenance manuals must be provided.
- Spares: Indenters for all Rockwell scales (2 No. each), standard test blocks and other consumables.
- The equipment must be calibrated to give accurate and reproducible results.
- Any additional feature (s) may be quoted separately by the bidder. This should not be the part of price of the unit.

8.COMPUTERISED VICKERS HARDNESS TESTER

1. Computerized Vickers Hardness Tester for direct and accurate measurement of Vickers Hardness Number using image processing technology. The tester must have wide testing range of measuring hardness of very soft to very hard materials. The tester must have motorized loading/dwell/unloading cycle. High accuracy and reproducibility of measurements at all loads should be provided. The test loads required are 5kgf, 10kgf, 20kgf, 30kgf, 50kgf....to 320kgf.
2. Max test height: 200mm, and throat depth: 135mm

3. The tester must have the latest features viz. user friendly software with all help files and window features, online indentation setting and focusing on PC monitor & advanced image processing. It must have statistical evaluation software for calculating standard deviation, mode, median, and showing pictorial results e.g. histogram etc.
4. Impression image viewing and recording facility must be available with the tester.
5. **Facility of manual operation must be available.**
6. The equipment offered must be complete with the following:-

 Calibrated Standard Test Block (1 No.), Diamond indenter (1 No.), Flat Anvil (1No.), Vee-type Anvil –small & big (1 No. each), Relevant Spanners Set (tool kit), Electric Cord & PC interface cord (1 No. each), Video Capture software CD (1 No.), Operating instruction and maintenance manual (1 No. each),
7. Spares: Microscope bulbs (12 No.), Fuses (12 No.), Vickers Indenter (3 No.), standard test blocks and other consumables.
8. Accessories: PC with latest configuration suitable for above hardness tester with all attachments, preferably with color monitor, color printer and all other necessary accessories needed for smooth testing of samples.
9. The equipment must be calibrated to give accurate and reproducible results.
Supplier has to prove that the machine is in calibration at the time of installation.
10. Any additional feature (s) may be quoted separately by the bidder. This should not be the part of price of the unit

7. 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 favour of "Registrar, Rajiv Gandhi University of Knowledge Technologies" and payable at Hyderabad (India).