



**IIITDM**  
KANCHEEPURAM

## TENDER NOTICE FOR PROCUREMENT

Tender Enquiry No: **IIITDMK/24-25/SP/XRay/020 Dt13/11/24**



**वैदिक दनदवि प्रपत्र /Global Tender Enquiry  
(E-Procurement Mode)**

**For**

**Supply and Installation of X-ray diffraction (XRD)**

## GLOBAL OPEN TENDER

### Notice Inviting E-Tender (E-Procurement Mode)

Date: 13.11.2024

IIITDM Kancheepuram invites online bids (e-tender) in two bids systems, from OEM/Authorized distributors/Authorized dealer for the following item.

<b>Item</b>	:	<b>Supply and Installation of X-ray diffraction (XRD) (Specification/Quantity details enclosed as Annexure-1)</b>
<b>Tender Enquiry No</b>	:	<b>IIITDMK/24-25/SP/XRay/020 Dt13/11/24</b>
<b>EMD</b>	:	<b>Payment proof for EMD of Rs.7,50,000/- or a valid MSME Registration Certificate for EMD exemption must be attached</b>

#### CRITICAL DATE SHEET

<b>STAGE</b>	<b>DATE &amp; TIME</b>
<b>Pre-Bid meeting</b>	<b>27<sup>th</sup> November 2024 – 15:00 HRS at IIITDM Kancheepuram / Hybrid Mode</b> Meeting ID – <a href="https://meet.google.com/nfi-wqmc-qxi">https://meet.google.com/nfi-wqmc-qxi</a>
Bid Submission End Date & Time	17 <sup>th</sup> December 2024 - 15:00 HRS
Bid Opening Date & Time	18 <sup>th</sup> December 2024 - 15:30 HRS

**NOTE:**

**Category of Suppliers invited for this Tender**

- i) Class I local Supplier - has local content minimum 50%
- ii) Class II local Supplier - has local content minimum 20%
- iii) Non Local Supplier - has local content less than 20%

**(Refer Order No. P-45021/2/2017-PP (BE-II) issued by the Public Procurement Section, DPIIT, Ministry of Commerce and Industry, GOI dated 16-09-2020)**

**Important:**

All communications are to be addressed to in the name of The Registrar, IIITD&M Kancheepuram only and not in the name of any officer and mails has to be sent to official purchase email id [purchase@iiitdm.ac.in](mailto:purchase@iiitdm.ac.in)

## **INSTRUCTIONS FOR ONLINE BID SUBMISSION**

The bidders are required to submit soft copies of their bid electronically on the CPP Portal, using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the CPP Portal, prepare their bids in accordance with the requirements and submit their bids online on the CPP Portal.

**For more information, bidders may visit the Portal (<https://eprocure.gov.in/eprocure/app>)**

### **1. REGISTRATION PROCESS ON ONLINE PORTAL**

- a) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online bidder Enrollment**” on the CPP Portal which is free of charge.
- b) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- c) 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.
- d) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify /nCode /eMudhra etc.), with their profile.
- e) 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 DSC’s to others which may lead to misuse.
- f) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

### **2. BID PREPARATION**

- a) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- b) 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.
- c) 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/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- d) 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” or “Other Important Documents” are available to them to upload such documents. These documents may be directly submitted from the “My Space are 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.

**Note: This information is provided for understanding the bid submission process in the CPP Portal and may be noted that the Institute is not responsible for any delay / problem for uploading of document in the CPP Portal.**

## GENERAL TERMS AND CONDITIONS

1. The Bidders are requested to give detailed tender in two bid format.

**Bid-I** : **Technical Bid**  
**Bid-II** : **Commercial Bid**

2. The tender document can be downloaded from the CPPP Portal <https://eprocure.gov.in/eprocure/app> OR Institute website- <https://www.iiitdm.ac.in/tender>

3. The duly filled tenders should be submitted on or before due date **15.00 HRS, 17<sup>th</sup> December 2024**. Extension of due date will not be entertained.

4. **A pre-bid meeting is organized on 27.11.2024 at IIITDM Kancheepuram / Hybrid mode** to clarify any doubts about the tender. The Interested bidders may participate at their own cost and the minutes of the meeting will be uploaded in the website. These shall be binding on all bidders and will form part of the bid documents. The link for the meeting through online mode is <https://meet.google.com/nfi-wqmc-qxi>.

5. **Tenders submitted without following the two bid offer system will summarily be rejected.**

### 6. **Bid -1: Technical Bid**

The online Technical bids should be uploaded containing the scanned copy of the following documents in (.pdf file)

- I. The technical bid compliance sheet & Eligibility Criteria (**Annexure-1**)
- I. Payment proof for EMD of Rs.7,50,000/- or a valid MSME Registration Certificate for EMD exemption must be attached. Bid Security Declaration form (**Annexure-2**)
- II. Declaration of Local Content (**Annexure-3**)
- III. Manufacturer's Authorization & Warranty Support Declaration (**Annexure-4**)
- IV. Bidders shall quote only those products in the bid that are not obsolete in the market and have at least 5 years residual market life i.e. the offered product shall not be declared end-of-life by the OEM before this period. (**Annexure-5**)
- V. **Experience Certificate:** Should have Supplied TWO similar equipment (each costing Rs.1.00 Crore and above excluding taxes or equivalent foreign currency) to reputed organizations/ research institutions/ Universities etc. in India on or after 1/1/2018 (PO copies to be enclosed) (**Annexure -6**)
- VI. Item Description Leaflet (**Annexure-7**)
- VII. Declaration Regarding Clean Track/No Legal Action (**Annexure-8**)
- VIII. Annual Maintenance Contract (**Annexure-9**)
- IX. Acceptance of Tender Terms (**Annexure-10**)
- X. No Relation Certificate (**Annexure-11**)
- XI. Bids should have a validity of **120 days**. The technical offer should not contain any information on price.

