

INDIAN INSTITUTE OF TECHNOLOGY
KHARAGPUR – 721 302, INDIA

No. IIT/KGP/S&P/CRF/FESEM/2018-19

Date: 11-10-2018

*Sub: Procurement of Variable pressure High resolution Field Emission Scanning Electron
Microscope with EDS and EBSD Facility*

Indian Institute of Technology Kharagpur invites sealed bids from reputed manufacturer or their authorised Distributor/Dealer (foreign firms or their Indian Representative company) who have adequate credential for supply/installation of Variable pressure High resolution Field Emission Scanning Electron Microscope with EDS and EBSD with accessories as per Annexure – I for the Central Research Facility, Indian Institute of Technology Kharagpur, India. *The FESEM will facilitate the research activities at the undergraduate, postgraduate and doctoral level, in addition to training of students at the UG and PG laboratory courses and research collaboration/consultancies with the Institutes outside IIT Kharagpur.*

*Interested parties may submit their sealed bids under Two-Bid system as per **Technical Specifications** given at **Annexure I**, and **General Terms & Conditions and Special instructions** given at **Annexure II and Annexure III**. Bidders are required to submit their **Details** in the format given at **Annexure IV** along with their technical bids. They are also required to submit a signed **Declaration** in format given at **Annexure V**. A **Checklist and Compliance statement** against each item of Annexure I-III thereon severally and individually shall also be submitted. Kindly refer to the Institute website www.iitkgp.ac.in [link: Tenders] for complete tender details.*

*The tender be sent in a sealed packet, containing two separate sealed envelopes (one each for **Technical Bid and Price Bid**) along with prescribed tender fee and Earnest Money Deposit (EMD) duly superscripted with Tender Notice No-IIT/KGP/S&P/CRF/FESEM/2018-19 **Date: 11-10-2018**, to the Office of the **Central Research Facility, Indian Institute of Technology Kharagpur, P.O. Kharagpur Technology, PIN 721302, West Bengal, India on or before 09-11-2018 by 11.30 a.m.***

*For any query pertaining to this bid document, communication be address to **Central Research Facility, Indian Institute of Technology Kharagpur-721302 [Ph: 913222-282480]**.*

The technical bid will be evaluated first and price bids will be opened in respect of those OEMs/Vendors, who are found technically qualified after evaluation of Technical bids.

*The Technical bids will be opened on 12.11.2018 at 11.00 a.m. in the office of Chairperson, Central Research Facility, **Indian Institute of Technology Kharagpur-721302.***

*Chairperson, Central Research Facility .
FOR DIRECTOR IIT, KHARAGPUR*

Copy to: 1. Institute website, 2. Central Procurement Portal 3. Notice Board

Indian Institute of Technology, Kharagpur
Central Research Facility

**Specifications for Variable pressure High resolution Field Emission Scanning Electron
Microscope with EDS and EBSD**

The Central Research Facility wishes to procure a Variable pressure High resolution Field Emission Scanning Electron Microscope with EDS and EBSD with options for studying a wide variety of materials, which could be metallic, ceramic, semiconductor, polymer, rubber, emulsion/gel (frozen condition) and biological samples..

The detailed specifications are given below:

1.	Resolution	1 nm or better @15 KV, 2nm or better @1Kv.High Vacuum Mode. 2nm or better @30KV in VP Mode.
2.	Magnification	x15 to x10,00,000 or more .
3.	Accelerating Voltage	Lower limit: 20Volts or lower Higher Limit :30KV or higher All the KV settings must be operated /achieved by software only.
4.	Chamber	Large chamber with at least 10 accessory port.
5.	Stage	5 axis motorized stage with motorized stage movements equivalent to or better X=100mm or more Y=80mm or more Z=40mm or more Tilt=-3-70°or better R=360°continiously Sample holder must have enough size to accommodate 8 or more 1cm ² samples.
6.	Electron Optics & Aperture	Beam Deceleration/Beam Booster technology/Gentle Beam technology or equivalent technology for high resolution imaging at low KV. All the recommended attachment (if any) must be offered in the offer itself, to work the above mentioned options. Magnetic/Electrostatic objective lens assembly/hybrid lens assembly or equivalent lens system for getting high resolution imaging of magnetic materials with shorter working distance. The lens system must be water cooled .The system must have motorized aperture. The system must have Variable pressure up to 100pa or more. One should able switch over to Variable pressure mode without insertion of mechanical

