Notice inviting quotations (NIQ)-(last date for submission 27/01/2014, 5-30 PM)

SPECIFICATIONS OF GONIOMETER

1. The Goniometer system should be **based on state of the art technology** and complete in all respects and ready for operation as per specifications.
2. Adequate protection against power failure, leakage current, and short circuit failure should be provided in the system.

**Technical Specification of Contact Angle Goniometer**

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<tr>
<th>Sl. No.</th>
<th>Requirement</th>
<th>Specification</th>
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<tr>
<td>1.</td>
<td>Sample stage</td>
<td>100x100 mm</td>
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<td>2.</td>
<td>Static contact angle of sessile liquid drop</td>
<td>Range: 0-180 deg, Resolution: 0.1 deg</td>
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<td>3.</td>
<td>Surface and interfacial tension measurement</td>
<td>- Range: 0.01-1000 mN/m, Resolution:0.01 mN/m, Cuvette for IFT measurement</td>
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<td>4.</td>
<td>Dynamic contact angle measurement</td>
<td>- Advancing and receding contact angle measurement</td>
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<td>5.</td>
<td>Liquid Dispensing unit</td>
<td>- Software-Controlled double direct Dosing System (without tubing will be preferred) - Manual dosing</td>
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<td>6.</td>
<td>Illumination during measurement</td>
<td>software-controlled adjustable intensity of light.</td>
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<td>7.</td>
<td>Optical requirements</td>
<td>Optical system with min. zoom (6x) lens</td>
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<tr>
<td>8.</td>
<td>Video recording system</td>
<td>High Speed camera with progressive scan minimum 61 frames per second (fps)- 780x580 pixel, max. 311 frames fps- 780x60 pixel, software adjustable.</td>
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| 9.     | Software Requirement                                | i. The complete software must be an integrated pack to control the dosing of liquids, image analysis and evaluation of results.  
|        |                                                       | ii. Software to determine static and dynamic contact angles using sessile drop and captive bubble method, store and report measured contact angle values.  
|        |                                                       | iii. The software should be able to record the video images and should be able to trigger the camera for video recording. These video images are then analyzed frame by frame by the software automatically.  
|        |                                                       | iv. Software controlled focussing for image recording.  
|        |                                                       | v. Software to determine surface free energy of solids from contact angle data. The surface free energy splits into its polar and dispersive components.  
|        |                                                       | vi. Integral and extendable database with substance data of liquids which can be linked directly to the measuring data.  
|        |                                                       | vii. Software to measure the Surface and Interfacial tension of liquid-air/liquid-liquid interface by Pendent drop method.  
|        |                                                       | viii. Calculation of Work of Adhesion and graphical plotting.  
|        |                                                       | ix. Laplace Young calculation for both Sessile and for Pendant Drops.  
|        |                                                       | x. Statistics and Measurement error analysis.                                  |
| 10.    | All accessories to connect the system to PC for data acquisition along with PC: RAM 1GB, Processor i3, Storage 500 GB, Screen: 20 inch |
| 11.    | Possibilities for upgradation to work with concave surfaces |
Terms and Conditions
1. All quoted models must be compatible with Indian power supply: 220 Volts/50Hz for single phase and 440 V/50 Hz for three phase supply.
2. The Technical and commercial quotations must be submitted separately in sealed envelope with a subject (“Quotation for Goniometer) written on that.

Technical bid must contain the following:
(a) Quotation should be directly from the Original manufacturer or authorized sales agent.
(b) Sole agency certificate (if applicable) and its validity from Foreign Principals (in case of foreign manufacturer),
(c) Proprietary certificate (if applicable, for any component or instrument quoted).
(d) Delivery period should be specifically mentioned and should be as small as possible.
(e) Details on installation, commissioning and training of the equipment must be specified.
(f) State service support for the equipment in India, specifically in Delhi; give details of service centers with address, telephone numbers and name of service engineers available, response time during warranty and afterwards.
(g) Certificate of compliance with deviations from specification (if any) must be attached.
(h) Original brochures and original specification sheets (from equipment manuals) directly obtained from the principal manufacturer of the quoted model must be enclosed along with supporting data. **A table of compliance for all the points in specifications with authentic signature must be supplied. This is required for the evidence of confirmation of the specifications. Without this, your quotation will NOT be considered.**

The Financial Bid must contain the following:
(a) Prices of the quoted model should be FOB Delhi and include all taxes, delivery, installation and onsite training charges.
   Please note that IIT Delhi is exempted from central excise and custom duty.
(b) The products will be used for educational purposes. Any applicable academic institution discounts should be offered and stated.
(c) Guarantee or warranty conditions must be clearly specified; exemptions if any must be clearly stated. Charges for additional warranty for 2 years should be quoted separately.
(d) Service charges per visit and AMC after one year of warranty period must be specified.
(e) Validity of quotation must be till 90 days,
(f) Mode of payment is through LC only for foreign purchases (any kind of advance payment clause should be avoided).
   Name and address of the company on whose name the LC is to be opened should be clearly mentioned.
(g) Supplier must submit TIN number/PAN number as applicable.

3. Institute reserves the right to order equipment with better quality over lower price and to accept or reject any or all the quotations without assigning reasons thereof.
4. Technical and commercial bids should be submitted separately in sealed covers by **27/01/2013 (Monday) 5:00pm**
   Indian standard time to the following address:

Attn of:

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