Tender Notification for the procurement of **EBSD attachment to a scanning electron microscope (ESEM, ThermoFisher make)** at IISc *(Last Date for submission of tender: 22/03/2022)*

Dear Sir/Madam,

We are looking for an Electron Back Scatter Diffraction (EBSD) setup to be integrated with existing environmental scanning electron microscope (ESEM). The system should be compatible to ESEM Quanta (ThermoFisher Make). Kindly send your best quotation for an EBSD setup on C.I.P. Bangalore basis. Your quotation should clearly indicate the terms of delivery, delivery schedule, E.D., payment terms etc. The tender should be submitted in two separate sealed envelopes - one containing the technical bid and the other containing the commercial bid, both of which should reach us, duly signed on or before 1700 hours 22/03/2022.

Also please enclose a compliance certificate along with the technical bid.

Technical specifications for the high resolution EBSD Camera attachment to a scanning electron microscope (ESEM, ThermoFisher make)

Sl. no	Features	Specification
1	Compatibility	It should be compatible with ESEM Quanta 200 (ThermoFisher make). The EBSD system should also have suitable vacuum interface (should be bellow type) for mounting the EBSD camera in the SEM port.
2	Camera resolution	Minimum 1.4 mega pixel resolution or better on CCD
	Sensitivity	Should be able to work at low probe current (SEM probe current range: 100 pA- 200 nA) and low voltages (SEM range: 5 kV-30 kV)
3	Indexing speed	At least 200 indexed points per seconds. The camera should have indexing success rate of 98% or better. The EBSD camera system should be highly sensitive one to cater to Nano area analysis application.
4	High tension	The phosphor screen of EBSD detector should be optimized for low kV data application while working with SEM. The EBSD should have hexagonal grid structure for minimizing the grain shape artefacts.
5	Insertion and retraction	The EBSD camera should have motorized insertion and retraction mechanism with remote control digital handset. The position accuracy is to be 0.1mm.
6	Standards	Standards for calibrating the EBSD system.
	Safety	Safety feature to avoid collision of sample stage/sample with the camera
7	Softwares	The EBSD software should be compatible with the operating system in the computer of ESEM Quanta 200 (windows XP). The EBSD system software should include following

		features: (i) Data Acquisition Software (ii) Phase Reflector File Creation Software (iii) Pole Figure Software (iv) Mapping Software (v) ODF Software(vi)Imaging and Beam Control Software (vii) Stage Control Software. The Software must have a provision to check whether a point has been correctly indexed or not, even it should be able to provide whether multiple solution is available for that point.
8	License	Offline license must have the feature so that the S/N level can be improved by averaging each pixel with its surrounding neighbouring pixels to get better indexing rates.

In case of any minor deviation, the committee reserves the right to take the final decision.

Terms & conditions

1. The vendor should also make sure that the price quoted would be valid for a period of 2 months. Reasonable change in the price will be accepted.
2. Two-bid system (separate technical and financial bids) in sealed tenders.
3. The technical bid must clearly specify the prescribed technical specifications without including the prices. Please provide in detail the specifications. Unique characteristics may be highlighted. Vendors who include price information in the technical bids will be automatically disqualified.
4. A compliance statement and table have to be included for each specification point.
5. Technical bids will be opened first. IISc may seek clarifications after opening of technical bids, and may ask them to perform some example experiments on the sample given by IISc to demonstrate the promised technical specifications. Vendors may be required to give presentations. There are several items that require information to be provided by the supplier. If information is not provided against any of these items, this will disqualify the supplier. After technical evaluation by a committee, vendors may be asked to re-quote in a specific format to facilitate comparison of prices. IISc also reserves the right to cancel the tender at any time without assigning any reason whatsoever.
6. Price bids of only technically qualified vendors will be considered.
7. The Vendors must have supplied at least 5 similar EBSD units to centrally funded technical institutes (IISc, IITs and NITs) and national research labs (DAE, DRDO,DMRL, NAL, NML and equivalent) in the last 5 years. A detailed list of users, along with contact information of primary users, should be provided.
8. The price bids must offer CIF Bangalore prices.
9. Prices to be quoted separately for baseline system and options. Prices will should be quoted in adequate detail with relation to packing details to cover insurance compensation in case of damage to any specific modules
10. Indicate price for annual maintenance contract.
11. The payment will be by letter of credit: payable 100% after satisfactory installation and acceptance.
12. Indicate delivery period.
13. Order will be placed on lowest bid from technically qualified vendor.
14. The last date to submit the quotations is **22/03/2022 before 5 p.m**.

15. The tender documents should be addressed to **The Chairman, Department of Materials Engineering, Indian Institute of Science, Bangalore 560012**, and posted at the following address:

    Prof. Satyam Suwas
    Department of Materials Engineering
    Indian Institute of Science, Bangalore 560012
    INDIA