		apertures. Field of view should be same for both High vacuum mode and variable pressure mode.
8.	Probe Current	At least 100nA or higher
9.	Detectors	<p>a) Chamber SEI detector.</p> <p>b) In-Lens SEI detector/Upper secondary electron detector /In column detector or equivalent detector for high resolution imaging in High Vacuum.</p> <p>c) BSE detector, preferably semiconductor type.</p> <p>d) Separate variable pressure electron detector.</p>
10.	User Interface	Fully computer controlled system with window based Software to operate the microscope along with keyboard, mouse, and control panel including multifunction for control and adjustment of frequently used SEM parameters. Manual joystick control for motion of stage axis. The easily accessible image data files.
11.	Display & Image frame store rate	Two 24" LED Monitors for FESEM. One for control another for Imaging.
12.	Vacuum System	Suitable vacuum system having ion pump, Turbo Pump & R.P. Should have pumping Time < 5 minutes after Specimen Exchange.
13.	Accessories	<p>a) High resolution printer.</p> <p>b) Chiller.</p> <p>c) Compressor.</p> <p>d) Chamber Scope.</p> <p>f) Interface between SEM and EDS</p> <p>g) Joystick/Track ball or equivalent device for stage motor control</p> <p>h) Suitable gold coater with vacuum pump. The system must have provision for changing sputtering time and current.</p> <p>j) 5 nos of carbon tape.</p>

		<p>k) 2 nos of Emitter to be supplied as if when required in spite of emitter life time, Re tip of filament is not acceptable.</p> <p>l) CPD –critical point dryer.</p>
14	Computer	Most updated Desktop system with Pentium I7 core processor, speed 3 G Hz, HDD Memory \geq 1 Tb, RAM \geq 8 GB,DVD writer, sufficient USB ports and most updated windows based software, and 24 inch LED monitor.
15	Software packages	<p>Particle size analysis and image processing software, windows based software, and multiple offline licenses for analysis. The latest version of software for the quoted model should be included. For off-line analysis suitable interfacing, if required, should be provided for another computer for further analysis.</p> <p>Data formats(ACSII, TIFF, JPEG, BMP, etc.) Backup software must be provided on optical media. Any further version of the software and updates must be provided free of cost.</p>
16	Calibration	Standards for calibration of magnifications, dimensional and resolution.

17.	EDS	<p>Peltier cooled (LN2) free SDD detector with minimum resolution 129 eV at Mn K alpha, with Quantitative, Qualitative analysis, mapping, point Id, Line scan capabilities, phase map, drift correction, standard sampler for calibration should be provided. Detector area 30mm² or more. Detection from B(5)to U(92).</p> <p>Detector can process at greater than 1 Mcps input and greater than 800cps output. The detector should be capable of detecting from Be to U and Quantification from B to U based on ZAF method.</p> <p>Supplied EDS server & analysis software should be capable of performing data acquisition, storing and transfer in common Windows based application format. It should have features like peak auto identification routine, spectral match analysis, automatic background subtraction, spectrum process using filters, least square fitting and peak de-convolution. Pile up correction and and back ground noise reduction, simultaneous imaging and analysis should be possible</p> <p>All these capabilities should be applicable for polished flat specimens, fractured samples and nanostructured particulate systems.</p> <p>Backup software must be provided in optical media. Any further version of the software and updates must be provided free of cost.</p> <p>The supplier should arrange for seamless interfacing, software, installation and commission for EDS system.</p> <p>Training for the user shall be arranged for 4 working days for 3 persons.</p> <p><u>Calibration standard (Preferably from NIST)</u> – 1 No's with 36 element standard materials suitable for use with EDS systems. The materials should be mounted on a 1" or 1.25" diameter stub with a Faraday cup for Beam Current measurements. The elements are those commonly required for metals, alloys, nitrides, oxides etc.</p> <p>Complete set of user manuals should be provided for the EDS system.</p> <p>System should be integrated with EBSD and SEM systems.</p>
18.	EBSD	<p>The EBSD system should work on the same computer platform as that of EDS system, EBSD camera system should be CMOS based with 3000 fps or more. The EBSD should be optimized for low –kV data application while working with SEMS; camera should have motorized insertion and retraction mechanism. The position accuracy is to be 0.1mm .The camera should have Forward scattering Diodes as imaging detectors to acquire images with atomic, orientation, channeling contrast; camera interface to SEM should have sliding and tilting interface plate to correctly position the camera at the shortest possible EBSD WD for optimal special resolution. The system software should include following features:</p> <p>(i) Data Acquisition Software</p>

