Government eProcurement System

eProcurement System Government of India

Tender Details

Date : 30-Aug-2023 05:30 PM

Print

Basic Details

Organisation Chain	Indian Institute of Technology Ropar		
Tender Reference Number	149-23		
Tender ID	2023_IITRP_768656_1	**Withdrawal Allowed**	Yes
Tender Type	Open Tender	**Form of contract**	EOI
Tender Category	Goods	**No. of Covers**	1
General Technical Evaluation Allowed	No	**ItemWise Technical Evaluation Allowed**	No
Payment Mode	Not Applicable	**Is Multi Currency Allowed For BOQ**	No
Is Multi Currency Allowed For Fee	No	**Allow Two Stage Bidding**	No

Cover Details, No. Of Covers - 1

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical/Finance	.pdf	EOI for S and I of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy

Tender Fee Details, [Total Fee in ₹ * - 0.00]

Tender Fee in ₹	0.00		
Fee Payable To	Nil	**Fee Payable At**	Nil
Tender Fee Exemption Allowed	No		

EMD Fee Details

EMD Amount in ₹	0.00	**EMD through BG/ST or EMD Exemption Allowed**	No
EMD Fee Type	fixed	**EMD Percentage**	NA
EMD Payable To	Nil	**EMD Payable At**	Nil

Work /Item(s)

Title	EOI for S and I of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy				
Work Description	EOI for S and I of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy				
Pre Qualification Details	Please refer Tender documents.				
Independent External Monitor/Remarks	NA				
Tender Value in ₹	NA	**Product Category**	Laboratory and scientific equipment	**Sub category**	NA
Contract Type	Tender	**Bid Validity(Days)**	180	**Period Of Work(Days)**	45
Location	M Visvesvaraya Block IIT Ropar	**Pincode**	140001	**Pre Bid Meeting Place**	NA
Pre Bid Meeting Address	NA	**Pre Bid Meeting Date**	NA	**Bid Opening Place**	Store and Purchase R and D Section
Should Allow NDA Tender	No	**Allow Preferential Bidder**	No		

Critical Dates

Publish Date	29-Aug-2023 03:00 PM	**Bid Opening Date**	19-Sep-2023 03:30 PM
Document Download / Sale Start Date	29-Aug-2023 03:00 PM	**Document Download / Sale End Date**	19-Sep-2023 03:00 PM
Clarification Start Date	29-Aug-2023 03:00 PM	**Clarification End Date**	13-Sep-2023 11:00 AM
Bid Submission Start Date	29-Aug-2023 03:00 PM	**Bid Submission End Date**	19-Sep-2023 03:00 PM

Tender Documents

NIT Document

S.No	Document Name	Description	Document Size (in KB)
1	Tendernotice_1.pdf	EOI for S and I of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy	691.32

Work Item Documents

S.No	Document Type	Document Name	Description	Document Size (in KB)
1	Tender Documents	Instructions.pdf	EOI for S and I of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy	674.70

Tender Inviting Authority

Name	The Assistant Registrar R and D Section
Address	Store and Purchase R and D Section M Visvesvaraya Block IIT Ropar 140001

INDIAN INSTITUTE OF TECHNOLOGY ROPAR
RESEARCH AND DEVELOPMENT SECTION
Rupnagar-140001 (Punjab) India
Contact No. 01881-23-1149 Email: purchase.rnd@iitrpr.ac.in

File No. 149-23/NTTM/F234/CHEMICAL-10191/ Dated 29.08.2023

Indian Institute of Technology Ropar is in the process of purchasing following item(s) as per details as given as:-

Details of the item	EOI for Supply and installation of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy
Earnest Money Deposit to be submitted	NA
Warranty	3 years comprehensive warranty
Delivery Schedule	As per tender document

Tender Documents may be downloaded from Central Public Procurement Portal http://eprocure.gov.in/eprocure/app.Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website http://eprocure.gov.in/eprocure/app . The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Ropar tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website http://eprocure.gov.in/eprocure/app as per the schedule given in the next page.

No manual bids will be accepted. All quotation (both Technical and Financial should be submitted in the E-procurement portal).