### **Important:**

The Technical bid consisting of all annexures and other documents should be serially numbered and to be uploaded as a single pdf file and the page number details has to be furnished in the compliance sheet. The total number of pages uploaded to be mentioned in the relevant column.

**Earnest Money Deposit:**

- Bidders shall Deposit EMD in the following bank. The amount must be through online mode and it shall be received on or before the last date and time of bid submission and the payment proof of EMD shall be attached along with the technical bid. No other mode of payment is accepted.

**Steps for submission of EMD through SBI E-Collect:**

- Go to link - <https://www.onlinesbi.sbi/sbicollect/icollecthome.htm>
- Please select category as “Educational Institutions”
- Please select “IIITDM – KANCHEEPURAM A/C” from drop down list
- Please select “Earnest Money Deposit (EMD)” from Payment Category drop down list
- Kindly fill all tender details, contact details, EMD amount and make payment.
- After successful payment, the payment proof of EMD shall be attached along with the technical bid.
- In the case of payment failure/ mismatch of particulars leads to cancellation of bid.
- For the successful bidder, the EMD will be retained/ adjusted against the security deposit.
- For the unsuccessful bidders, EMD amount will be refunded within 30 days from the finalization of contract.
- The bidder shall enclose cancelled cheque/bank details to refund the EMD amount in case of unsuccessful bids at the technical evaluation process.
- EMD shall be forfeited if any tenderer withdraws their offer within the bid validity period.
- Exemption from submission of Bid Securing Declaration against valid and relevant NSIC /MSME Certification is permitted, however it shall be subject to scrutiny by the IIITDM Kancheepuram and if during scrutiny, it is found that the NSIC Certificate is invalid and/or irrelevant, then that bid is liable to be rejected as “not accompanying EMD”. Therefore, Bidders claiming exemption from EDM / Bid Securing Declaration against NSIC certificate, should ensure the same carefully, while submission of their bids.
- Note: If in the view of bidder, any exemption / relaxation is applicable to them from any of the eligibility requirements, under any Rules / Guidelines/ Directives of Government of India, bidder may submit their claim for the applicable exemption /relaxation, quoting the valid Rule/Guidelines/ Directives with a copy of such notification. In this case the bidder must submit necessary and sufficient documents along with the technical bid, in support of their claim. The relevant and valid certificates in support of claim of exemption must be submitted along with the Technical Bid.

**7. Bid-2: Commercial Bid / Price:**

- i. **The Institute is exempted from custom duty (as applicable to Research Institutes/University) vide Custom notification no. 51/96 dt 23.07.1996 based on the DSIR notification in this regard.**
- ii. The Price may be quoted either in INR or in Foreign Currency.
- iii. The Price quoted should be for FOR Destination at IIITD&M Kancheepuram, Melakottaiyur, Off Vandalur-Kelambakkam Road, Chennai – 600 127.
- iv. In case, the Indian bidders wanted to quote in INR for the items imported from foreign countries, they have to execute High Sea sale agreement to avail the duty exemption. The Institute shall provide the required documents in this regard.
- v. The packing, forwarding, freight, insurance and commissioning charges, if any extra may be quoted separately in commercial bid.
- vi. This should contain only the price information along with commercial terms & conditions.
- vii. Submission of commercial bids by any other means shall not be accepted by the Institute in any circumstances.
- viii. Online submission of the bid will not be permitted on the portal after expiry of submission time and the bidder shall not be permitted to submit the same by any other mode.
- ix. **The Institute is Government Funded Educational Institution offering UG/PG and PhD programmes. The Item is required for student laboratory purposes and prices may be quoted at applicable “Academic Pricing”.**

**8. Bank Charges:**

All Bank charges inside India, including the opening of LC, will be borne IIITDM Kancheepuram. The Bank charges outside India to Beneficiary’s Account only. In case the bidder seeks confirmation of LC, such confirmation charges are to the Beneficiary’s account.

**9. Technical Evaluation:**

- All the technical aspects of the bids will be evaluated by a committee constituted by the Director. The scrutiny of bids will be done prima-facie on the basis of documents and information furnished by the bidder in the bid. Hence, the bidders are requested to upload all the required documents to avoid rejection of bid for want of information.
- The Technical Committee will examine all the Technical aspects of the bids received. Further, the Technical Committee may seek additional information from the existing users at IIITDM Kancheepuram or from other Institutes, these feedbacks will be considered for technical evaluation, the bidders will also be called for technical presentations if it is required so.
- The information received and the bids already submitted together will be examined with reference to the tendered specifications and evaluation is made by the Technical Committee.
- Further, the Institute may verify from the end users specified in the technical bid about the execution and satisfactory functioning of the item quoted, if required.
- Any information given in the bid found to be incorrect / false / suppressed fact will render the bidder ineligible at any stage during evaluation process or after issuance of PO and PO can be cancelled with no cost to the Institute.

