This is a Technical and Commercial Bid to upgrade TEM Sample preparation facility

This is an RFQ (Request for Quote) to upgrade TEM Sample preparation facility which includes procurement of a Dimple grinder and Ultrasonic disc cutter as part of an open tender for the Centre for Nano Science and Engineering (CeNSE) at IISc, Bangalore.

CeNSE is a multidisciplinary research department at IISc that houses a 14,000 sq. ft. cleanroom and characterization facility used by 50 faculty members from various disciplines at IISc. CeNSE also a user-facility which has hosted over 6000 participants from more than 700 universities and institutes all over the world. Consequently, any tool in CeNSE receives significant exposure to scientific community in India and beyond. The vendors are requested to factor in the value of this exposure in to their quotes.

Being a user-facility puts additional technical burden on the tool. We need a tool that can tolerate heavy usage (at least 50 hours/week), has a high uptime, can be serviced and maintained for the foreseeable future (at least 5 years), and has a track record of reliability at comparable facilities in India and abroad. Details of existing facilities and the user program can be gleaned from:

http://nnfc.cense.iisc.ac.in/

http://www.mncf.cense.iisc.ac.in/

https://www.inup.cense.iisc.ac.in/

Procedure

1. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. Quotes in violation of this will be rejected.
2. **The deadline for submission of proposals is the 20th of January 2020, 5:00 pm Indian Standard Time.** Proposals should arrive at the Main office, GF-15, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India, by the above deadline.
3. The decision of the purchase committee is final.
4. The technical proposal should contain
    a. Relevant technical datasheets. The committee reserves the right to cross-check the information in these datasheets with publicly available information.
    b. A compliance table with 5 columns. The first column must list the technical requirement, in the order that they are given in the technical configuration below. The second column should describe the capability of the tool for that specific requirement. In case the technical requirement is a question, second column must provide a technical answer. Please be quantitative and consistent with the technical datasheets. Third column must specify whether the technical requirement is met with a “Yes”, “No”, or “Partially”. If the response is “Partially” or “No” the third column, the fourth column

must explain the extent of the deviation and, if possible, the reasons for the deviation. The fifth column is for other "Remarks". You can use it to compare your tool with that of your competitors or provide more details/justifications.

   c. Technical capabilities of any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.
   d. Any additional capabilities or technical details that you would like to bring to the attention of the purchase committee. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors

5. The technical proposal will be evaluated against the technical requirement. Only vendors who meet the technical requirement will be considered for the commercial negotiation.
6. If multiple systems fulfill the requirements, vendors can offer multiple bids.
7. The commercial bid must contain:
   a. Itemized cost of the system and *required* accessories
   b. Itemized cost, as an option, for any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the tool.
   c. The quotes should be CIF Bangalore, India. So please include cost of shipping to Bangalore. The quote does not need to account for Customs duties.
   d. Please indicate the warranty provided with the tool.
   e. Length of time that the tools will be supported with service and spares from the date of installation. Our requirement is that the tools be supported for at least 5 years from the date of installation. To quote lowest price, vendors often quote for obsolete or soon-to-be obsolete equipment. This is NOT acceptable. For a user-facility like CeNSE, it is vital that the equipment be serviceable and supported for the foreseeable future. The length of guaranteed support will be used to estimate the life-cycles cost of the tool.
8. The RFQ must include references of 10 previous installations, preferably in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently.
9. We encourage vendors to give technical presentations, physically or over Skype, so that we can better understand the technical capabilities of their tools and vendors can better understand the requirements. To schedule the presentations, the vendors can contact Dr. Suresha S J, GF-12, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India. (sureshasj@iisc.ac.in).

   Any technical questions can be directed to Dr. Suresha S J, GF-12, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India. (sureshasj@iisc.ac.in).

Technical Requirements

1. DIMPLE GRINDER WITH MICROSCOPE

The technical specifications of the equipment are given below:

S. No.	Item	Description
1.	Automatic dimple grinding unit	Should be capable of dimpling 3 mm diameter samples
2.	Dimpling process specifications	Dimpling depth down to 10 microns or less with high precision Automatic termination of the process The unit should have a user-friendly continuous thickness monitoring mechanism. Digital Micrometer & Analog Micrometer to indicate depth in Dimple Grinder is essential and both indicators should have a readout accuracy of 1 µm. The system should enables accurate dimpling to be performed without prior knowledge of the specimen thickness.
3.	Sample monitoring during grinding	The equipment must have a feature to align specific specimen area for dimpling with good précis by using a stereomicroscope or equivalent mechanism. It should be possible to set a timer for dimpling process to terminate the dimpling process after set time.
4.	Consumables/spare parts	Specimen Mount, Stainless steel (SS), spherical, 2mm wide set of 4 – Qty 1 set Felt Polishing Rings (15mm Ø for 656.07512) set of 15 – Qty 1 set Other recommended consumables and spares should be quoted as optional.
5.	Power supply requirements	• 230V, 50 Hz Operation, single phase
6.	a) Installation & commissioning b) Warranty	The equipment should be installed in the laboratory without additional cost. Start-up assistance and training should be included for two scientists in the laboratory. 12 months warranty from the date of acceptance of the equipment.
7.	Documentation	• Operating and maintenance manual, wiring diagrams, spare part list as applicable

2. ULTRASONIC DISC CUTTER

The technical specifications of the equipment are given below:

S.No.	Item	Description
1.	The ultrasonic disc cutter	The ultrasonic disc cutter should be able to cut 3 mm discs out of brittle and fragile samples of typical thickness such as 0.5 mm silicon wafers or ceramic without introducing crack or damaging the samples.
1.	Cutting tool	• Circular cutting tool 3 mm, 2.3 mm diameter • Rectangular cutting tools min. 2mm X 3mm and/or bigger
2.	Sample monitoring during cutting	• The instrument should have provision to monitor depth of cut and must have a user-friendly adjustable sample stage, which can be positioned to cut desired region of interest with sufficient accuracy. • The offered instrument must come with a stereomicroscope or similar arrangement to facilitate precise positioning of the area of interest at the center of the tool.
3.	Cutting process specifications	• Variable user tunable frequency is essential • Depth of cut display indicator • Spring loaded sample stage with capability of positioning the cut in the desired position accurately
4.	Consumables	• All required accessories as well as consumables for out-of-box operation of the instrument must be included.
5.	Power supply requirements	• 230V, 50 Hz Operation, Single phase
6.	a) Installation & commissioning b) Warranty	a) The equipment should be installed in the laboratory without additional cost. Start-up assistance and training should be included for two scientists in the laboratory. b) 12 months warranty from the date of acceptance of the equipment.
7.	Manuals	• Operating and maintenance manual, wiring diagrams, spare part list as applicable

Thanking you,

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