

Tender Ref. No: NABI/02(103)/18-19/N-PUR

Modified Technical Specifications after Pre-Bid Meeting held on 9th Jan' 2019

Specifications for Transmission Electron Microscopy

Amendments/Changes mentioned in Yellow Colour

S. No	Transmission Electron Microscope	
1.	Controls	Fully Digital, PC based with provision for full manual over ride if required
2.	Accelerating Voltage	40 to 120 KV in steps or continuous
3.	Resolutions	Point Resolution: 0.38 nm or better Lattice resolution: 0.2 nm or better
4.	Performance	High Contrast with high resolutions at all magnifications
5.	Magnifications	Minimum 50x to 600000X, should not cause image rotation
6.	Goniometer stage	Side entry eucentric goniometer stage, fully computer controlled, motor driven with facilities for specimen positions memory and tracking Standard anti contamination device with LN2 devar/LN2 cold trap
7.	Specimen protection	Anti-contamination device, sample protection, protection against beam damage
8.	TEM image viewing/record	CCD camera Bottom mount, 4 mega pixels or better Complete CCD imaging recording software for data collection and analysis All possible TEM modes: Bright field, dark field, low dose/minimum dose system Should be possible to rotate with in $\pm 70^\circ$ or better
9.	EDS system	X- ray detector with accessories, cooling system and software for quantitative and qualitative analysis Crystal area must be 60mm² or better and resolution = 136EV or better

10.	Vacuum system	Ultra high vacuum system for contamination free observation of the specimen Turbo Pump/ DP/ IGP with RPs Fully automated vacuum system
11.	Filament	Should be able to use both Tungsten and LaB6
12.	Automated Functions	Auto focus, filament emission, specimen selection, field search Auto Astigmatism correction Automatic sequential image recording Pre irradiation for preventing damage to beam sensitive specimens
13.	Computer system	Latest Computer with necessary hardware (64 bit, 2 TB HDD, 16 gb RAM and 4 GB dedicated graphics card) and software for TEM image capturing, storage, measurement and analysis Software feature should include instrument status display, navigation, image archiving, processing report edition, measurements, GUI 27 inch or bigger high resolutions latest two LED monitor High quality color laser printer 600 dpi X 600 dpi 5 year warranty for computer system, software's with antivirus software updates
14.	UPS	10 KVA UPS for TEM and 12 KVA UPS for chiller with power backup for atleast one hour for entire system All components including subsystems accessories and computers must be compatible with 220 volts, 50 HZ electrical power
15.	Consumables/spares	Spares/consumables for atleast 10 years should be supplied with TEM unit (list to be provided)
16.	Guarantee/Warranty/Assurance	Three years warranty and complete supply must be guaranteed for free repairs/replacements for 5 years from the date of installations.
		Software upgrades and updates must be provided free of cost as and when required
17.	Pre Installation requirement	The vendor qualified engineer must visit installation site and check requirements for installing and commissioning of the equipment and report well in advance before delivery
18.	Security Systems	Must have all the necessary security systems for handling power, water and vacuum failures overheating and high voltage discharge

19.	Training	Post installation, necessary training atleast 3 times each for a week as per requirement.
20.	Sample preparation items to be supplied	<p>(a) Light Microscope-One number</p> <ol style="list-style-type: none"> Above 500 nm thickness section used to fix sample orientation in the resin block Magnifications needed X 40 or more up to X100 <p>(b) Hot Plate- 3 number</p> <ol style="list-style-type: none"> Required temp around 40 to 100 Sample size max 20 slides
21.	Optional (not considered for comparison) (a) Operator	Trained Operator (MSc and above) for 01 year should be provided by the successful bidders along with the equipment. All statutory rules regarding the manpower should be followed as per GOI norms.
	Optional (not considered for comparison) (b) Consumables	Carbon coated copper grids, 300 mesh and Quantity required is 100 numbers

Please read the estimated cost of the Equipment in the CPPP Portal as INR 2 Crores instead of INR 4 Lakhs.

All other Terms and Conditions of the tender remain unchanged

Stores and Purchase Officer