**10. Opening of Commercial Bids**

IIITD&M Kancheepuram will open commercial bids of only the shortlisted bidders who qualified at the technical evaluation stage.

**11. Make in India Policy:**

1. This Institute is following and will abide with the Public Procurement (Preference to Make in India), Order 2017 issued from time to time. The Institute will award the Contract to the Bidder whose bid has been determined to be substantially responsive as per the Order No. P-45021/2/2017-PP(BE-II) dated 16- 09-2020 from Department for Promotion of Industry and Internal Trade (Public Procurement Section), Ministry of Commerce and Industry, Govt. of India.
2. The following bidders are permitted to bid for the item.
  - i. Class I local supplier – has local content equal to more than 50%
  - ii. Class II local supplier – has local content 20% to less than 50%
  - iii. Non Local Supplier - has local content less than 20%
3. Further among all technically qualified bids during the price evaluation the lowest bid will be termed as L1. If L1 is Class I local supplier the contract will be awarded to L1. If L1 is not Class I Local supplier, the lowest bidder among the class I local supplier will be invited to match the L1 price subject to class I local supplier quoted price falling within the margin of purchase preference and the contract shall be awarded to such class I local supplier subject to match the L1 price. In case the lowest eligible class I supplier fails to match the L1 price, the class I local supplier with next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and the contract shall be awarded accordingly. In case none of the class I local supplier within the margin of purchase preference matches the L1 price the contract shall be awarded to the L1 bidder (Class II Local supplier or Non Local supplier. Class II Local supplier will not get any purchase preference.
4. The margin of purchase preference for Class I local supplier is 20% from L1 price (without tax).

**12. Fraud and Corruption:**

IIITDM Kancheepuram requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,

a. The terms set forth below are defined as follows:

- **“Corrupt practice”** means the offering, giving, receiving, or soliciting, directly or in indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
- **“Fraudulent Practice”** means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;

- “**Collusive practice**” means a scheme or arrangement between two or more bidders, designed to establish bid prices at artificial, non -competitive levels; and
  - “**Coercive Practice**” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract
- b. IIITDM Kancheepuram will reject a proposal for award if it determines that Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent collusive or coercive practices in competing for the Contract in question

**13. Delivery Period / Timelines:**

The deliveries and installation must be completed **within 20 weeks** from the date of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet this expectation, as this is linked to student’s Labs / classes.

**14. Supply & services:**

- i) The items covered by this document is required to be supplied and installed at **Laboratory complex, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Off Vandalur-Kelambakkam Road, Melakottaiyur, Chennai – 600 127, Tamil Nadu.**
- ii) IIITD&M Kancheepuram will not provide any accommodation / transportation for the engineers / representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the principal supplier / agent to make their own arrangements.

**15. Restriction on Purchase on Grounds of Defense of India:**

The Institute follows Ministry of Finance and Department of Expenditure OM No.6/18/2019-PPD dated 23<sup>rd</sup> July 2020 and subsequent order dated 23<sup>rd</sup> July 2020 which are binding and the evaluation will be done accordingly.

**16. Installation and Training:**

- i) Bidder shall be responsible for installation/demonstration as applicable and for after sales service during the warranty and thereafter.
- ii) Installation and demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site.
- iii) Necessary training at the Institute for the employees of IIITDM Kancheepuram to be provided.

**17. Performance Bank Guarantee:**

5% Security Deposit in the cost of Purchase Order Value as Performance Bank Guarantee for a period of warranty period plus two months.



**18. Warranty / Support:**

- i) The items supplied shall carry the warranty as per the requirement mentioned in the technical specification.
- ii) The defects, if any, during the guarantee / warranty period are to be rectified free of charge by arranging free replacement wherever necessary.

**19. Indemnity:**

The vendor shall indemnify, protect and save IIITD&M Kancheepuram against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc., or such other statutory infringements in respect of all the items supplied by them.

**20. Freight and Insurance:**

The items to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at IIITD&M Kancheepuram site.

**21. Payment terms:**

**No advance payments are allowed.**

**INR Terms:** 90% payment shall be made against delivery and acceptance of the item by the Institute. The balance 10% is payable after installation, commissioning and demonstration of the whole system to the satisfaction of the Institute upon submission of PBG 5% to cover the warranty period plus 2 months.

**Foreign currency terms:** 100% LC with 90% payment against submission of documents and balance 10% after delivery, commissioning and demonstration of the whole system to the satisfaction of the Institute upon submission of PBG 5% to cover the warranty period plus 2 months.