		<p>(ii) Phase Reflector File Creation Software</p> <p>(iii) Pole Figure Software</p> <p>(iv) Mapping Software</p> <p>(v) ODF Software</p> <p>(vi) Imaging and Beam Control Software</p> <p>(vii) Stage Control Software</p> <p>(viii) Phase Identification Software.</p> <p>ICDD Date base should be provided for material phases and diffraction data of different material. One Pre tilt Sample holder. 2 offline license should be provided.</p>
		Items to be quoted Optionally :
1.	Cool Stage for FESEM	Temperature range -25°C to +50°C, temperature accuracy +/- 1.5°C, keypad/display for temperature display and control.
2.	Advance Research Motorized Inverted Microscope With Correlative Microscopy	<p>Specification for Advance Research Motorized Inverted Microscope:</p> <ol style="list-style-type: none"> 1. Microscope stand: Encoded Fully Motorized Inverted Microscope stand with Fully Achromatically corrected Optical Beam path & Achromatically corrected Fluorescence beam path, Integrated Light Intensity Manager and Contrast Manager for Different Applications and dedicated Interactive TFT display for convenient operation. Frame mounted Min. 12 Nos. Pre-programmed Buttons for fixed Mot. Operation. Equipped with Three Illuminators - Transmitted, Reflected & Fluorescence. Interfaces 4x CAN, RS 232, USB and TCP/IP. Advance Control Unit for All Mot. Operation and System Can be operated through Software via PC. 2. Inbuilt Integrated Electronically Motorized Z focus drive with a minimum step resolution of 10 nm or better. Objective specific Z travel speed customization with max travel speed 8mm/sec. 3. Motorized Objective Nose piece: 6 Position Motorized Objective Nose piece or better / preferably with Faster Movement. 4. Motorized Condenser: Universal Condenser with a N.A of 0.55 or better for Ph, DIC, BF with 6 position.

		<ol style="list-style-type: none">5. Mot. X-Y Stage: Mot. Piezo Scanning Stage with Universal Specimen holder for slides, different sizes of Petridishes and Multi well Plate holder, travel range of 130x85mm or better. 6. Eye Piece: Focusable 10X eyepieces with FOV 23 mm. or better. 7. Transmitted Illumination: 100W halogen light source with fully Motorized Control of transmitted Illumination. 8. Objectives: High N.A plan apochromat Objectives, 2.5x - Plan NF Universal Objective N.A. 0.06, 5x - Universal Plan Semi apochromat Objective N.A. 0.13, 10X - Universal Plan Semi apochromat Objective N.A. 0.3, 20X Plan apochromat Objective N.A. 0.8, 25X- Live Cell Imaging Objective Plan apochromat with N.A. 0.8 with Multi Immersion (Oil, Dry and Glycerol)(Quote as Optional), 63X- Plan apochromat Objective N.A. 1.4 oil, 50x - Plan apochromat Objective N.A. 0.95, 100x - Plan apochromat Objective N.A. 1.0, 9. Optovar Turret: Coded 3-Position Optovar Turret with 1.6x & 2.5x Lenses. 10. DIC Accessories: High resolution DIC sliders and DIC prisms for respective objectives. 11. Plus DIC Accessories: Additional Plus DIC for better resolution in thicker adherent cells.(Quote as Optional). 12. TFT Display Interactive TFT control monitor should be Microscope frame mounted. 13. Fluorescence Attachments: Self aligned, Pre centered 100 Watt Hg Fluorescence illumination and operation with Fully Apochromatically corrected Fluorescence Beam path. (Quote as Optional).
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14. Reflected Halogen Illuminator 12 V 100 W halogen light source for Reflected Illumination with External Key to Allign Bulb Filament.

15. Observation Technique Reflected Bright Field, Dark Field, Polarizing , 2-Stage DIC along with Circular DIC.

16. Light Filters Individual Filters - ND, White Balance, for Reflected & Transmitted Illuminators.

17. Reflector Turret for Fluorescence Filters Motorized 6 position reflector turret with automatic recognition function for fluorescence filters (Optional)

a. Filters for DAPI G 365 - BS 395 - BP 445/50 .

b. Filters for Alexa 488 BP 485/20 - BS 510 - BP 515-565 .

c. Filters for Alexa 568 BP 530-585 - BS 600 - LP 615 .

18. ShutterMotorized Shutter for Multidimensional Imaging. Objective specific Z travelling speed optimization, minimum of 5 steps with Oil Stop functions for oil and dry objectives.

19. Scientific Digital Camera :High resolution, Monochrome scientific grade, peltier cooled CCD camera for fluorescence Imaging, Resolution: 3 Mega Pixel or Better, Pixel size 4.5 micron or better ,Dynamic range > 1: 2500 or better, FWC 17Ke or better ,Read out noise: < 7.7 e or better, Read out speed 24.5 MHz or better ,Frame Rate: 38fps at full resolution, Digitization: 14 Bit or better ,Peltier cooled, R-G-B live Pixel intensity Curve for easy Operation.