(Registrar)

SCHEDULE		
Name of Organization	Indian Institute of Technology Ropar	
Tender Type (Open/Limited/EOI/Auction/Single/Global)	EOI	
Tender Category (Services/Goods/works)	Goods	
Type/Form of Contract (Work/Supply//Service/Buy/Empanelment)	Supply	
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems/Lab Equipment)	Lab equipment	
Date of Issue/Publishing	29/08/2023 (15:00 Hrs)	
Document Download/Sale Start Date	29/08/2023 (15:00 Hrs)	
Document Download/Sale End Date	19/09/2023 (15:00 Hrs)	
Last Date and Time for Uploading of Bids	19/09/2023 (15:00 Hrs)	
Date and Time of Opening of Technical Bids	19/09/2023 (15:30 Hrs)	
Tender Fee/EMD	Rs.___NIL_____/- (For Tender Fee) **Rs. NA**(For EMD)	
	(To be paid through RTGS/NEFT. IIT Ropar R & D Account Bank details are as under:	
	Name of the Bank A/C	: IIT Ropar R & D Account
	SBI A/C No.	: 32325870435
	Name of the Bank	: State Bank of India
	IFSC Code	: SBIN0013181
	MICR Code	: 140002008
	(This is mandatory that UTR Number is provided in the on- line quotation/bid. (Kindly refer to the UTR Column of the Declaration Sheet at Annexure-F)	
No. of Covers (1/2/3/4)	2	
Bid Validity days (180/120/90/60/30)	180 days (From last date of opening of tender)	
Address for Communication	Assistant Registrar, R&D Section, Store & Purchase, M. Visvesvaraya Building, Indian Institute of Technology Ropar, Rupnagar – 140001	
Contact No.	01881-231149	
Email Address	Purchase.rnd@iitrpr.ac.in, jr.rnd@iitrpr.ac.in	

Registrar

Instructions for Online Bid Submission:

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:http://eprocure.gov.in/eprocure/app). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

http://eprocure.gov.in/eprocure/app

REGISTRATION

1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:http://eprocure.gov.in/eprocure/app) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.

2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.

5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.

6) Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / eToken.

SEARCHING FOR TENDER DOCUMENTS/

1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.

2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the

bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2) The bidder has to digitally sign the bid document and upload the required bid documents one by one as indicated in the tender document.
3) Bidder has to select the payment option as "on-line" to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, an EMD / Tender fee is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS.
4) A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

5) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.

7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

9) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

ASSISTANCE TO BIDDERS

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

General Instructions to the Bidders

1) The tenders will be received online through portal http://eprocure.gov.in/eprocure/app .In the Technical Bids, the bidders are required to upload all the documents in .pdf format.

2) Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://eprocure.gov.in/eprocure/app. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://eprocure.gov.in/eprocure/app under the link "Information about DSC".

3) Tenderer are advised to follow the instructions provided in the 'Instructions to the Tenderer the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at https://eprocure.gov.in/eprocure/app.

Expression of Interest (Eol) for Procurement of Field Emission Scanning Electron Microscope with Energy Dispersive Spectroscopy

All the manufacturers from India as well as from global market are invited.

Introduction and Application Requirements

IIT Ropar wishes to purchase FESEM for the project entitled “Development of Indigenous Encapsulated Phase Change Material (PCM)-based Active Wear Textiles and Demonstration of Commercial-scale Manufacturing”. General materials to be analyzed using the proposed FESEM includes inorganic nanomaterials including thermal-magnetic materials, organic nanomaterials such as COF, polymeric particles, encapsulated materials, and relatively large size textile samples containing nanomaterials. One of the materials to be analyzed involves core-shell assembly where core and shell are both soft materials with different physicochemical properties. The shell is expected to be a thin layer. The beam deacceleration/stage biasing need to be avoided. Working distance (WD) needs to be as small as possible. EDS may need to be operated for relatively longer time. Also, it is important to know the field of view at the given WD. The chamber and stage should be suitable for large size textile samples. Cross-collection of the signals needs to be avoided at the given WD.

The documents to be submitted by OEM or Authorized Representative of OEM:

- Model number(s) of the instrument that meets the specifications (or very closely matches the specifications).
- Brochures/Catalogues with respect to each point specified in technical specifications.
- Compliance sheet of the specifications mentioned in the Eol. The compliance sheet must be vetted by the OEM. If any of the specifications is not complying, mention the actual parameter value that the instrument model offers in the OEM’s technical specification document.
- Valid authorization letter from OEM.
- Domestic user list of similar system with Model No.