**22. Penalty for delayed services / LD:**

- i) As time is the essence of the contract, delivery period mentioned in the purchase order should be strictly adhered to. Otherwise LD clause will be applied / enforced.
- ii) If the supplier fails to supply, and fix the item as per specifications mentioned in the order within the due date, the supplier is liable to pay liquidated damages of 1% of order value for delay of every week or part thereof subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.
- iii) IIITD&M Kancheepuram reserves the right to cancel the order in case the delay is more than 04 weeks and the contractor is not eligible for any damage from the Institute and contractor will forfeit his claim for EMD.

**23. Jurisdiction:**

The disputes, legal matters, court issues, if any, shall be subject to Courts in the district of Chengalpattu Jurisdiction only.

**24. Force Majeure:**

- a) IIITD&M Kancheepuram may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that the delay, in performance or other failure to perform its obligations under the contract, is the result of a force majeure.
- b) If the due date of submission of tender / tender opening is declared a holiday for the Institute, the due date for submission of tender / tender opening will be extended to same time on next working day.

**25. Arbitration:**

All disputes of any kind arising out of supply, commissioning, acceptance, warranty maintenance etc., shall be referred by either party (IIITD&M Kancheepuram or the bidder) after issuance of 30 days notice in writing to the other party clearly mentioning the nature of dispute and will be referred to the arbitrator to be nominated by Director, IIITD&M Kancheepuram, India. The Venue for arbitration shall be Chennai, India.

**26. Acceptance of the terms and conditions of tender document:**

The bidders has to accept all the terms and conditions of this tender document and it is made known that the bidders quoting for this tender had impliedly accepted the terms and conditions of this tender.

**27. Interpretation of the clauses in the Tender Document:**

In case of any ambiguity / dispute in the interpretation of any of the clause in this tender document, interpretation of Director, IIITD&M Kancheepuram shall be final and binding on all parties. The IIITD&M Kancheepuram reserves the right to accept the offer in full or in parts or reject the offer summarily or partly without assigning any reasons.

**28. Integrity Clause:**

No official of a procuring entity or a bidder shall act in contravention of the codes which includes prohibition of making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process.

**29. The competent authority reserves the right to either accept or reject the tender without assigning any reason.**

Sd/-  
कुलसचिव / Registrar  
IIITD&M Kancheepuram

**ANNEXURE-1**
**TECHNICAL BID**
**Technical Compliance Sheet (to be filled and uploaded)**

<b>Name of the Agency</b>	
<b>Office Address:</b>	
<b>Name and Mobile No. of contact person:</b>	

**ITEM: Supply and Installation of X-ray diffraction (XRD) (QTY: 01 No)**

<b>SI No</b>	<b>Parameter</b>	<b>Technical Specification</b>	<b>Compliance Yes/No/N.A.</b>	<b>Deviation (If Any)</b>	<b>Remarks</b>
1.	Basic system configuration	<p>An integrated system inclusive of an X-Ray source, generator, primary &amp; secondary optics, goniometer, sample stage, and detector assembled in a suitable radiation-shielded cabinet/ enclosure.</p> <p>i. A complete floor standing, sufficiently illuminated, radiation enclosure that prevents exposure from either the direct or scattered X-ray beam.</p> <p>ii. The enclosure must meet International and Indian X-ray radiation safety requirements.</p> <p>iii. The enclosure must provide convenient access to the goniometer, optics, and sample stages.</p> <p>iv. The system should have auto-component recognition of the X-ray tube, Optics, Sample Stage, and Detectors.</p> <p>v. Safety:</p> <p>a. The instrument should have Type approval from the Atomic Energy Regulatory Board (AERB) for operation in India. Type approval certificate to be provided along with the technical</p>			

		<p>bid. This certificate is a basic requirement for considering technical bid responsive.</p> <p>b. As per the highest international standards and regulations, a fully X-ray protected enclosure safety system is essential, X-ray protected enclosure as per international safety norms and CE certified, EC declaration of conformity certificate is essential and should be provided along with the system.</p> <p>c. The radiation leakage out of the cabinet should be <math>\leq 1 \mu\text{Sv/h}</math> during operation of the XRD system at full power and measured at a 10 cm distance with hard radiation sources like Ag &amp; Mo. Document of compliance should be provided.</p> <p>d. Cabinet door safety interlocking shall be provided such that x-rays can't be generated until the cabinet door is properly closed.</p>			
2.	X-Ray Generator	<p>i. 3.0 kW or more power X-ray generator with up to 50 kV or more voltage, and 60 mA or more current.</p> <p>ii. Input power should be single phase 220 V <math>\pm</math> 10%, 50-60 Hz.</p> <p>iii. Stability: &lt;0.005% for high voltage and current with 10% variation of main supply.</p> <p>iv. Safety devices: The instrument should trip upon overload, over voltage, over current, interruption of water flow, failure of warning lamps, case open, etc. It should also follow all the international and Indian safety norms.</p>			