20. Image Analysis Software:

a. System Control :Automatic and interactive Microscope control

b. Image Acquisition Image capture, Movie Acquisition, Automatic Multi channel Image Acquisition, automated Light path setting with Automated Z stack settings. ROI Imaging.

c. Image Processing Basic adjustment of Brightness, contrast and gamma, Adjustment of color in BF images, Correction of bleaching effect in Z stack images, Pixel shift correction, image smoothening basic, Acquisition facility with Multichannel imaging with upto 8 channels.

d. Image Sharpening basic: Image Analysis Interactive and basic measurement such as Length, Angle, diameter, Area, Perimeter. Gray value measurement along a line, Continuous Time Lapse / Movie acquisitions, Graphical representation of analytical & Statistical Data, statistical Analysis and evaluation of Data.

e. Image Documentation: Creation of User defined reports.

f. Image Viewing: Orthogonal View of Z stack Images, Simultaneous Image observation for comparison Grain, Phase & NMI Analysis with Particle Evaluation.

g. Utilities; Provision of retaining Acquisition Parameters.

21. Co-Relative Accessories: Co-Relative Software and Universal Sample holder with Three position Calibration Marker for Amalgamation of Optical & Electron Microscopes.

22. Future Up gradation: System should be upgradable to Apo tome or equivalent an Laser Source.

23. Accessories: Installation requisites like compatible Branded PC, Monitor & UPS should be included in the supply.

3.	Man Power	The supplier will have to provide a high skilled and experienced full time operator to run the system for a period of 3-years from the date of installation of the system in the institute <u>at their own cost</u> . The amount for the 3 years operator service might be paid on year to year basis. The operator will work as an employee of the vendor and institute shall have no responsibility for his/her service liabilities.
Please note the party should have at least 20 FESEM installations across the country for last 10 years .All the major points mentioned in the specification (like resolution , KV range , Lens system etc) should be clearly mentioned in the brochure, so that can be cross checked with the technical bid.		

Installation requisites:

All the prerequisites for installation have to be quoted. Institute will only provide electricity at 220V, 50Hz, normal quality water and space.

Safety devices:

Suitable online 10 KVA UPS systems to run the system safely at least for two hrs.

Warranty and maintenance:

1. The complete comprehensive onsite warranty for 3 years(excluding breakdown periods) for the entire system, including the filaments etc.
2. In case of breakdown during the warranty period, a competent service engineer of the supplier should make as many visits as are necessary to rectify the problem and replace the faulty parts, without any liability of cost. But it should be repaired within 72 working hours from the date and time of complaint lodged by the user. In case of any delay in repair without adequate justification, there will be penalty of rupees 5,000/- per day for the down time. Supplier should ensure to provide all spares required for making the instrument operational. The spares recommended for keeping in inventory along with the instrument may also be quoted.

Annual maintenance contract:

After warranty, AMC (year wise) charges should also be quoted as optional.

Installation and training

Installation should be done by the manufacturer. On-site one week training for operation and application may be given to the users free of cost. IIT Kharagpur will not bear any training or leaving expenditure in this regard.

Spare parts

The supplier of the instrument must confirm in writing that the spares for the entire instrument will be available for a period of at least ten years after the model of equipment supplied has been phased out. For frequently required spares, there should be adequate

inventory with the Indian agency.

Manual

One set of operating manual and service manual including detailed drawings and circuit diagrams(in English) should be provided with the instrument

User list with contacts

Vendor should provide us a list of installations in India with all contact details and model details so that IIT Kharagpur can approach the contact person for any feedback. In case of any doubt about capability of the machine, the vendor will have to arrange demonstration at any site bearing the cost including the travel and other expanses of IIT Kharagpur representatives.

Compliance statement

The supplier must submit technical brochures and proper application notes adequately explaining and confirming the availability of the features in the model of the equipment being quoted.

The supplier must submit a table indicating the compliance of the features of the model of the equipment being quoted with those given in the indent. Features not matching – must be clearly indicated.

Additional features and Features in the quoted equipment which are better than those in the indent – may be clearly explained.

The vendor may certify that the equipment and accessories quoted provide a complete package for use of SEM along with analysis by EDS, EBSD and e-beam lithography.

Merely complying all above specifications does not imply that system is technically acceptable. Qualifying technically is subjected to successful demonstration of its imaging capabilities in presence of a technically competent person from IIT Kharagpur. Bidder should bear the cost of demonstration of equipment capabilities.

Other Requirements:

1. Demonstration of all the functionalities of FESEM imaging process, showing specified resolution on standard samples such as Gold and Tin ball, and testing on various user's sample must be done at the time of installation. All standard specimens should be provided by the vendor.
2. The vendor should have at least 10 FESEM installations across the country in last 10 years. The Committee may relax the number of installation required.
3. Lifelong upgradation of all software for imaging, analysis & EDS etc should be included.
4. List of spares that can be kept in stock should be provided with price

GENERAL TERMS AND CONDITIONS

(1) Last Date of Submission of Sealed Bids (both technical and price bids, separately): 09-11-2018 up to 11:30 a.m.

