

Tender Notification for procuring a PUMP and Controller to FEI, FEG SEM (Sirion) for the Advanced Facility for Microscopy and Microanalysis at IISc., Bangalore.

Sub: Request for quotations for Pump and controller to FEI, FEG SEM (Sirion), TMP and DP.

Commercial Terms and Conditions:

1. Quotations are invited in a two - bid system (separate technical and financial bid) in sealed tenders.
The supplier is requested to provide compliance statement for each of the items listed in the technical specifications and demonstrate compliance after complete installation.
2. Technical bid and financial bid to be sent to :
Prof. N. Ravishankar
Materials Research Centre,
Indian Institute of Science,
Bangalore – 560 012
3. The last date for receiving tender quotations will be: 8th July, 2019.
4. Technical bids will open first.
The buyer may seek clarifications after opening of technical bids.
The supplier will be informed the dates of presentation, if required.
5. The technical bid must be the exact format of quotation of the price bid without including any other prices. Do not include any price information in the technical bid.
6. The supplier must quote in specific format to facilitate for the comparative statement of prices and technical evaluation.
7. Only technically qualified bids will be considered for further action.

8. The price bids will be opened in the presence of technically qualified supplier and the purchase committee.
9. The quotations will be for CIF, IISc., Bangalore. The insurance and the freight charges must be indicated in the CIF.
10. The warranty should be for atleast one year from the date of handing over.
11. Terms of Payment: As per negotiation.
12. The supplier shall clearly indicate the exact delivery period in the technical bid.

System details :

The FEI Sirion Scanning Electron Microscope (SEM) is a high-resolution instrument with an electron beam voltage range from 200V – 30kV. The field-emission electron source (FEG) and Hexalens electron column are capable of imaging resolution down to 1.5nm at high beam voltages and 2.5nm at 1kV. The FEG, the semi-immersion objective lens, and the in-lens secondary electron detector together provide high-resolution imaging from 200eV to 30keV. The immersion-lens mode and the in-lens SE detector provide extremely high SE collection efficiency giving excellent high-resolution imaging. As well as a normal secondary electron (SE) detector this SEM has a Back Scattered Electron (BSE) Detector, Energy Dispersive Spectrometer for chemical analysis using X-rays (EDS), and an internal TV camera (CCD). The scan generator also will scan up to 4kx3k images so that large area images can be acquired with excellent resolution. The EDS system is also capable of acquiring X-ray maps and line scans.

Part required and description:**Pump & Controller**

The pump must be controlled by a controller suitable for SIRION XL 30 digital electron Scanning Microscope and should work in conjunction with other pumps and gauges and valves in system and follow the instruction of software and control PCB present in system. The hardware and software integration is to be responsibility of the vendor supplying the pump.

The pump must combine a turbomolecular pump and a drag pump on a single shaft. It should be made from a multi-stage axial-flow turbine which is optimised for operation in molecular flow conditions. The drag pump must be made from pumping channels formed by helical grooves. And required to be designed for operation at higher pressures than conventional turbomolecular pumps. The rotor to be machined from one piece to form the angled blades of the turbomolecular pump. The rotor and stator blades should have an open structure at the pump inlet, and a more closed structure at the outlet. This configuration must give an optimum combination of pumping speed and compression when pumping gases of both high and low molecular weight . The pump should be supplied with an inlet-strainer which fits in the interstage-port. The pump should have a vent-port to vent the pump and vacuum system to atmospheric pressure. The pump also should have a purge-port in the motor and bearing housing chamber. The pump need to be cooled by the present mechanism present in basic scanning electron microscope..

1	Publishing/uploading tender document to IISc Website	20.06.2019
2	Last date for submission of bids	08.07.2019, 5.00 PM
3	Technical bids opening	09.07.2019 (Forenoon)
4	Commercial bids opening	09.07.2019 (Afternoon)