3.	X-Ray Tube	<p>i. 1.8 kW or more power, Metal-Ceramic insulated body, Cu Anode with high focal stability, and long life should be offered.</p> <p>ii. The X-ray tube should have facility to switch easily from point focus to line focus and vice versa without any need for realignment and without disconnecting any utilities like high voltage cable, water connection, etc. The manual procedure for changing the line focus to point focus also should be provided. Point focus creation at the source through blocking X-ray's with slits/optics is not acceptable.</p> <p>iii. The Mo target of X-ray tube along with Cu target X-ray tube should be supplied with their corresponding filters for Beta (<math>\beta</math>) suppression.</p> <p>iv. System should be able to accept other X-ray sources like Co, Cr, Fe, Ag, etc. shall be user friendly with easy change over options for changing different target tubes by the user, as and when required.</p> <p>v. Auto recognition facility for line focus, point focus, and anode material type should be available.</p> <p>vi. The system should have requisite cooling-system/chiller (<i>refer the S. No. 11 for more details</i>).</p>			
4.	Goniometer	<p>i. Vertical <math>\theta</math>-<math>\theta</math> type high-resolution, fully automatic computer controlled, stepper or continuous motor controlled goniometer.</p> <p>ii. Both <math>\theta</math>-<math>\theta</math> &amp; <math>\theta</math>-2<math>\theta</math> setup in coupled and decoupled configuration.</p> <p>iii. Shall have scanning modes like continuous scan, step scan, and fast scan.</p> <p>iv. Variable measuring circle radius with minimum 100 mm (from max to min) adjustment in the</p>			

		<p>diameter. The measuring circle radius shall be 220 mm or above.</p> <p>v. Angular reproducibility (<math>2\theta</math>): <math>\pm 0.0001^\circ</math> or lower</p> <p>vi. Angular accuracy (<math>2\theta</math>): <math>\pm 0.0025^\circ</math> or lower</p> <p>vii. Goniometer angular linearity (<math>2\theta</math>): <math>\leq \pm 0.01^\circ</math> over the complete range using LaB<sub>6</sub> standard reference material (SRM). Documentary proof and proof from the installation report shall be submitted.</p> <p>viii. Goniometer angular range without accessory mounted: <math>360^\circ</math></p> <p>ix. The goniometer should facilitate transmission analysis with the sample kept horizontally, with the tube above and the detector below the sample in the vertical plane of measurement. The vendor needs to confirm this feature availability with documentary proof.</p> <p>x. <math>2\theta</math> range from <math>-110^\circ</math> to <math>165^\circ</math> or enhanced with a minimum step size of <math>0.0001^\circ</math> or lower with a scan speed in the range of 0.01 to <math>50^\circ/\text{min}</math>.</p> <p>xi. Slew speed: <math>\geq 15^\circ/\text{sec}</math></p> <p>xii. There shall be no need for manual alignment when mounting and demounting accessories like optics, sample stage including non-ambient temperature, humidity, monochromators, detectors, etc.</p>			
5.	Optics	<p>i. Suitable incidence optics consisting</p> <p>a. Motorized programmable divergence slit and motorized programmable anti-scatter slits facilitating measurement from 0.5 deg (<math>2\theta</math>) onwards or latest generation mirror-based optics for B-B measurement providing superior intensity &amp; low background should be offered (documentary proof from the</p>			

		<p>manufacturer should be submitted).</p> <p>b. Suitable graded Multi-layered Mirror Optics for Cu for high intensity for thin film GIXRD application should be offered.</p> <p>c. For the Cu source the instrument should facilitate easy alignment-free/motorized changeover of the optics from Bragg-Brentano to Parallel Beam and vice versa.</p> <p>d. Suitable Soller Slit should be offered on the incident beam.</p> <p>ii. Suitable diffracted beam optics consisting of</p> <p>a. Anti-scattering slit for the detector.</p> <p>b. In the diffracted beam Suitable Soller Slits to be quoted.</p> <p>c. For thin film GIXRD analysis &amp; samples with irregular surfaces: Long Soller slits/ Parallel Plate Collimator/ Parallel Slit Adaptor, High Resolution type should be provided.</p> <p>iii. Comprise of an X-ray lens (poly-capillary) for stress and texture measurement. It is recommended to have both a mirror and an x-ray lens.</p> <p>iv. Micro-beam collimator of size 0.1 mm, 0.3 mm, and 0.5 mm for micro-diffraction and stress measurements should be provided.</p>			
6.	Sample stage & Sample holder	<p>i. Standard: Sample stage for analysis of powders in reflection B-B geometry.</p> <p>ii. For powder, thin film GIXRD, micro-diffraction, stress, and texture: A sample stage with motorized Z for analyzing samples (with sample holder) with a diameter of 120 mm or more, a maximum height of 80 mm or more, and a maximum mass of 2 kg or more with facility for motorized <math>\phi(\phi)</math> and</p>			