The Technical bids will be opened on 12-11-2018 at 11.00 a.m. in the Office of the Central Research Facility, I.I.T. Kharagpur, India.

(2) Payment Terms & Performance Guarantee: 90% payment will be made on submission of shipping documents and balance 10% payment will be made on installation, commissioning and submission of PBG for performance period if the payment is made by LC, otherwise after receipt of stores by any other payment mode. The security deposit so retained may be refunded on submission of Bank Guarantee towards Performance Guarantee valid for **3 years throughout warranty period plus sixty days** drawn on any commercial bank.

No advance/mobilization support, is payable against supply of stores.

In the event of failure to deliver the stores beyond the specified date, liquidated damages @ 1% per month or part thereof in respect of the value of stores will be deducted, subject to a maximum of 5%; alternately the order will be cancelled and the undelivered stores purchased from elsewhere at the risk and expense of the vendor.

(3) Warranty/Guarantee & On-site skill support: Minimum **three years** onsite comprehensive OEM warranty from the date of successful installation and commissioning. The firm has to guarantee supply of spares for a minimum period of 10 years. The OEMs/Authorized Distributors and Dealers must attach certificate about their after sales and service facilities, escalation support for on-call service or station engineer etc. AMC for 3 to 5 years to be quoted separately.

(4) Delivery of Stores: The store items be supplied within 30 days from the date of receipt of the Purchase Order or from opening of LC whichever is later.

(5) Tender Fee: An amount of **INR 5,000** (Rupees five thousand only) as tender fee (non-refundable) is to be paid. The payment shall be made by Demand Draft from any Nationalized Bank /Commercial Bank and paid in favour of "Indian Institute of Technology Kharagpur", payable at Kharagpur. **Bids without Tender Fee will not be accepted. This should be enclosed separately in an envelope and stapled with the Technical Bid document superscribing Tender fee.**

(6) Earnest Money Deposit (EMD): An amount of Rs. 7,00,000/- in the form of Demand Draft drawn in favour of "**Indian Institute of Technology Kharagpur**", payable at Kharagpur or Fixed Deposit Receipt or Banker's Cheque to be obtained from the Bidders. **E.M.D. should be enclosed separately in an envelope and stapled with the Technical Bid document superscribing EMD.** The bid security

(EMD) is normally to remain valid for a period of 45 days beyond the final bid validity period. **Any bid without EMD will summarily be rejected. No interest is payable on EMD.** EMD will be refunded to the unsuccessful bidder on finalization of the tender process. The EMD of vendor awarded with the contract to be treated as part of security deposit towards Performance Guarantee and will be refunded back on submission of performance security. No interest is payable on Security Deposit. Security Deposit shall be forfeited if the selected vendor after award of contract fails to execute the same.

(7) **Price:** Domestic tenders are to quote and accept their payment in Indian currency. Indian agents of foreign suppliers are to receive their agency commission in Indian currency. Cost of imported goods, which are directly imported against the contract, may quote in foreign currency (currencies) and will be accordingly in that currency and the portion of the allied work and services, which are to be undertaken in India (like installation & commissioning of equipment) are to be quoted and will be paid in Indian currency. The price shall be quoted with cost break-up indicating the applicable prices for each component (custom duty, import duty, landing and clearing charges and commission to Indian agents). Excise Duty Exemption/Custom Duty Exemption Certificate and Inter-state transit Way Bill (Form-50) will be issued only in favour of the bidder and address as mentioned in the Purchase Order.

(8) **Bid:** Technical Bid and Price Bid should be submitted in two separate sealed envelope quoting reference number on the top of the envelope. Tender Fee and EMD should be enclosed with the Technical Bid documents, in separate sealed envelopes, stapled with the packet containing Technical Bid documents. The OEMs may either bid directly or Country/Regional/State Distributors /Dealers/Vendors, to quote authorized with valid authorization certificate, capability to sale and service of the products.

(9) **Acceptance of Tender:** The Authority of IIT Kharagpur does not bind itself to accept the lowest priced bid and reserves the right to reject any or the entire tender bids received without assigning any reason thereof.

(10) **Extra Features:** If the bidder provides any other extra features on the Hardware or Software which are not mentioned in the tender product specifications, then that shall be highlighted in clear terms, with documentary evidence/literature.

(11) **Compliance List:** The proposal be properly indexed and a compliance list against the technical specifications should be provided.

(12) **Service:** Response to ensure quality of services, the deputed Engineer/Technical officer from the OEM/Vendor must be well trained and must be in the payroll of the OEM/Vendor.

