



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

(“ವಿ ಐ ಯು ಅಧಿನಿಯಮ ೧೯೯೪” ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)

“ಜ್ಞಾನ ಸಂಗಮ”, ಬೆಳಗಾವಿ-೫೯೦ ೦೧೮, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Established as per the VTU Act, 1994)

“Jnana Sangama”, Belagavi -590 018, Karnataka State, India

Registrar

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Call for Estimation Quotation

The Registrar, VTU, Belagavi invites estimation quotations for the following work: **“Establishment of Centre of Excellence in Inter Disciplinary Material Characterization at VTU Regional Centre, Kalaburgi”**. The eligible bidders should download the above documents and submit the documents office of the Registrar, VTU, Belagavi on or before **02-07-2022**.

Detailed Technical Specification:

Set up of CoE in Inter Disciplinary Material Characterization Integrated Multi Role Multi Scale Mechanical Test Platform

Test platform in accordance with ISO and ASTM standards. Delivers precise material characteristics User-friendly software platform provides a feature rich experience in exploiting powerful electro-mechanical testing abilities. Combined with high speed data acquisition.

Part	Description	Quantity
Vibration Isolation Unit	<ul style="list-style-type: none">Non electricity powered or Air with simple visual indicator	1
Chassis	<ul style="list-style-type: none">Rigid Metal Frame and Levelling Chassis.	1
Enclosure	<ul style="list-style-type: none">Insulated upright enclosure housing the platform, test stage, electronics & controls all in one compact unit.Footprint - 1800 mm x 950 mm x 750 mm.	1
2D High Load Force & Displacement Sensor	<ul style="list-style-type: none">Piezo controlled, 6 plate capacitive force & displacement sensor.Min. Normal Force - 10mNMax. Normal Force - 15 N.Max. Displacement - 250 µm.Sample Size: 70 mm X 70 mm X 50 mm	1
Low Loads Sensor	<ul style="list-style-type: none">Electrostatic Force Actuation & Displacement Sensing.Min. Force - 0.1 mN.	

	<ul style="list-style-type: none"> ● Max. Force - 10 mN. ● Max. Displacement - 35 μm 	1
Motion Stages	<ul style="list-style-type: none"> ● DC Stepper motors. ● Recirculating ball caged ball screw rods. ● Travel Distance : <ul style="list-style-type: none"> ○ X stage : 250 mm. ○ Y stage : 150 mm. ○ Z stage : 100 mm. 	1
Microscope	<ul style="list-style-type: none"> ● Infinity corrected ULWD, Chromatic Objectives : 10X, 20X, 50X and 100X with 5 MP camera 	1
Scanning Probes	<ul style="list-style-type: none"> ● Max. scan range (XY) : 70 μm x 70 μm. ● Max. Z-range : 10 μm. ● Automatic self-alignment with alignment 	1
Cyclic Loading Setup	<ul style="list-style-type: none"> ● Compact Cyclic Testing Equipment. ● Frequency of operation : 15 Hz. ● Max. Displacement Amplitude : 4 mm. ● Max. Force : 500 N. 	1
Analysis Tools and Features	<ul style="list-style-type: none"> ● Software for Test, Acquisition and Analysis Navigate X,Y,Z navigation ● Acquire , Measure force and displacement as a function of time ● Analyze Raw data Load-Displacement curve fitting based on Power law and other methods. ● Different profiles are available (Standard , user defined, Partial load and unload) for Indentation. 	
Tips	<ul style="list-style-type: none"> ● Test tips for High and Low Loads 	1
Desktop Workstation	<ul style="list-style-type: none"> ● Workstation i5 or better, 9th Generation, HDD (1TB), 16GB RAM ● Desktop (FHD and 22 inch screen, two monitors), Keyboard and Mouse with Licensed OS 	1
Tools	<ul style="list-style-type: none"> ● Allen key set ● Screw driver(Minus and Plus) ● Tweezer 	1

Multi Material High Acceleration deformation Test Equipment

- Linear encoder
 - Scale – 10 mm
 - Read head – 50 nm
 - Speed – 5 m/s
 - Interface – LASI
 - Cable – Custom
- DAQ
 - DAQ – 10 KHZ
 - PCI 6602 – Multichannel Precision counter
 - SCB-68A – Noise Rejecting, Shielded I/O Connector Block
 - SH68-68-D1 – 4 x Shielded Cable, 2 m
- Software
 - DAQ and timing base module
 - Data Storage module
 - User interface for Analytics
- Mechanical Stand / Chassis
 - Fiction slider mechanism
 - Pendulum mechanism
 - Sample holder with navigation
- Integration and optimization
- Power supplies
 - 5 VDC Linear PS
 - 12 VDC Linear PS
 - 30 VDC Linear PS
 - Others
- Cables
 - Connectors
 - Terminals
 - E&C Enclosure
- Operating Manual
 - Soft and Hard Copy
- Work Station
 - I5 or better with 1TB HDD, Monitor, Keyboard and Mouse with Licensed OS

Automated Specimen Surfacing Machine

- Automatic with finer polishing surface.
- 8” Single Disc
- Corrosion resistant FRP enclosure
- High Speed AC Motor
- Splash guard to avoid water spill over
- Electronic Display system with Touch Screen
- Clock and Anti clock wise rotation

CNC Operated Discharge Machine

- Max RM piece 250 mm
- Travel (X,Y) – 350x 450 mm
- Cutting Speed 150 mm²/min
- Max RM piece weight 350 Kgs
- CNC with LCD display
- Servo Controlled
- 3 Phase power supply, 415 Volts, 3.0 KVA
- 4 Axis controlled.

Uni and Bi-directional Oscillatory scuffing test equipment

- Max Load Range – 50 N
 - Condition Load – Upto 15 N
 - Speed – 1500 rpm
 - DAQ – Real time DAQ
 - Specimen diameter – dia 6mm to 8 mm
 - Force Resolution – 0.05N
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Terms and Conditions:

The bidders should enclose the following documents along with estimation quotation:

1. The Tenderer should furnish GST Registration Certificate.
2. The Bidder should furnish Registration Certificate.
3. PAN Card Photocopy.
4. IT returns for the past 3 years.
5. GST returns for three financial years.
6. Authorization letter from OEM.
7. The Bidder /OEM should have an experience / expertise in the successful execution of above work in any State Governments or Quasi Government Department or Government Undertaking / Universities / Colleges.
8. As proof, the Bidders should upload the purchase orders executed previously by the reseller / distributor / OEM.
9. A turn-over of not less than 80% of estimated cost for at least 3 years, in any of last 5 financial years. As proof, Profit & Loss Account Statement, Balance Sheets and audited reports certified by CA for corresponding financial years.

Sd/-
Registrar