		<p>motorized tilt (<math>\chi</math>) scan should be offered. The adjustable Z-range should be 2 mm or more with a step size of 1 <math>\mu\text{m}</math> and <math>\phi</math>-axis movement for the complete <math>360^\circ</math> with a step size of <math>0.01^\circ</math>, and the motorized tilt (<math>\chi</math>) of “<math>-1^\circ</math> to <math>+90^\circ</math>”.</p> <p>iii. Suitable sample stage transmission analysis and SAXS/WAXS on powder samples should be offered.</p> <p>iv. For powder sample analysis: 10 no's Al sample holders &amp; 10 No Acrylic/Glass/PMMA holders should be offered.</p> <p>v. For small quantity samples: 6 no's of zero background sample holder.</p> <p>vi. Sample holders for transmission analysis and SAXS/WAXS with minimum 3 no's should be offered.</p> <p>vii. Laser-based pointer to identify the measurement spot of the sample along with additional mechanical device to identify the position of the sample should be provided.</p> <p>viii. A non-ambient stage with a sample motorized Z-height adjustment facility from room temperature (RT) to <math>+1200^\circ\text{C}</math> or more radiation-based oven heater with all accessories of <math>\text{Al}_2\text{O}_3</math> sample cups (5 No's) and zero-background inserts (2 No's) for micro-sample analysis should be provided. Also, high vacuum pump with vacuum range of <math>10^{-4}</math> mbar and other all required accessories for functioning and controlling the operations should be provided. There should be a facility for Sample height correction during <i>in-situ</i> heating analysis.</p>			
7.	Detector	<p>The latest fast solid-state array energy resolution detector with the following minimum specifications:</p> <p>i. Detector should be capable to work with all X-ray emission lines</p>			



		<p>i.e., Cu, Cr, Co, Mo, Ag, etc. with good efficiency.</p> <p>ii. Count rate: <math>1 \times 10^8</math> cps or higher</p> <p>iii. Number of strips/Channel: 192 or more</p> <p>iv. The detector (Strip/Channel) spatial resolution in both x and y planes should be <math>\leq 75 \mu\text{m}</math>.</p> <p>v. Detector must work in 2-D mode and capable of 2-D, 1-D, and 0-D data collection.</p> <p>vi. Detector should be capable to work in static and scanning mode</p> <p>vii. The detector stand alone, with or without suitable optics should have energy resolution of <math>&lt; 500</math> eV for the capability to remove the fluorescence from sample. The details of the same should be provided by the vendor.</p>			
8.	Electronics	<p>The system electronics should have an integrated shutter control and should be capable of monitoring and controlling all diffractometer functions such as angles, counts, slits, generator safety, etc.</p>			
9.	Computer	<p>i. Two (2) number of desktop PCs (brand: HP/DELL) should be provided for all operations of the XRD and data analysis with minimum Core i7 or higher processor, minimum 2 TB of HDD, 8x DVD-RW drive facility, <math>\geq 16</math> GB DDR RAM, Windows 10 or higher operating system with <math>&gt; 500</math> GB of SSD compatibility with user interface, and <math>\geq 24</math>" widescreen flat panel LED monitors.</p> <p>ii. A color laser-jet printer (A4-size) HP brand for Print, Scan, and Copy purposes with minimum specs of 600 x 600 dpi resolution, Wi-Fi/wireless enabled, one extra spare of color toner, etc. should be provided along with the system.</p>			

10.	Software & Data analysis	<ul style="list-style-type: none"> <li>i. The software should be capable of simultaneous diffractometer control, data collection &amp; analysis, peak search, search-match, and elaborate pattern treatment such as data smoothening, background subtraction, <math>\alpha_2</math> stripping, crystallinity determination, qualitative and quantitative phase studies, remote service support, etc.</li> <li>ii. Software for Rietveld refinement, structure analysis, profile fitting with crystallinity estimates, and partial least square regression (PLSR) analysis should be quoted.</li> <li>iii. Automated Rietveld quantification program creation and analysis software should be offered.</li> <li>iv. Software for cluster analysis of large data sets of 80 or more should be offered.</li> <li>v. The software should be OEM's and a minimum of 5 Individual (not network) user licenses for the above analysis software to be provided.</li> <li>vi. Software should be offered for texture, stress, SAXS/WAXS, GI-XRD, and 2-D XRD analyses.</li> <li>vii. The offered software should be compatible for use with the following database such as COD, ICDD, and ICSD in the latest version.</li> <li>viii. Automatic generation of data in absolute intensity is desirable.</li> <li>ix. A toolbox for advanced 2-D processing for anisotropic SAXS or GISAXS/ WAXS data should be included.</li> <li>x. One (1) number of PDF-5+ scholar with five (5) year license validity for academics should be provided.</li> </ul>			
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## TENDER NOTICE FOR PROCUREMENT

**Tender Enquiry No: IIITDMK/24-25/SP/XRay/020 Dt13/11/24**

11.	Water chiller	Suitable close loop chiller to cool the x-ray source & generator. The chiller should be sufficient to cool the entire system with a small profile and low noise ( $\leq 80$ dB) such that it can be housed inside the XRD room itself and shouldn't require a separate space.			
12.	UPS	Minimum 15 kVA or higher branded online UPS as per XRD OEM requirement to run XRD system along with water chiller for 1 hour or higher backup.			
13.	Training	Necessary onsite training on operation, maintenance of the offered system, and X-ray diffraction studies must be provided for the deputed personnel (minimum of 5 people) for minimum period of 2 weeks split in to two phases.			
14.	Warranty	The offered XRD equipment including all the attachments, accessories, X-Ray tube, water chiller, and UPS should be carried at least five (5) Years Comprehensive Warranty from the date of installation. If in case during the warranty period, any item or spare is to be replaced, then all such warranty replacement parts should be replaced on a dispatch duty paid (DDP) basis by the vendor. Within the warranty period the instrument downtime should not be more than a month, otherwise, the comprehensive warranty time would be increased by a month for every 1-week delay. The price should be quoted for comprehensive maintenance package of 5 years and it should be applicable after completion of standard warranty period.			