1.	Resolution	1.0 nm or better @ 15kV and 1.5 nm or better @1 kV. Better resolution at voltages lower than 1kV will be preferred in the interest of the sample types.
2.	Electron Gun	Schottky Field Emitter
3.	Magnification	50x to 8,00,000x or better, Adjustment: Continuously variable in either coarse or fine modes. Zooming over the full magnification range is expected without switching-off lenses, changing Working Distance or refocusing.
4.	Working distance and field of view	Working Distance =10 mm or better. It is important to know the size of FOV at HR mode.
5.	Acceleration Voltage	Lower limit: 20V or less, Higher limit: 30kV or higher. All the kV settings must be software controlled. Adjustment: Continuously variable in 10 Volt steps Imaging at lower voltages such as below 200 V without affecting the sample is highly required.
6.	Specimen Chamber	Large chamber 300 mm or better inner diameter and 200 mm or better height for large specimens with at least 8 or better accessory ports. Analytical Working Distance: At least 10 mm or better for a maximum signal collection. The chamber must be designed for optimum positioning of all chamber detectors allowing simultaneously acquisition of all detectors without refocusing.
7.	Specimen Stage	5 axis eucentric stage/motorized stage with motorized movements X=100 mm or more Y=100 mm or more Z=50 mm or more Tilt= (-10) – (+90)° R=360°
8.	Electron Optics	Gentle Beam/ Beam Booster/ technology or equivalent technology for high resolution imaging at low kV.

		The system must have Electrostatic and Magnetic objective lens/Super Hybrid lens/ Compound lens system and equivalent lens assembly for high resolution imaging. The objective lens design of the FESEM must provide a reduced magnetic field at the specimen surface. High-resolution imaging of dia-, para-, or ferromagnetic samples - in any composition and together with other materials – should be possible even at short working distances and low applied voltage. Imaging with BSE-detector must be possible simultaneously with EDX @ 10 mm Working Distance or better.
9.	Probe Current	At least 100nA or higher. Current stability should be mentioned. The probe diameter is expected to be as small as possible. Noise and
10.	Detectors	a) Chamber SEI detector. b) In-Lens SEI detector/In column detector or equivalent detector for high resolution imaging in High Vacuum. c) Retractable Backscattered Detector
11.	User Interface	Keyboard, Mouse, Control Panel with multifunction for the control and adjustment of frequently used SEM parameters, Manual Joystick (or equivalent) control for stage axis.
12.	Scanning and Display	1 No. of 27” monitor with suitable and factory tested computer workstation for FESEM. Electron beam scan speeds with dwell time of 50ns per pixel and a large frame store must be up to 26K x 18K or better.
13.	Imaging facilities	We like to know the various capabilities of image processing, file formats, metadata, and related features.
14.	Vacuum System	Suitable vacuum system with Ion pump, Turbo Pump, and Rotatory Pump

15.	Accessories	a) Chiller. b) Compressor. c) Chamber scope (CCD) d) Control panel for adjustment of various SEM functions like focus, magnification, etc. e) Interface between SEM and EDS. f) Joystick for stage motor control g) 5 nos. of carbon tape. h) Suitable 10kVA online UPS with minimum 30 min back up i) UPS power distribution accessories including cables, DBs, and required switches j) Three nos. of 2TR environmental ACs k) Construction of vibration isolation platform inside the lab l) minimum 5 Schottky Field Emitter guns with installation support m) minimum 5 apertures with installation support
16.	EDS Detector	EDS system inclusive of SDD EDS detector SDD area: 30mm^2 or better Energy Resolution <129eV on Mn-Kα or better @ 100,000cps Detection Range B (5) to Cf (98) EDS system software: Spectrum, Map and Line Scan Acquisition and Live Spectrum Viewer and Live chemical analysis. A separate PC with 1 No. of 27" Monitor to independently control the EDS detector.
17.	Computer solution	Independent branded, factory-fitted computer should be provided for each FESEM and EDS. EDS software, cards, related hardware should be included in EDS computer.
18.	Environment	The FESEM should have an integrated Mu-metal shielding to protect from stray fields and vibration.
19.	Upgradation	The system should be upgradable to Cryo, In-situ heating, tensile testing, electrical measurement, fully integrated confocal Raman imaging, micromanipulation system, and e-beam lithography by incorporating electrostatic beam blanker and laser interferometry stage at any point in future. A few stakeholders have shown interest in some of the above upgradations for future use.

20.	Warranty	3 years comprehensive warranty on complete FESEM system including EDS, and UPS with battery. 2 years AMC on FESEM system including EDS after expiration of Warranty.