(13) **Installation and Commissioning:** Free of cost at IIT, Kharagpur. The OEM must ensure timely installation of FESEM and accessories with necessary support to the indenters, as per details and lists to be made available by the Stores & Purchase Section or the indenting Departments/Centres/Schools.

(14) **Validity of licenses:** Software's licensing price or policy (if any) shall be clearly mentioned.

- (a) All licenses should be perpetual
- (b) All the accessories shall be from the same OEM

(15) The OEM should be an ISO-9000 and ISO-14001 certified company with due credits to energy conservation and green earth compliance.

(16) Relevant documents of the OEM shall be enclosed, along with the Technical Bid. Any explanation on this account shall be supported with documentary evidence from the principals.

(17) **Conditional Offer** will not be accepted.

(18) **Period of Validity:** Bids shall remain valid for acceptance for a period of 120 days from the date of opening of the price bid.

(19) The benefit of any downward price revision (revision on account of budget/financial policy, tax revision, EPZ etc.) is to be given to IIT Kharagpur by the selected OEM/vendor.

(20) Past Performance of the Vendors will be judged at the time of Technical Evaluation.

(21) **The Institute does not bind** itself to offer any explanation to those bidders whose technical bids have not been found acceptable by the Technical Evaluation Committee of the Institute.

(22) **Bidders should** enclose the following documents:

- (i) Certificate of Registration / Trade License
- (ii) Enlistment form (R1), complete in all respect
- (iii) Attested copy of PAN card, Service Tax, CST/VAT registration papers
- (iv) Banker's Solvency Certificate
- (v) Audited statement of accounts and IT returns for the last three years
- (vi) Authorized Distributors/Vendors must submit appropriate authorization certificate and letter from their OEMs, for participation in the said tender.
- (vii) Name and address of past satisfactory supplies or minimum three clients to whom such items/stores have been supplied should be mentioned in the technical bid.
- (viii) Copy of mandatory test reports, national testing/reliability and endurance test reports etc., certified or conducted at the manufacturing site, granted by the bureaus/quality control departments/national testing laboratories.
- (ix) Copy of product literature, for which the prices have been quoted.
- (x) A write up on service and maintenance capability, mitigation of risks or breakdown and replacement capability, with the escalation support matrix suggested for the Institute. Vendors must indicate their sales and support service centre in India and their plan to address issues about services, maintaining minimum service inventory etc.
- (xi) Signed copy of the tender document, with company seal, agreeing to the terms & conditions and declaration should be provided.

(xii) DGS&D enlistment certificate needs to be attached (applicable only for Indian Agents)

(23) **All tenders are to** be handed over in a sealed box in the office of the Central Research Facility, IIT Kharagpur. The bids (technical and price bids) once submitted shall be the property of the Institute and shall not be returned to the vendor in future.

(24) **The person/officer signing** the tender/bid documents should be delegated with an appropriate Power of Attorney (duly endorsed by a Notary Public) by the Chief Executive Office/Managing Director of the Company to sign such documents.

(25) **Opening of Price Bids:** The Price Bid(s) of only those vendor(s) who are found technically qualified will be opened and the same will be opened before the technically qualified vendor(s). **The date for opening of price bids will be notified separately.**

(26) Tenderer or his/her authorized representative (with proper authorization letter for attending opening of technical bids and also for opening of price bids) may choose to be present at the time of opening of Technical Bids/Price Bids.

(27) **IMPORTANT**

1. Director may accept or reject any or all the bids in part or in full without assigning any reason and does not bind himself to accept the lowest bid. The Institute at its discretion may change the quantity/upgrade the criteria/drop any item or part thereof at any time before placing the Purchase Order.

2. A bid submitted with false information will not only be rejected but also the OEM/vendor will be debarred from participation in future tendering process.

3. The OEMs/Vendors need to submit a certificate during opening of technical bids that they are not currently debarred or blacklisted in IIT Kharagpur for any supplies, products or services, or at present in any national organization or educational institute/ university.

4. In case of any dispute, the decision of the Director of this Institute shall be final and binding on the bidders.

5. For any query pertaining to this bid document, correspondence be addressed to :
End user

Central Research Facility,
Indian Institute of Technology Kharagpur- 721302,
West Bengal, India
[Ph:03222-282480, Fax:03222-282481]

6. In case the due date for opening tender happens to be a holiday, the same will be opened on the next working day. The timings will however remain unchanged. Please Note that the Institute remains closed on Saturday & Sunday.

Chairperson, Central Research Facility
For Director, IIT Kharagpur

INSTRUCTIONS & SPECIAL CONDITIONS

(To be returned by Tenderer along with the Tender duly signed)

1. *GENERAL: Tenderer(s), who are Indian Agents of OEMs should furnish a clear declaration as follows: We declare that I am/we are Accredited Agents of the suppliers aboard. DGS&D enlistment certificate needs to be attached (applicable only for the Indian Agents)*

2. *DEVIATION FROM SPECIFICATIONS:*

It is in the interest of the tenderer to study the specifications in the tender schedule thoroughly before quoting so that, if the tenderer makes any deviations, the same are prominently brought out in the body of the tender. If you need to add any optional items to your system in order to meet our specifications, you are requested to quote for the total including the option required to suit our requirements. Otherwise, your tender will not be considered at all.

3. *PRICE:*

For imported items both F.C.A./F.O.B. & C.I.F. Kolkata price by Air/Sea to be quoted. The price should be without Customs Duty and Excise Duty since IIT Kharagpur is exempted from the payment of Customs & Excise Duties. The Institute, if required will provide certificates for Import Items: The order acknowledgement should be issued by Fax within 3 days, and the item should be airlifted/boarded in sea within 30 days from the date of receipt of the Letter of Credit/copy of DD, as the case may be.

(i) Agency Commission, if any will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances.

(ii) The unit prices should be for the same unit as indicated in the Schedule to tender enquiry and not for any other unit.

(iii) Prices quoted should be for supply, installation and commissioning at I.I.T. Kharagpur.

(iv) Discount, if any, should be indicated separately / prominently.

(v) Offers should normally be on fixed and firm price basis. Any clause making price variation will not be acceptable.

*(vi) Where tenderer intends to quote in Indian Rupees, for imported items, the price should be quoted "FOR Destination" basis. Offer should be on "High Sea Sales" basis. No sale tax can be charged. Customs Duty applicable against **Declaration in Terms of Government of India Notification No.51/96-Customs dated 23.07.96 will be paid. Vendor will arrange payment of customs duty during clearance and the same will be reimbursed at actual against proper documents. Way Bill will be issued on request.** Seller has to undertake the responsibilities of customs clearance. All necessary supporting documents will be provided by the IIT Kharagpur. An agreement can be made in this regard, if the seller wishes, before customs clearance.*

4. *TRANSIT INSURANCE:*

The Purchaser will not pay separately for Transit Insurance.

5. PAYMENT:

(i) Payment for indigenous items and also imported items quoted in Indian Rupees will be made only after completion of supply, installation and commissioning of the Systems to the entire satisfaction of the Purchaser. No Advance Payment will be made for Indigenous Purchase.

(ii) Where items are imported and the payment is desired to be made to their foreign Principals directly, the same will be made against Irrevocable Letter of Credit on submission of shipping documents or by any other mode of payment (i.e. Demand Draft/Sight Draft/Wire Transfer) after receipt of stores.

6. TENDERERS SHALL SUBMIT ALONG WITH THEIR TENDER:

(i) Complete address and tele links for contact persons of principals and Indian agent offices dealing with this purchase.

(ii) Name and full address of the OEM's Banker and their swift code.

(iii) Proof of having ISO 9001 or other equivalent certification given by appropriate authorities.

(iv) If payment is made through LC, then LC opening charges inside and outside India, who will have to bear to be clearly mentioned

(v) Country of origin is to be provided for each item.

7. EARNEST MONEY DEPOSIT: tenderer must submit an EMD of INR 7,00,000/- (Rupees Seven Lakh only (REFUNDABLE) IN THE FORM OF BANK DRAFT/BANERS' CHEQUE IN FAVOUR OF "INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR". It should be placed in the cover containing of Technical Bid.

1) 8. TENDER FEE: TENDER FEE OF TOTAL INR 5000 (Rupees five thousand only) [NON- REFUNDABLE] IN THE FORM OF BANK DRAFT MUST ACCOMPANY THE TENDER. It should be placed in the cover containing the Technical Bid.

9. PERFORMANCE BANK GUARANTEE:

On behalf of the Principal, Indian Agent must be able to provide Performance Bank Guarantee of the amount equivalent to the 10% of the cost of equipment from any Nationalized Bank. The Performance Bank Guarantee is required for the entire period of Warranty. Performance Bank Guarantee must remain valid for a period sixty days beyond the expiry of the Warranty Period. Bid security will be refunded back on submission of performance Security.

10. GUARANTEE:

The tenderer has to declare that the goods sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications.

11. JURISDICTION:

All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued i.e. Jurisdiction of KOLKATA HIGH

COURT. Acceptance to this effect is also necessary at the time of opening of Technical Bid.

12. ACKNOWLEDGMENT:

It is hereby acknowledged that we have gone through all the points listed under "Instructions & Special Conditions" outlined above, and those in the accompanying note on "Important Conditions", and we agree to abide by them under the penalty of permanent disqualification for Tender participation and for related penal actions for non-abidance of the conditions.

*13. Interested vendors must be able to supply adequate spares and consumable during **three year warranty**. Vendor should also ensure trouble free service and performance for another **two years beyond three years Comprehensive Warranty Period** with adequate spares and accessories.*

**SIGNATURE OF TENDERER ALONG WITH
SEAL OF THE COMPANY WITH DATE**

NOTE: ONE AGENT CANNOT REPRESENT TWO SUPPLIERS OR QUOTE ON THEIR BEHALF AT ONE TIME.

In case of import all the particulars required for opening Letter of Credit (L/C) should be furnished in clear terms. After opening of L/C, based on our tender, no more requests for amendment of L/C will be entertained. Total price including supply, installation and commissioning at I.I.T., Kharagpur, should be quoted. The cost of items that may be supplied from indigenous resources and also installation part if installation is done by Indian Agents should be stated in Indian Rupees.

- 1. In case of Import, bidders are requested to quote FCA/FOB price mentioning Freight & Insurance charges separately. Ex-Works pricing may be considered.*
- 2. Warranty should be valid for Three years for all items including third party items.*
- 3. Quotations should be submitted in Separate Sealed Cover (with Sealing Wax). The quotation should be in typed format. No manual entries are allowed and any manual entry will entail rejection at the opening stage itself.*
- 4. Before submitting vendor should ensure that they have submitted the following in the technical bid, the documents as mentioned hereunder: Technical Literature, Specification documents, **Point-by-point Compliance Statement**, General Terms & Conditions, Acceptance of Kolkata High Court Jurisdiction, Name and address of 5 organizations of which 1 must be in India where the OEM has installed 1 such equipment in the last 2 years and a copy of Price bid with prices masked.*

The Commercial bid shall have all the commercial documents, agreements and Price bid. Prices should be given component wise to enable the Institute to decide the final configuration.

TECHNICAL BID DOCUMENT

FORMAT TO BE FILLED BY THE MANUFACTURERS/ INDIAN AGENTS (ON BEHALF OF THEIR FOREIGN PRINCIPLES) OR THEIR AUTHORIZED COUNTRY DISTRIBUTORS/ REPRESENTING DEALERS/ REGIONAL AGENCIES, SUBMITTING TENDER FOR SUPPLY OF NAME OF ITEM FOR IIT KHARAGPUR (DEPARTMENT OF NAME OF DEPARTMENT)

1. Name of the Tenderer :

2. Status of the Tenderer: (attach documents, if registered company/partnership/proprietary ship)

3. Whether OEM/representing foreign principle :
(attach copy of certificate/authorization)

4. Details of key top official/authorized official:
(attach details)

5. Details of tie-ups for supply/services, if any:
(Attach details, agreements, escalation matrix)

6. Income Tax and Service Tax returns of previous three assessment year (copy):

7. Financial status of bidder and/or his associates including Annual Report & Balance Sheet/ Statement of Account of past three years with Registration of Companies (ROC) receipts duly authenticated by Chartered Accountant :

8. Current list/address of clients where similar material has been supplied and successfully working:

9. Name of the vendor's three largest clients, to whom similar products and services were extended & amount of transaction/annual bills to such clients:

10. Name and address of Vendor's bankers and attach a Solvency Certificate from the Bank for a minimum amount of Rs. 20.00 Lakh :

11. Income Tax Permanent A/c No. (attach copy) :

12. Details of EMD/Bank Draft No., issuing branch and date:

Certified that all above information are correct to the best of my/our information, knowledge and belief.

-----Dated
signature & seal of the Authorized person of OEM/Vendor

NOTE: This is to be submitted in a separate sealed envelope super scribing "TECHNICAL BID", Notice inviting Tender No.IIT/Dept/ Name of Item/2014-15 and name of the bidder. All technical documents like literature, catalogues etc., are to be put in the same envelope. Price bid of that company/firm only will be opened which do technically qualify, for further consideration. Attach all relevant documents in the same serial order as above, properly indexed, duly signed and sealed.

DECLARATION

1. I, -----Son /Daughter of Shri -----

Proprietor/Partner/CEO/MD/Director/
Authorized Signatory of M/s. ----- am competent
to sign this declaration and execute this tender document.
2. I have carefully read and understood all the terms and conditions of the tender
and hereby convey my acceptance of the same.
3. The information/ documents furnished along with the above application are true
and authentic to the best of my knowledge and belief.
4. I/we am/are well aware of the fact that furnishing of any false information/
fabricated document would lead to rejection of my tender at any stage besides
liabilities towards prosecution under appropriate law.
5. Each page of the tender document and papers submitted by my Company is
authenticated, sealed and signed, and I take full responsibility for the entire
documents submitted.

----- Signature of the Authorized Person

Date: ----- Full Name: -----

Place: ----- Company Seal: -----