**Eligibility/Selection criteria:**

- The quoted X-ray diffraction should be compatible (stability, angular reproducibility, angular accuracy) with *in-situ* diffraction, stress and texture testing platform.
- X-ray diffraction with all the quoted capabilities especially angular reproducibility, angular accuracy, and stress on the sample provided by end-user should be demonstrated (in person or via video conferencing) at mutually convenient time and location for technical compliance, system efficiency and cutting-edge performance verification. A sample for the demonstration would be provided to the concerned representative at least one 1 week advance.
- The final decision on technical compliance will be based on live or satisfactory online demonstration of the quoted system.
- Dedicated in-house training for 5 persons for a minimum period of 2 weeks split in to two phases. Phase 1: Basics operations and Phase 2: Advanced level training for powder, thin film GIXRD, micro-diffraction, stress, texture, etc. operations along with change of X-ray tube and *in-situ* measurements.

**Note: The total cost will be taken into account for arriving L-1.**

### ELIGIBILITY CRITERIA

SI. No	Description		Compliance Yes/No/N.A.	Page No.
1.	<b>Technical Sheet</b>	The technical bid compliance sheet & Eligibility Criteria ( <b>Annexure-1</b> )		
2.	<b>EMD</b>	Payment proof for EMD of Rs.7,50,000/- or a valid MSME Registration Certificate for EMD exemption must be attached. Bid Security Declaration form ( <b>Annexure-2</b> )		
3.	<b>Declaration of Local Content</b>	Declaration of Local Content ( <b>Annexure-3</b> )		
4.	<b>Authorization Letter from OEM</b>	( <b>Declaration from OEM to be enclosed for the following</b> ) <ul style="list-style-type: none"> <li>• Manufacturer's Authorization &amp; Warranty Support Declaration (<b>Annexure-4</b>)</li> <li>• Bidders shall quote only those products in the bid which are not obsolete in the market and has at least 5 years residual market life i.e. the offered product shall not be declared end-of life by the OEM before this period. (<b>Annexure-5</b>)</li> </ul>		
5.	<b>Experience Certificate</b>	Should have Supplied TWO similar equipment (each costing Rs.1.00 Crore and above excluding taxes or equalent foreign currency) to reputed organizations/ research institutions/ Universities etc. in India on or after 1/1/2018 (PO copies to be enclosed) ( <b>Annexure -6</b> )		
6.	<b>Leaflet</b>	Product Leaflet ( <b>Annexure-7</b> )		
7.	Declaration Regarding Clean Track/No Legal Action ( <b>Annexure-8</b> )			
8.	Annual Maintenance Contract ( <b>Annexure-9</b> )			
9.	Acceptance Of Tender Terms ( <b>Annexure-10</b> )			
10.	No Relation Certificate ( <b>Annexure-11</b> )			
11.	<b>Bid Validity</b>	120 Days		
12.	<b>Total Number of pages uploaded in the technical bid</b>			
<b>Please Enclose Relevant Document Only.</b>				

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**ANNEXURE-2**

(To be printed in the letter head of the bidder)

**Bid Security Declaration form**  
**(In lieu of EMD Submission)**

Date: \_\_\_\_\_  
\_\_\_\_\_

Tender No.

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported with EMD.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of two year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

- a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: \_\_\_\_\_ (insert signature of person whose name and capacity are shown)  
in the capacity of \_\_\_\_\_ (insert legal capacity of person signing the Bid Securing Declaration)

Name: \_\_\_\_\_ (insert complete name of person signing he Bid Securing Declaration)

**Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)**

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)

Corporate Seal (where appropriate)

**(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)**

**ANNEXURE-3**

**SELF-CERTIFICATION REGARDING LOCAL CONTENT (LC) FOR GOODS,  
SERVICES OR WORKS ISSUED BY OEM UNDER PREFERENCE TO MAKE IN INDIA  
ORDER CERTIFICATE FOR CLASS-I or CLASS- II LOCAL SUPPLIER OR NON  
LOCAL SUPPLIER**

Tender No.: \_\_\_\_\_; Date: \_\_\_\_\_

Date: [insert date (as day, month and year) of Bid Submission]

We hereby declare that the items under our Quotation  
No. \_\_\_\_\_ in the brand name of  
\_\_\_\_\_ & (equipment details)  
\_\_\_\_\_ are manufactured at  
(complete address) \_\_\_\_\_.

Hence, it contains the local content of: \_\_\_\_\_% as defined under the Make in India  
policy of the Department for Promotion of Industry & Internal Trade, DPIIT, Govt. of India.

The value addition for the local content is done at (Name of the place & address)  
\_\_\_\_\_.

The Country of Origin of the item(s) is/are \_\_\_\_\_.

**Further, it is declared that finished Equipment is not imported and local Content not  
calculated on the basis of Transportation, Insurance, Installation, Commissioning, and  
Training & after sales services. But Equipment is Manufactured/Assembled in India at out  
Factory address \_\_\_\_\_.**

The false declaration will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of  
the General Financial Rules of which a bidder or its successors can be debarred for up to two years  
as per Rule 151(iii) of the General Financial Rules along with such other actions as may be  
permissible under Law.

We also declare that the goods are not manufactured in a country that shares its land border  
with India nor the beneficial owner belong to those country.

We shall be held responsible if the certificate is found to be incorrect.

Seal and Signature of OEM & Bidder

**ANNEXURE-4**

**Manufacturer's Authorization & Warranty Support Declaration**  
(ON OEMs Letter head)

Date:

Tender No: \_\_\_\_\_

To  
The Director,  
IIITDM Kancheepuram,  
Chennai – 600127.

We, \_\_\_\_\_ [name of Manufacturer], who are official manufacturers of (Insert type of goods manufactured) having factories at (insert full address of Manufacturer's factories), do hereby authorize [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following goods, manufactured by us [insert name and or brief description of the goods], and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee, warranty, availability of spare parts and AMC support in accordance with the Terms and Conditions of Contract with respect to the Goods offered herein.

Authorized representative of the Manufacturer

Authorized representative Bidder

Signature:

Signature:

Name:

Name:

Address:

Address:

Mobile No:

Mobile No:



**ANNEXURE-5**

**Manufacturer's Authorization for Product Continuity Certificate**  
(ON OEMs Letter head)

Date:

Tender No: \_\_\_\_\_

To  
The Director,  
IIITDM Kancheepuram,  
Chennai – 600127.

We, \_\_\_\_\_ [name of Manufacturer) hereby certify that the product herein quoted with its design, model and all technical specifications mentioned \_\_\_\_\_ [insert name and or brief description of the goods] in the tender will remain and have sales and service support in the market for at least 5 years of residual market life i.e. the offered product shall not be declared end-of-life by the OEM before this period.

Authorized representative of the Manufacturer

Authorized representative Bidder

Signature:

Signature:

Name:

Name:

Address:

Address:

Mobile No:

Mobile No:

**ANNEXURE-6**
**Past Experience details**

List of Organizations for whom the bidder has undertaken such work in India on or after 1/1/2018.  
 (must be supported with Purchase orders)

Name of the organization	Name of Contact Person	Contact No.	Copy of Purchase Orders (Page no.) along with value

**Note: Without submission of relevant Purchase orders, experience will not be considered.**

**Signature of Bidder**

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Organization Name:** \_\_\_\_\_

**Contact No.:** \_\_\_\_\_

**ANNEXURE-8**

**DECLARATION REGARDING CLEAN TRACK/NO LEGAL ACTION**

(to be provided on letter head of the firm)

I hereby certify that the above firm namely \_\_\_\_\_ is neither blacklisted by any Central/State Government/Public Undertaking/Institute nor any criminal case registered / pending against the firm or its owner / partners anywhere in India.

I also certify that the above information is true and correct in any every respect and in any case at a later date it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date:

Authorized Signatory

Name:

Place:

Designation:

Contact No.:

**ANNEXURE-9**

**ANNUAL MAINTENANCE CONTRACT**

We hereby certify that the Annual Maintenance Contract for the equipment, after expiry of warranty period will be charged as follows:

For Comprehensive AMC

- 1) 1<sup>st</sup> year \_\_\_\_ % of the equipment value
- 2) 2<sup>nd</sup> year \_\_\_\_% of the equipment value
- 3) 3<sup>rd</sup> year \_\_\_\_% of the equipment value.

For Non - Comprehensive AMC

- 1) 1<sup>st</sup> year \_\_\_\_ % of the equipment value
- 2) 2<sup>nd</sup> year \_\_\_\_% of the equipment value
- 3) 3<sup>rd</sup> year \_\_\_\_% of the equipment value.

We also certify that the spares for the equipment will be available for the equipment for \_\_\_\_ years.

**(This rate will not be part of the commercial bid evaluation for arriving L-1)**

Date:

Authorized Signatory

Place:

Name:

Designation:

Contact No.:

**ANNEXURE-10**

**ACCEPTANCE OF TENDER TERMS  
(To be given on Company Letter Head)**

Date: DD/MM/YYYY

To,  
The Director,  
IIITDM Kancheepuram,  
Chennai – 600127.

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: \_\_\_\_\_

Name of Tender /

Work:

Dear Sir,

1. I / We have downloaded / obtained the tender documents (s) for the above mentioned “Tender” from the web site(s) namely \_\_\_\_\_ as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc ..), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

**ANNEXURE-11**

**NO RELATIONSHIP CERTIFICATE  
(To be given on Company Letter Head)**

1. I/We hereby certify that I/We\* am/are\* related/not related (\*) to any officer of IIITDM Kancheepuram. (If Related provide the details of the employee)
2. I/We\* am/are\* aware that, if the facts subsequently proved to be false, my/our\* contract will be rescinded with forfeiture of E.M.D and security deposit and I/We\* shall be liable to make good the loss or damage resulting from such cancellation.
3. I/We also note that, non-submission of this certificate will render my / our tender liable for rejection.

Date:

Authorized Signatory

Place:

Name:

Designation:

Contact No.: