इंटरनेशनल एडवांस्ड रिसर्च सेंटर फॉर पाउडर मेटलर्जी एंड न्यू मटेरियल्स) एआरसीआई(, बालापुरपीओ



हैदराबाद

#### INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS (ARCI), BALAPUR P.O 500005

# Tender No. SC20240175/PO

Date:14.02.2025

# **GLOBAL e TENDER DOCUMENT**

# SUPPLY, INSTALLATION AND DEMONSTRATION OF MULTIFUNCTIONAL X RAY TEXTURE DIFFRACTOMETER UNIT

1.	EMD (Earnest Money Deposit/Bid Security)	INR 7,50,000/- or 8630 USD
2.		INR 2500+18% GST (INR 2950/-) or 34 USD
3.	e-Tender document published date	14.02.2025
4.	Bid documents can be accessed from	https://eprocure.gov.in/eprocure/app
5.	Pre Bid Meeting date and time	21.02.2025 at 14:30 Hrs
6.	Bid submission start date and time	22.02.2025 at 09:00 Hrs.
7.	Bid submission end date and time	07.03.2025 before 15:30 Hrs.
8.	Online Bids opening date and time (for COVER -1 Tender Fee and EMD/Bid Security)	10.03.2025 at 10:00 Hrs.

इंटरनेशनल एडवांस्ड रिसर्च सेंटर फॉर पाउडर मेटलर्जी एंड न्यू मटेरियल्स) एआरसीआई(, बालापुरपीओ



# हैदराबाद INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS (ARCI), BALAPUR P.O <u>500005</u>

**Instructions to Bidders** 

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# हैदराबाद INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS (ARCI), BALAPUR P.O <u>500005</u>

#### **NOTICE FOR INVITING GLOBAL E-TENDER**

International Advanced Research Centre for Powder Metallurgy and New Materials (henceforth referred to as ARCI) is an Autonomous Research and Development Centre of Department of Science and Technology (DST), Government of India with main campus at Hyderabad and with operations in Chennai and Gurugram.

# Scope of work: Supply, installation and demonstration of Multifunctional X Ray Texture Diffractometer Unit.

You are invited to submit your most competitive <u>online</u> quotation through CPP Portal (Central Public Procurement Portal) website <u>https://eprocure.gov.in</u> on or before the prescribed due date. Manual bids shall not be accepted except for the original documents, if any mentioned in this tender.

# As per Ministry of Finance, Department of Expenditure Order No. F.No:6/18/2019 PPD Dated 23.07.2020, Restrictions under Rule 144(xi) of the General Financial Rules (GFRs) 2017,

(i) <u>Requirement of registration:</u> Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of Goods, Services, (including consultancy Services/ Non Consultancy Services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in Annexure I of the above O.M.

(ii) <u>Validity of registration</u>: In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids.

(iii) Revised application format for registration of bidders from countries sharing land border with India from the following link.

https://dpiit.gov.in/related-links/revised-application-format-registration-bidders-underrule-144-xi-gfr "Bidder "for the purpose of this order Including the term Tenderer, consultant, vendor or service provider in certain context(s) means any person or firm or company including any member of consortium or joint venture (that is an association of several persons or firms or companies), every artificial juridical person not falling in any of the description of bidders stated here in before, including any agency, branch or office controlled by such person participating in procurement process. Bidder from a country which share a land bordered with India, "For the purpose this order means:

- 1. An entity incorporated, established or registered in such a country; or
- 2. A subsidiary of an entity incorporated, established or registered in such a country; or
- 3. An entity substantially controlled through entities entity incorporated, established or registered in such a country; or
- 4. An entity whose beneficial owner is situated in such a country; or
- 5. An Indian (or other) agent of such of an entity; or
- 6. A natural person who is a citizen of such a country; or
- 7. A consortium or joint venture where any member of consortium of Joint Venture falls under any the above.

#### Tender Enquiry No: (Case No.) SC20240175/PO dtd: 14.02.2025.

- Last date and time of submission of Tender online (Tender Fee, EMD/Bid Security, Technical Bid, and Price Bid): **07.03.2025 before 03:30 PM**.
- Pre bid meeting date and venue: 21.02.2025 at 1430 Hrs.

International Advanced Research Centre for Powder Metallurgy and New Materials, Balapur Post, Hyderabad – 500 005, Telangana, India.

• Services to be provided at:

International Advanced Research Centre for Powder Metallurgy and New Materials, Balapur Post, Hyderabad – 500 005, Telangana, India.

• Estimated Delivery period: 16 weeks from date of Purchase Order.

#### Validity of Bid:

Quotation should have minimum validity of **120 days** from the date of opening.

#### Last date for submission: 07.03.2025 before 15:30 Hrs.

The bidders are required to submit soft copies of their bids electronically on the CPP Portal before the last date stated above using valid Digital Signature Certificates.

All the tenders, in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.

#### **Opening of the tender**

- Only the Technical bid shall be opened online on the date of the tender opening. Price bids of only those firms will be considered for opening whose offer would meet all tender requirements including compliance to technical specifications and has passed all tender conditions/ technical evaluation.
- After opening of the price bids, detailed comparative statement will be generated online and the finalization of successful bidder will be done on L-1 (lowest price) basis as per CPP Portal.

#### **Clarification on bid**

Bidders can seek clarification as per the schedule start and end date through email IDs given below:

For Technical clarifications: mate-char@arci.res.in

For Commercial clarifications: <a href="mailto:ramesh.e@arci.res.in">ramesh.e@arci.res.in</a>

"NO REQUEST FOR CLARIFICATION OR QUERY SHALL BE NORMALLY ENTERTAINED AFTER THE CLARIFICATIONS END DATE" Should ARCI deem it necessary to amend the bidding documents as a result of a clarification, it shall do so by hosting the clarifications and amendments on the website of ARCI/CPP Portal only for the benefit of other prospective bidders. Hence, prospective bidders are requested to follow the websites regularly.

#### Award of Contract

Contract will be awarded to successful bidder and a copy of the award of the contract will be uploaded in CPP portal after finalizing the tender.

#### **DISQUALIFICATION OF TENDERS:**

The tenders are liable for rejection in the following circumstances:

- If they are not in line with the terms and conditions of this tender notice.
- Conditional quotations
- Incomplete tenders
- Tenders without Tender Fee and EMD.
- Tenders submitted through Fax or e-mail.
- If two bid system is not followed.
- If price bid enclosed alongwith technical bid cover (Within Same Cover).
- The Firm need to quote all the charges /prices as per the tender requirement, if any

firm quote nil charges/consideration, the bid shall be treated as Unresponsive bid and will not be considered.

Director, ARCI reserves the right to accept or reject any or all tenders either in part or in full or to split the order without assigning any reasons there for.

The original hard copies of Tender Fee, EMD (if any) should be submitted on or before the due date to the following address:

International Advanced Research Centre for Powder Metallurgy and New Materials, Balapur Post, Hyderabad – 500 005, Telangana

IMPORTANT NOTE: Amendment, Corrigendum if any to this tender document, WILL BE HOSTED ONLY IN ARCI WEBSITE and CPP Portal and no separate Press Notification will be issued. Bidders are advised to visit our website and CPP Portal regularly to know such details.

Director, ARCI, Hyderabad

# SPECIAL INSTRUCTIONS FOR ONLINE BID SUBMISSION:

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement are at <u>https://eprocure.gov.in/eprocure/app</u>. The bidders must carefully follow the instructions.

- Possession of valid Digital Signature Certificate (DSC) and enrolment/registration of the contractors/bidders on the e-procurement/e-tender portal is a prerequisite for e-tendering.
- Bidder should do the enrolment in the e-Procurement site using the "Click here to Enroll" option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide the correct/true information including valid e-mail-id. All the correspondence shall be made directly with the contractors/bidders through e-mail-id provided.
- Bidder need to login to the site through their user ID/ password chosen during enrolment/registration.
- Then the Digital Signature Certificate (Class III Certificates with signing key usage) issued by NIC/SIFY/TCS/nCode/eMudra or any Certifying Authority recognized by CCA India on e-Token / Smart Card, should be registered.
- The DSC that is registered only should be used by the bidder and should ensure safety of the same.
- Contractor / Bidder may go through the tenders published on the site and download the required tender documents/ Annexures for the tenders he/she is interested.
- After downloading / getting the tender document/ Annexures/ Appendices, the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected.
- If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account the corrigendum / addendum published before submitting the bids online.
- Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of the e-Token/ Smart Card to access DSC.
- Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my tenders' folder.
- From my tender folder, he selects the tender to view all the details indicated.
- It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender Annexures and appendices carefully and upload the documents as called for; otherwise, the bid will be rejected.
- Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ Annexure and generally, they can be in PDF/xls/rar/zip/dwf formats. If there is more than one document, they can be clubbed together and can

be provided in the requested format. Each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded, if permitted. Bidders Bid documents may be scanned with 100 dpi with black and white option. However if the file size is less than 1 MB the transaction uploading time will be very fast.

- Bidder should take into account the corrigendum / addendum published from time to time before submitting the online bids.
- The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.
- Bidder should submit the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender. **Scanned copy of the instrument should be uploaded as part of the offer.**
- The bidder has to select the payment option as offline to pay the EMD as applicable and enter details of the instruments
- The details of the DD/BC, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.
- The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
- The bidder has to upload the relevant files required as indicated in the covered content. In case of any irrelevant files, the bid will be rejected.
- If the price bid format is provided in a spread sheet file like BoQ\_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price Bid/ BOQ template must not be modified/replaced by the bidder, else the bid submitted is liable to be rejected for this tender.
- The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.

- After the bid submission (i.e after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
- The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
- Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers. The confidentiality of the bids is maintained since the secured Socket Layer 128 bit encryption technology is used. Data storage encryption of sensitive fields is done.
- The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.
- For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. For any further queries, the bidders are asked to contact over phone as mentioned in the CPP website or send an email to - <u>cppp-nic@nic.in</u>.

#### PART-1 TECHNICAL BID - TERMS AND CONDITIONS

#### **I. Vendor qualification criteria:**

- a) Original Equipment Manufacturer (OEM) or authorized representatives of OEM only can quote for this tender. Vendor should submit authorization letter valid on tender date from OEM along with the quotation.
- b) Latest release of the model should be quoted.
- c) Should have local service center to respond service calls at short time.
- d) All items should be with part number and full description.
- e) All the relevant documents should be uploaded at the time of tender.
- f) OEM is required to submit a letter of commitment at the time of quote for supply of spares and also for efficient and prompt after sales service of the equipment for a minimum period of 10 years after the guarantee/warranty period under mutually agreed terms and conditions.
- g) Failure to meet any of the above vendor qualification criteria may lead to disqualification of tender at technical evaluation stage itself and vendor's quotation may not be considered for procurement.

#### **II. Pre dispatch inspection**

- a) The manufacturer/supplier of the unit shall demonstrate, if required, at their works during pre-dispatch inspection by ARCI personnel and shall satisfy all the technical specifications as described in the tender document.
- b) The manufacturer /supplier of the unit shall demonstrate the features as provided in **Annexure-I (Scope of supply)**.
- c) All the consumables, raw materials, required for the above demonstration should be arranged by the tenderer.
- d) All the utilities and manpower required for the demonstration shall be arranged by the supplier only.

#### III. Acceptance criteria:

- a) The manufacturer/supplier's trained engineer should carry out installation and commissioning of the unit at ARCI.
- b) The entire functionality of the equipment according to the specifications should be demonstrated at ARCI.

- c) The manufacturer/supplier of the unit shall demonstrate the features as specified in **Annexure I (Scope of Supply)**.
- d) Infrastructure required for the above demo will be arranged by ARCI.

#### IV. Other aspects:

#### A. PATENT RIGHTS:

The Supplier shall indemnify ARCI against all third-party claims of infringement of patent, trademark or industrial design rights, copy rights arising from use of the Goods or any part thereof in India.

#### **B. Training:**

The manufacturer shall impart training in the operation and preventive/breakdown maintenance of the complete unit including sub-parts during installation, **commissioning**, **and testing with supplier provided standard samples** to ARCI personal at ARCI.

#### C. Utilities/Infrastructure for installation:

a) Supplier shall indicate all the required utilities/infrastructure such as power, water, gas, etc including power backup requirements.

b) Supplier shall provide overall dimensions of the Unit along with floor area/height of the site or building, including foundation details if any, for accommodating the Unit.

c). The operating environment for the Unit including temperature and humidity control, antivibration, EMI, EMC etc. should be indicated.

d). If any charges extra are payable for Installation and Commissioning, the same should be included in the total cost of the stores as per the price schedule (BOQ).

#### D. Manuals, software and other drawings etc.:

The following documents (in English) shall be provided along with the Unit in both hardcopy and softcopy forms:

- a) Operation and maintenance manuals, troubleshooting procedures, calibration methods, wiring and other schematic diagrams, list of components, spares and accessories.
- b) If there are any bought-out systems and components, manuals should be provided in hardcopy and softcopy forms for the same.
- c) Calibration certificates for sensors, instruments, gauges, display units etc. must be provided.
- d) Software upgrades pertaining to the supplied Unit should be provided free of cost as and when new versions are released by the OEM for the next 10 years from the date of final acceptance.
- e) Safety and security instruction manual should be provided.

**E. After-sales service:** The supplier shall guarantee efficient and prompt after-sales service including the supply of the spares for a minimum period of 10 years after the guarantee/warranty period or 8 years after the discontinuation of the model whichever is later under mutually agreed terms and conditions.

#### F. Bought-out items:

All bought-out sub-systems and components if any should be of reputed make conforming to international standards. Make and details of all bought-out sub-systems and components shall be specified.

#### G. General Quote:

The breakup for accessories or sub system(s) /attachments apart from the basic system, if any, should be quoted separately.

Bidders shall download the Schedule of Quantities and Prices in the XLS Format and save it without changing the name of the file. Bidder shall quote their rate in figures in the appropriate cells, thereafter save and upload the file in financial bid cover (Price Bid) only. Bidder shall quote the prices in the given format BOQ\_XXXX in excel sheet for online submission of bids. The Technical bid also shall be uploaded in CPP Portal in the appropriate place.

It is required to take utmost care for uploading Schedule of Quantities & Prices and any change/ modification of the price schedule shall render it unfit for bidding.

#### If the template of Schedule of Quantities & Prices file is found to be modified/ corrupted in the eventuality by the bidder, the bid will be rejected.

#### H. Technical compliance statement:

The vendor should provide item wise details against each and every specification. Deviations if any are to be highlighted. Suppliers are required to provide the Technical Compliance Statement as per Annexure – II while submitting the Technical Bid (Cover 2).

#### I. Guarantee/warranty:

- a) The Unit shall be under warranty for a period of one year from the date of <u>final</u> acceptance by ARCI.
- b) During the warranty period, all software and hardware updates shall be provided free of cost. Items, if any, excluded from the warranty shall be explicitly mentioned by the supplier.
- c) The Unit shall be guaranteed for satisfactory performance for 01 year from the date of installation, commissioning and acceptance at ARCI. The manufacturer shall replace premature failure of parts during the guarantee period at their cost and risk.

#### J. Delivery/ time schedule:

The offer shall be accompanied by a detailed delivery time schedule showing the individual time schedule required for submission of initial equipment layout drawings, foundation drawings along with load data, main equipment and sub-assembly drawing, shipment schedule of the equipment as well as the time for installation, commissioning and performance tests.

#### K. Packing:

The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit. In order to maintain safety of the equipment, we prefer to have wooden crating with adequate cushion inside for transportation of any goods. The material has to be dispatched with International standard packing to withstand rigors, and to avoid any transit damages.

#### L. Insurance:

The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.

For delivery of goods at the purchaser's premises, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "Warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after dispatch **or upto installation and commissioning of stores whichever is later.** The Supplier shall arrange Insurance F.O.R, ARCI Hyderabad.

#### M. General instructions:

a) The bidder should submit the scanned copy of the Technical Bid for online submission. No brochures/leaflets etc. should be submitted in loose form. Please indicate page nos. on your quotation. The price should not be mentioned anywhere in this document.

# b) Price Bid should be submitted online only and no other mode of submission is acceptable.

- c) The technical offer should be complete to indicate that all products and services asked for are quoted. Each page of the bid and strikeout/corrections shall be duly signed and stamped by the bidder. Unsigned Tenders are liable to be rejected. Failure to comply with this requirement may result in the bid being rejected.
- d) The purpose of certain specific conditions is to get or procure best product/service etc. for ARCI. The opinion of Technical Committee shall be the guiding factor for technical short listing.

# <u> PART- 2</u>

### **TENDER FEE AND EARNEST MONEY DEPOSIT/BID SECURITY**

1. Bid should be accompanied by Tender Processing Fee of **INR 2500 + 18%GST (INR 2950/-) or 34 USD** in the form of Account Payee Demand Draft drawn on in favour of Director, International Advanced Research Centre, Payable at Hyderabad. Tender Fee is not refundable. Bids submitted without tender processing fee will not be considered for further processing.

2. Bid should be accompanied by EMD **INR 7,50,000/- or 8630 USD** from Indian or Foreign bidders in the form of Demand Draft or Insurance Surety Bonds or Banker's Cheque or Fixed Deposit Receipt lien registered or Bank Guarantee (including e-Bank Guarantee) from any of the Indian Commercial banks in favour of <u>Director,</u> <u>International Advanced Research Centre, Payable at Hyderabad</u> or payment online like RTGS/NEFT/ECS in an acceptable form.

**3.** If TDR is submitted towards EMD, the same shall be obtained in favor of "<u>Director,</u> <u>International Advanced Research Centre," with lien registered for the</u> <u>corresponding period duly discharged by the tenderer.</u>

The details of transaction for Tender Fee and EMD viz Name of Bidder firm, tender description, Transaction ID/No. of Transfer, Transaction date, Amount of Transaction, Name of Bank, Address of Bank shall be furnished by the TENDERER ON THEIRLETTERHEAD SEPARATELY ENCLOSED IN COVER-1 (Online and Offline) ALONG WITH TENDER.

Online Payment Account details are as follows:

#### **Details of Account Holder**

Name of the Institution	International Advanced Research
	Centre for Powder Metallurgy & New
	Materials
Name of Account Holder (As per Bank	ARCI TECHNOLOGY PROGRAM FUND
Record)	
Account Number of above account	1849101016974
Complete Contact Address	RCI Road, Balapur, Opposite Balapur
	Vilage, Hyderabad -500005
Telephone No	0091-040-24452361
Fax No	0091-040-24442699

#### **Bank Account Details**

Bank Name	CANARA BANK
Branch Name	Kanchanbagh
Beneficiary's Name	ARCI Technology Program Fund
Complete Contact Address	Kanchanbagh, Hyderabad 5000059

Telephone No	040-23438704
9- Digit Code No of Bank & Branch	500015032
Account Number	1849101016974
Account Type	Savings Account
(SB/Current/Cash/Credit/Etc	
IFSC Code No of Bank	CNRB0001849
PAN Number	AAAAI0324C
TIN Number	36980207289
Service Tax Number	AAAAI0324CST001
GSTIN Number	36AAAAI0324C1ZG
E.Mail	fao@arci.res.in

3. No interest is payable on EMD.

4. The EMD shall be valid for a minimum period of three months from the date of closure of the bid.

5. Bidder registered with National Small Industries Corporation (NSIC) or MSME Udyam registration or any other body specified by Ministry of Micro, Small and Medium Enterprises as MSMES or Startups as recognized by Department of Industrial Policy and Promotion (DIPP), Govt of India for the tendered item are exempted from payment of Tender Fee and Earnest Money Deposit (EMD) subject to submission of valid documentary evidences throughout the time of the contract. Copies of MSME, NSIC registration certificates and other supporting documents should be submitted along with bid. Failure to submit the required documents shall lead to rejection of bid.

#### Refund of EMD:

Bid securities of the unsuccessful bidders should be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract. However, in case of two packet or two stage bidding, bid securities of unsuccessful bidders during first stage i.e., technical evaluation etc should be returned within 30 days of declaration of results of first stage i.e., technical evaluation etc.

#### Forfeiture of EMD:

EMD of tenderer will be forfeited, if the tenderer withdraws or amends its tender or derogates from the tender in any respect within the period of validity of its tender. Further, if the successful tenderer fails to furnish the required performance security within the specified period, its EMD will be forfeited.

#### PART- 3 PRICE BID – TERMS AND CONDITIONS

# PRICE BID SHOULD BE SUBMITTED ONLINE ONLY AND NO OTHER MODE OF SUBMISSION IS ACCEPTABLE.

Bidders shall download the Schedule of Quantities and Prices in the XLS Format and save it without changing the name of the file. Bidder shall quote their rate in figures in the appropriate cells, thereafter save and upload the file in financial bid cover (Price Bid) only. Bidder shall quote the prices in the given format BOQ\_XXXX in excel sheet for online submission of bids. The Technical bid also shall be uploaded in CPP Portal in the appropriate place.

It is required to take utmost care for uploading Schedule of Quantities & Prices and any change/ modification of the price schedule shall render it unfit for bidding.

#### If the template of Schedule of Quantities & Prices file is found to be modified/ corrupted in the eventuality by the bidder, the bid will be rejected.

#### I. Terms and Conditions:

- a) Tenders with any condition, including conditional rebate, are liable to be rejected.
- b) The Price Bid/BOQ template must not be modified/replaced by the bidder, else the bid submitted is liable to be rejected for this tender.
- c) The bidder should carefully read the BOQ columns and feed the price as per the price breakup asked in the BOQ. If the quoted price is not as per the price breakup given in the BOQ, the concerned price bid will be rejected.
- d) For Domestic bidders, the unit price of materials is basic cost. GST, packing, forwarding, freight and insurance amount if any may be provided separately as per the BOQ.
- e) For Foreign bidders, the unit price of the materials is Ex-Works price and packing, forwarding and freight and insurance charges if any, may be provided separately as per the BOQ.
- f) Unit price should include main equipment (total system) including computer hardware and software as per the specifications in scope of the work.
- g) Final landing cost shall be basis of price evaluation.
- h) The bidder should quote single price in their respective currency for the equipment in the price bid (excel BOQ) taking into account all the items as per their specifications mentioned in SCOPE OF SUPPLY.
- i) Printed conditions of the vendor submitted with the tender will not be binding on ARCI.
- j) The commercial bids of only the technically qualified bidders shall be considered for further processing.
- k) Commercial Bid (prices quoted) should not be enclosed in the technical bid envelope. If the price quote is submitted with technical bid, the tender is liable to be rejected.
- 1) The Director, ARCI reserves the right to accept the offer in full or in part or reject summarily or partly thereof.

#### **II. Tenderer to inform himself fully**

The tenderer is required to carefully examine the documents enclosed and get fully aware himself as to all conditions and matters which may in any way affect the works or the cost thereof, before submitting his offer.

If the tenderer finds any discrepancies, omissions, or contradictions in the documents or is in doubt as to the true meaning of any part, he shall at once contact in writing for an interpretation/clarification from the Director, ARCI.

The tenderer shall however not be entitled to any extension of time for submission of his tender on such account, unless the Director extends the due date.

#### **III. Payment terms:**

#### For Import:

An irrevocable Letter of Credit [L/C] for 100% of the order value will be established by the purchaser in favour of the supplier, through purchaser's bank in India once the following condition is met:

#### Receipt of order acknowledgement and acceptance of the order.

THE ACTUAL PAYMENT TO SUPPLIER WILL HOWEVER BE RELEASED IN TWO STAGES IN THE FOLLOWING MANNER:

Payment for 90% of the order value will be made upon shipment of the equipment and negotiation of the following shipping documents through L/C:

- A) Signed Commercial Invoice Original + 5 Copies
- B) Airway Bill/Bill of lading Original + 5 Copies.
- C) Packing List -Original + 5 Copies

D) Certificate of conformity from the supplier that stores/equipment has been tested by the supplier and the same meet the technical specification - Original + 3 Copies.

E) Supplier's Certificate to the effect that the contents in each package are not less than those entered in the Invoice and the Packing List - Original + 3 Copies.

Balance 10% of the order value will be released through L/C upon submission of the following documents:

A) Commercial Invoice for 10% order value.

B) Final Acceptance Certificate [FAC] issued by the purchaser/authorized representative in original against satisfactory installation and commissioning of the equipment at ARCI Site.

C) Bank Guarantee Equivalent to 10% of total order value covering warranty period of the

equipment issued or counter guaranteed by an Indian Bank clearly mentioning the relation with OEM if submitted by Indian Agent.

D) If the above-mentioned performance bank guarantee is not provided, 10% of the order value (i.e. second stage payment) will be released only after the expiry of the warranty period from the date of FAC.

# **IV. Inspection Certificate (IC)**

The end user will provide inspection certificate after receipt, Installation, Commissioning, Demonstration of Technical Specifications of the equipment as per Tender Terms.

#### V. Liquidated damages (LD)

As time is the essence of the contract, the work period mentioned in the Service Order should be strictly adhered to. Otherwise, LD clause will be applicable /enforced. If the supplier fails to provide the services mentioned in the order within the stipulated period, the Director, ARCI shall without prejudice to any other right or remedy available in law, levy a penalty for such delay by way of liquidated damages, at 0.5% per week of delay or part thereof, subject to a maximum of 10% of contract value. Such LD will be deducted from any amount due or which may become due to the supplier.

#### VI. Order acceptance

The successful bidder, on award of contract/order, must send the contract/order acceptance in writing, within 15 days of award of contract.

#### VII. Award of contract:

ARCI reserves the right at the time of award of Contract to increase or decrease the quantity of items specified in the Schedule of Requirements without any change in price or other terms and conditions.

#### VIII. Corrupt or Fraudulent Practices:

ARCI requires that the bidders who wish to bid for this project have highest standards of ethics. ARCI will reject a bid if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract. ARCI may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time it is determined that the vendor has engaged in corrupt and fraudulent practices during the execution of contract.

#### **IX.** Interpretation of the clauses in the Tender Document/Contract Document:

In case of any ambiguity/dispute in the interpretation of any of the clauses in this Tender Document, Director, ARCI's interpretation of the clauses shall be final and binding on all parties.

#### X. Arbitration

In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to arbitrator appointed by the Director, ARCI. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order. The venue of the arbitration shall be the place from where the purchase order/contract is issued. Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree



# SCOPE OF SUPPLY

# Technical compliance document for Multi-functional X-ray Texture Diffractometer (XRTD) unit: Supply, installation and demonstration.

Detailed technical compliance sheet to be filled against to the each specification with Serial No. mentioned below. All columns should be filled with required information and should be supported by published *product brochures, flyers, technical notes, and photos*.

The scope of the work includes supply, installation, commissioning and demonstration of the Multifunctional X-ray Texture Diffractometer (XRTD) unit at ARCI, Hyderabad, India.

The XRTD should have the capability to measure high-quality X-ray Diffraction profiles in various geometries of advanced materials in the form of solids (including irregular shape), thick and thin coatings, and thin films. The unit should be designed and built with optimization of various auto adjustable modules (e.g., suitable optics, sample stage, detector, etc.) to analyze

- 1. Texture,
- 2. Residual Stress and Residual Stress Maps,
- 3. Grazing Incidence XRD (GI-XRD),
- 4. High resolution XRD (HR-XRD),
- 5. X-ray Reflectivity (XRR),
- 6. Rocking curves and Reciprocal Space Maps (RSM)

of various forms and shapes of the samples. The measured data should be analyzed using suitable software and it should be possible to generate final reports according ASTM standards.

*Important to note*: Complete XRTD unit along with accessories (like chillers, power supply, transformers, non-ambient cell, etc.) and spares should be shipped to delivered at ARCI in a single shipment. Only state of art and cutting edge technology based items that are already in the portfolio of the manufacturer should be used in quoted XRTD unit.

Only brand new and latest model of XRTD should be offered. The XRD unit should consist of the following modules/ items:

Product brochures, flyers, technical notes, and photos should be provided.

- 1. High flux Cu, as primary anode X-ray source and secondary Cr anode X-ray source should be provided
- 2. Vertical goniometer with Bragg-Brentano geometry, capable of measuring theta-theta, theta-2theta scans with position accuracy (reproducibility) of 2theta better than  $\pm 0.01$  over the entire 2theta range.

- 3. Eulerian cradle with automated five axis cradle having Chi (tilt), Phi (rotation), Z, X, and Y axes liner movement, and oscillatory movement for X and Y axes stage.
- 4. Necessary to integrate primary and secondary optical modules that should have mirrors, monochromators, slits, and filters. These modules should be motorized to switchover from parallel beam to focused beam, and vice versa.
- 5. Advanced 0D, 1D and 2D photon counting solid-state detector with high dynamic range minimum of (10e8) and energy discrimination capability to suppress the fluorescence from a sample containing Fe should be provided.

Detailed specifications for each module in the XRTD unit are listed below:

1	X-source and generator: (Product brochures, flyers, technical notes, and photos should be provided)
1.1.	Line and Fine focus interchangeable Copper (Cu) and Chromium (Cr) anode X-ray sources
	operated at minimum of 1.8 kW and 1.8 kW, respectively with continuous power (higher
	power being preferred) should be able to produce high flux with the stability of better than
	0.1% for 12 hours at a temperature of 20 $\pm$ 0.2 °C. X-ray generator having minimum of
	power 3 kW should be offered. The X-ray generator should be ready for high power X-ray
	sources like Mo and Ag in future.
1.2.	Source voltage and current should be controlled by the computer with manual override, in
	increments of 1 kV and 1 mA, respectively.
1.3.	Suitable power supply to the X-ray generator should be built with robust electronics and
	electrical parts that should work at maximum ambient conditions.
1.4.	Generator should have automatic protection against voltage fluctuations and high voltage.
1.5.	Appropriate (suitable) rated, compatible, noise less (<70 dB) and indoor cooling system
	(water chiller) for the anode should be provided with temperature stability upto $\pm 0.1$ deg.
	C at water temperature of 20 deg. C. The chiller should be supplied long with main
	equipment from the XTRD manufacturer.
1.6.	External filter traps (at least three numbers) should be provided for minimizing dust
	settlements from the chiller in the target area.
1.7.	Safety: There should be the facility to detect abnormal cooling water flow, pressure and
	temperature; detection of abnormal generator overload, leak current breaker, or shutter
	malfunction detection. Options for X-ray power control through manual and auto start-
	up/shutdown. In the event of unexpected radiation safety circuit break, only the shutter of
	the
	X-ray generator to be closed and the power supply to the X-ray generator should continue
	to remain on.
2	Goniometer:
	(Product brochures, flyers, technical notes, and photos should be provided)

2.1.	Goniometer should be of vertical type theta-theta geometry based on optical position sensing system with independent theta source and theta detector drive based on DC or Stepper motors.
2.2.	Auto-alignment should be possible when mounting and demounting of other accessories
	like sample stage, detectors, monochromators, etc.
2.3.	Scanning Range: 20 from - 3° to 160° or above with Minimum Step size: 0.0001° or lower, Goniometer reproducibility of 0.0002° or better, Angular (theta / 2theta) accuracy of $\pm 0.0025$ deg. or better, and Scan speed of 0.002 deg. to 40 deg./min or better. (continuous and step scan mode)
2.4.	Goniometer radius should be more than 200 mm
2.5.	Instrument alignment accuracy (linearity): $\pm 0.01$ deg. or better for the complete 2theta range concerning any NIST reference standard. Documentary proof to be submitted along with the technical bid.
2.6.	Angular uncertainty from gear backlash should be avoided using appropriate
	optical encoders
3	Detector:
	(Product brochures, flyers, technical notes, and photos should be provided.)
3.1.	Maintenance-free advanced large area single photon counting hybrid solid state pixel detector compatible with/suitable for Cu and Cr radiations for most of the X-ray application work, i.e., high quality regular XRD (powder analysis, thin film samples, nanomaterial/nanoparticle), X-ray Texture, Residual Stress, Grazing Incident XRD (GI-XRD), High resolution XRD (HR-XRD), X-ray Reflectivity (XRR), Rocking curves and Reciprocal space maps (RSM), and should able to do small (micro area) spot diffraction for residual stress maps.
3.2.	50 655 110 55.
<b>э.</b> ∠.	Functioning of detector in both scanning and static mode.
3.2.	
	Functioning of detector in both scanning and static mode.
3.3.	Functioning of detector in both scanning and static mode.The 2D detector should capable of working in 0D, 1D as well as 2D mode.The Detector should have an active area of more than 190 mm2, number of pixel of more
3.3. 3.4.	Functioning of detector in both scanning and static mode.The 2D detector should capable of working in 0D, 1D as well as 2D mode.The Detector should have an active area of more than 190 mm2, number of pixel of more than 65,000 and pixel size of 100 x 100 micrometer2 or lowerEnergy discriminated / dispersive (selection) advanced single photon counting solid state
<ul><li>3.3.</li><li>3.4.</li><li>3.5.</li></ul>	<ul> <li>Functioning of detector in both scanning and static mode.</li> <li>The 2D detector should capable of working in 0D, 1D as well as 2D mode.</li> <li>The Detector should have an active area of more than 190 mm2, number of pixel of more than 65,000 and pixel size of 100 x 100 micrometer2 or lower</li> <li>Energy discriminated / dispersive (selection) advanced single photon counting solid state Si-based compound large area detector should be offered.</li> <li>The detector should work in 0D 1D, and 2D mode with a large dynamic range (&gt; 10^8, local maximum count rate/local noise), best angular as well as energy resolution (lower than</li> </ul>

3.9.	The detector should be able to suppress low angle (from 2 to 20 deg.) background by	
3.9.	variable active detector window.	
3.10	Detector should work in static, scanning, and fast scan mode.	
3.11	Detector should be operated at ambient temperature.	
4	Beam conditioning and optics (primary and secondary): (Product brochures, flyers,	
	technical notes, and photos should be provided.)	
	The XRTD unit should be equipped with a pre-aligned appropriate combination of primary	
	and secondary mirrors, and optics (divergence slits, antiscatter slits, Soller slits, receiving	
	slits and Beta filters, etc.) to obtain XRD profiles with high diffracted intensity, appreciable	
	angular resolution, minimum background, improved S/N ratio, as defined below.	
4.1.	Different optical geometries including primary, secondary and sample stages should be	
	easily exchangeable by the user when switching between various modes. Mirrors, optics	
	and slit systems should be compatible with Cu and Cr radiation (wavelength). Necessary	
	optics for Cu and Cr radiation, both towards the source and detector have to be provided.	
4.2.	Optics should include suitable Kß-filters for Cu and Cr radiation, optics to	
	minimize/eliminate Kaplha2, and Soller slits and Soller collimators, divergence slits,	
	receiving slits and anti-scatter slits. All necessary slits, filters and optics systems should be	
	included in the basic system for Cu and Cr radiations separately.	
4.3.	Optics and other necessary accessories should be provided to record excellent low angle	
	(starting from 1 degree of 2theta in reflection mode) XRD profiles with very low (flat)	
	background (BG). BG counts at these angles should not be more than the BG counts at 50	
	to 60 deg. of 2theta.	
4.4.	Bragg Brentano (focusing) geometry for powder, solids and coated samples, and parallel	
	beam geometry for GIXRD and uneven surfaced samples should be offered.	
4.5.	Exchange of optics modules from Bragg Brentano geometry to the Parallel beam geometry	
	and vice versa should be effortless. These modules should preferably be computer	
	controlled or easily exchanged with a push button or other mechanism.	
4.6.	Monochromatization to remove secondary fluorescence generated by transition elements,	
	in addition to energy discriminator detector should be offered.	
4.7.	Hybrid Ge(220) monochromators should be provided.	
4.8.	Monocapillary (100 micron) and polycapillary (500 micron) optics should be provided for	
	residual stress mapping.	
4.9.	The optics must be such that the system has ability to carry out texture, residual stress,	
	thin film X-ray reflectivity, rocking curve analysis and reciprocal space mapping.	
4.10.	To achieve i) high intensity and ii) high angular resolution (lower than 0.006 deg./ 21.6 arc-	
	seconds) of the diffracted profiles, suitable combinations of optics should be listed and	
	offered.	

5	Sample stage
	(Product brochures, flyers, technical notes, and photos should be provided.)
5.1.	Horizontal sample stage with a spinner (circular / cyclic motion) to mount powders, solids,
	thin and thick film samples. Sample stage should also be compatible to mount/ un-mount
	of non-ambient heating stage. It should be able to handle at least 500 grams of sample
	weight.
5.2.	Accessories for sample stage such as zero background sample holders, beam attenuation/
	alignment should be provided.
5.3.	Eulerian Cradle for texture, residual stress from large area (more than 10 mm) and residual
	stress maps from local area, rocking curve, reciprocal maps, and reflectivity measurements
	with motorized (all five axes) tilt, rotation, Z-, X- and Y-axes movements. The cradle should
	be capable of measuring equi-axial, bi-axial, and tri-axial residual stresses.
5.4.	Chi (tilt) of minimum range of -3 to +90 deg. or higher should be provided with step
	resolution of 0.01 deg. or lower.
5.5.	Phi (rotation) movement of 0 to 360 or higher range should be provided with step
	resolution of 0.01 deg. or lower.
5.6.	X-Y movement of $\pm$ 40 mm or higher and Z Movement of 0 to 10 mm or higher, and
	resolution and oscillation (movement) minimum of $\pm 5$ mm and higher should be offered.
5.7.	The stage should be compatible to integrate (both hardware and software) existing
	AntonParr 1) CHC Plus+ and 2) HTK-16N non-ambient Humidity and Temperature sample
	stages with auto-height alignment and temperature compensation facility of the sample to
	be attached to the goniometer in Bragg-Brentano and Parallel beam geometries for
	powder as well as thin film non-ambient XRD studies. Required flanges and other hardware
	to install two AntonParr 1) CHC Plus+ and 2) HTK-16N stages and software integration shall
	be within the scope of the order.
5.8.	Sample holders : i) powder sample holders minimum of 30 numbers, ii) zero background
	sample holders of minimum of 2 numbers for low volume samples, iii) thick solid sample
	holder with different dimensions (samples having height minimum of 10 mm, and width
	and length of 20 mm and 20 mm, respectively) should be provided.
5.9.	Programmable rotation/ oscillation (cycles) of the sample holder (spinner) between 0 to
	120 rpm or cycles per second, with increment of 10 rpm or cycles per second should be
_	offered.
6	Data acquisition and software
	(Product brochures, flyers, technical notes, and photos should be provided.)
6.1.	Advanced state-of-art industrial grade desktop 64 bit XTRD controlled and data acquisition
	computer with Intel <sup>®</sup> i7 or better processor, = 3.0GHz speed, 64 GB RAM, two numbers of
	1TB SSD, High-resolution HD 27" LCD colour monitor and the required graphic adaptor card
	should be provided. The operating system of the supplied PC should be of the latest
	release.
l	

6.2.	As a spare: TWIN of the controller and data acquisition computer system (exactly same as 6.1) including all necessary communications ports and cards. All software should be
	provided in media such as DVDs or pen drives, and should be installed at ARCI.
6.3.	The XRTD unit should be interfaced with the computer and dedicated software to perform
	operations such as remote operation, online data acquisition, diagnosis, guiding for the
	component/module exchange, etc. should be provided.
6.4.	Advanced version of data reduction and analysis software (qualitative and quantitative)
	should be provided.
6.5.	Licensed version of the software for XRD instrument control, system diagnosis software,
	data collection, data evaluation (background subtraction, smoothing, Kalpha1 and Kalpha2
	separation, peak search, and multiple peak separation), qualitative and quantitative phase
	analysis software, search match, etc. Software should be able to subtract the background
	without negative intensity points. After BG subtraction, it should be possible for the
	intensity to be plotted in LOG scale for publication quality. The analysis software should be
	able to export the analyzed data to international standard data formats. (please share the
	details of the version of the software, release date and web link)
6.6.	A concurrent advanced version of Rietveld-based standardless quantification refinement
	package with Structure analysis, profile fitting, lattice parameter refinement, stripping of
	Kalpha2 peak, crystallite size and lattice strain analysis, and crystallite size distribution
	determination software package should be offered. Facility to determine accurate
	quantitative phase analysis of samples with complex geological matrix by RIR and Rietveld
	technique as well as amorphous content also to be quantified by the software. A minimum
	of three licensees should be offered.
	(please share the details of the version of the software, release date and web link)
6.7.	Software for determination of retained austenite in steels should be provided.
	(please share the details of the version of the software, release date and web link)
6.8.	Software modules for
	1. X-Ray Reflectivity simulation and fitting,
	2. epitaxial layer analysis for rocking curve,
	3. reciprocal space mapping,
	4. texture and residual stress analysis,
	5. pole figure analysis including orientation distribution function
	analysis should be provided with two licenses. ( <i>please share the details of the version</i>
	number, release dates and web links of the software for each module,)
6.9.	The software for texture analysis should have capabilities to calculate the pole figure,
	orientation distribution function, and volume fractions of different standard and user-
	defined texture fibers, and texture components for different crystal systems. (please share
	the details of the version of the software, release date and web link)

6.10	The software for residual stress should capabilities to calculate bi-axial, triaxial residual
	stresses and 3D strain distribution calculations and visualization. ( <i>please share the details</i> of the version of the software, release date and web link)
6.11	Third party licensed Texture data analysis software "LaboTex" should be offered.
6.12	A dedicated data treatment and analysis advanced and industrial grade computer having the configuration of Intel Core i9 or AMD Ryzen 9 (16 cores) processor, NVIDIA RTX 3060 or higher Graphics card, 64 GB or higher RAM, 1 TB NVMe SSD and 10 TB HDD storage drives, thunderbolt 3.1 port, Dual 4K monitors and OS Windows 11 Professional (64-bit) with keyboard, mouse and color laser printer should be provided. All the analysis and plotting software including open-source tools such as ATEX and MTex should be <b>provided</b> into the data treatment and analysis computer.
6.13	Open source MTex tools run on Matlab platform. The latest release of Matalb with standard perpetual third party license with <b>Optimization Toolbox</b> to analyze geometrically necessary dislocations and Taylor factors using MTex should be provided.
7	Standards
	(Product brochures, flyers, technical notes, and photos should be provided.)
7.1.	Fluorescent screen for positioning the X-ray beam should be provided
7.2.	Silicon standard sample for checking the accuracy of the peak position and Si (111) for checking Rocking curve optics alignment.
7.3.	Vendor should supply NIST standard for HR-XRD (SRM2000), quantitative analysis
	(SRM676a), residual stress measuring calibration and other necessary calibration standards
0	to demonstrate specifications.
8	Other items
8.1.	Uninterrupted Power Supply (UPS): A suitable rated UPS with in-built IGBT for the XRTD unit and Chiller, from a reputed Indian brand (such as Emerson, Numeric, or ETON) with a minimum one-hour backup, must be provided.
8.2.	Installation Hardware: All necessary brackets, angles, furniture, tables, and stands required to properly position the XRTD, Chiller, computers, and associated equipment should be included.
9	Warranty, Spare Parts, AMC, etc.
9.1.	Warranty Period: The entire system including the UPS shall be covered by a comprehensive warranty for a period of one (1) year from the date of issue of the Final Acceptance Certificate. Any downtime incurred during the warranty period will not be considered as part of the warranty timeline. In the event of component failure, replacement parts must be supplied on a Delivery Duty Paid (DDP) basis, at no additional cost to ARCI. No payment will be made for parts replaced under warranty.
9.2.	Spare Parts and Service Support: The vendor must guarantee the availability of spare parts and service support for a minimum of ten (10) years after the model is discontinued.

10	Site Inspection and Requirements and Complete Documentation
10.1	Site Inspection and Requirements: A site inspection should be conducted within one (1)
	week of order placement and acknowledgment. Detailed site requirements, including CAD-
	drawn specifications for electrical systems (with ratings for cables, MCBs, MCCBs, and
	other electrical fittings), water supply, and air conditioning, must be provided in hard copy
	within two (2) weeks of the site inspection.
10.2	Complete Documentation: A comprehensive set of documentation, including all relevant
	drawings, user manuals, data measurements, and analysis protocols, must be supplied
	with the system in both hard copy and digital formats.
11	Safety and Radiation Compliance:
11.1	XRTD Enclosure: The enclosure for the XRTD unit must effectively block X-rays from the
	source, as well as scattered and diffracted beams. Radiation levels around the XRTD unit
	should not exceed 1 micro-Sievert/hour.
11.2	Radiation Measurement and Documentation: Post-installation, radiation levels around the
	XRTD unit must be measured, documented, and verified to meet safety standards.
11.3	Additional Safety Features: Safety measures detailed in Sections 1.5 and 1.7 should also be
	adhered to.
11.4	Radiation Measurement Device: One AERB-certified radiation level measurement unit
	must be provided.
12	Installation, Commissioning, and Demonstration:
12.1	Installation and Performance Verification: The instrument must be installed, tested, and
	commissioned by engineers from the OEM, or representatives duly trained by the OEM.
	Performance should be demonstrated on-site using both provided standards and ARCI-
	supplied test samples at ARCI, Hyderabad campus.
12.2	Training Program: Comprehensive training, including operation, troubleshooting, module
	and mode interchange (for Texture, Residual Stress, etc.), data treatment, analysis, and
	report generation, should be provided in two sessions. Each session must last a minimum
	of five working days. The first session should be conducted by an experienced application
	specialist following installation and demonstration. The second session should occur
	between three and six months from the date of the FAC and conducted by an application
	specialist from the OEM.
12.3	Installation Quality: Installation should reflect high craftsmanship, with no loose wires or
	unsecured items. All necessary materials for secure installation are included within the
	scope of the order.
13	<b>Pre-dispatch Inspection (PDI)</b> : ARCI official(s) will conduct a PDI at the manufacturer's site
	prior to shipment. During the PDI, the system's full functionality (hardware for
	measurements and software for analysis) should be demonstrated.
14	Final Acceptance Certificate (FAC): The FAC will be issued following a successful
	demonstration of high-quality XRTD profiles on NIST standards and ARCI test samples in all

	standard (optimum), high flux, and high angular resolution configurations. The FAC will also require the completion of the first training session and successful demonstration of texture, residual stress, and HRXRD data analysis and publication-quality figure generation. The warranty period will commence upon issuance of the FAC.
15	Technical bid qualification criteria
15.1	Signed "Compliance statement" should be provided in table format with detailed explanation how the particular module/ configuration meets the specification against to each section and/ or subsection by supporting officially published brochure, data sheets, and application sheet. Deviations from the specification, if any, should be highlighted. Alternate solution may be quoted with detailed explanation.
15.2	Bidders must provide test results on the samples supplied by ARCI along with their bid submission. The test reports should include detailed measurements, the analysis procedure, and the final results in both hardcopy and softcopy formats. Additionally, the original measured data files must be submitted. The measurements should include Texture, Residual Stress and Residual Stress Maps, Grazing Incidence XRD (GI-XRD), High- Resolution XRD (HR-XRD), X-ray Reflectivity (XRR), Rocking Curves, and Reciprocal Space Maps (RSM). Test samples will be provided by ARCI upon request. As part of the technical evaluation of the bid, ARCI reserves the right to visit the facility where the measurements were performed.
15.3	The manufacturers must have installed at least three (3) nos. of XRTD/ similar units having 80% functionality of the specifications in India during last 5 years. Necessary documentary proof with contact details of the end-user should be enclosed. Further Performance Certificates from these end users, preferably from government funded institutes, should submitted along the bid to prove the credibility, especially the service support capability, of the bidder.
16	Pre-bid meeting
	16. Pre-bid meeting: Authorized potential vendor, supplier or OEM representative is required to attend a pre-bid meeting to gain a clear understanding of the scope of supply. Any additional questions or requests for clarification should be raised during this meeting, as no further queries or clarifications will be addressed afterwards. The name(s) and designation(s) of the representative(s) who will be participating in the pre-bid meeting should be intimate to the ARCI one day before the meeting. <b>Only bidders who attend the pre-bid meeting will be eligible to participate in the tendering process.</b>



#### **TECHNICAL COMPLIANCE STATEMENT**

#### for Multi-functional X-ray Texture Diffractometer (XRTD)

S. No.	Specification and Description	Offered specification by vendor in detail	Deviation in specification, if any	Offered item/ model/part number, if any	Remarks, if any

#### \*Technical Tender Compliance Statement Requirements

- Technical Compliance Documentation: A detailed technical compliance sheet must be duly filled for each specification, referencing the corresponding Serial Number as mentioned in Page Numbers from 21 to 29. All required fields must be completed with accurate information and supported by relevant published product brochures, flyers, technical notes, and photographs.
- 2. Specification Compliance & Deviations: Each specification must be carefully reviewed. Any deviation from the specified requirements must be explicitly stated and justified in the compliance sheet.
- 3. Completion of Compliance Sheet: The tabular format provided must be fully completed, ensuring that no fields are left blank.
- 4. Supporting Documentation: Bidders must furnish product brochures, flyers, and technical notes for all quoted items, sub-items, and modules, clearly specifying model and part numbers.
- 5. Photographic Evidence: If product brochures or flyers are not available for any specific item, clear photographs of the item must be provided in the compliance sheet.
- 6. Visual Representation Quality: All figures, view graphs, and images must have sufficient resolution to ensure readability and clarity of information.
- 7. Relevance of Submitted Information: Only relevant details should be submitted. Any irrelevant product details or images unrelated to this bid must not be included.
- 8. Mandatory Submission Requirement: The information requested above is mandatory for the further processing of bids. Non-compliance with these requirements may lead to disqualification from the tendering process.

#### Suppliers are required to provide this Technical Compliance Statement while submitting the Technical Bid (Cover 2). Any deviations from the tender should be mentioned clearly.

**<u>NOTE:</u>** Please ensure all the relevant boxes are marked YES/NO against each column.

#### DECLARATION OF LOCAL CONTENT (ON COMPANY LETTERHEAD)

(In case the procurement value is less than or equal to Rs.10 Crores declaration to be given in Bidder's/Company's letter head and if more than Rs. 10 Crores declaration to be issued from the statutory auditors or cost auditor of the company (in case of companies from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies).

#### To,

# THE DIRECTOR, INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS (ARCI), Balapur P.O, Hyderabad-500 005.

**Subject:** Declaration of local content and compliance of Public Procurement (Preference to Make in India) Order 2017 and its amendments regarding.

SI N O	Name of the Goods/Services/W orks	Category of the Supplier (I/II/III)	Currenc y (must be in INR)	Local Conten t (%)	Locatio n at which value Addition is made	Countr y of Origin	Comply to the above referred rule (Yes/No)

- "Local Content "means the amount of value added in India which shall, be the total value of the item being offered excluding net domestic indirect taxes) minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.
- False declaration will be in breach of Code of Integrity under Rule 175(I)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for upto two years as per Rule 151 (iii) of the General Financial Rules along with such other actions permissible under Law.

Date: Place:

ANNEXURE –IV

#### TENDER ACCEPATANCE LETTER (TO BE GIVEN ON COMPANY LETTER HEAD)

#### To, THE DIRECTOR, INTERNATIONAL ADVANCED RESEARCH CENTRE FOR POWDER METALLURGY AND NEW MATERIALS (ARCI), Balapur P.O, Hyderabad-500 005.

#### Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No:\_\_\_\_\_\_ Name of Tender/Work/Service:\_\_\_\_\_\_

Dear Sir,

1. I/We have download /obtained the tender document(s) for the above mentioned<br/>Tender/Workfromthewebsite(s)namely:

\_\_\_\_\_ as per your advertisement, given in the above mentioned website(s).

- I/We hereby certify that I/We have read the entire Terms & Conditions of the tender documents from Page No. \_\_\_to\_\_\_(including all documents like annexures, schedules, etc.,) which form part the contract agreement and I/We shall abide hereby the Terms & Conditions/ Clauses contained therein.
- 3. The Corrigendum(s) issued from time to time by your department/organization too have also been taken into consideration, while submitting this acceptance letter.
- 4. I/We hereby unconditionally accept the tender conditions of the above mentioned tender document(s)/corrigendum(s) in its totality/entirety.
- 5. I/We hereby declare that our firm has not been blacklisted/debarred by any Govt.department/Public Sector undertaking.
- 6. I/We Certify that all information furnished by our firm is true&correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without giving any notice or reason therefore or summarily reject the bid or terminate 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.

7. I/We declare the following information provided are correct to the best of my knowledge.

KNOWI	eage.	
1	Name and Address of the Bidder	
2	Manufacturer/Dealer/Agent	
3	Contact Person	
4	Phone	
5	Email	
6	Mobile Number	
7	GST No	
8	PAN No	
9	UTR No/DD No( In case of online transfer of Tender Fee) if any	
10	UTR No/DD No( In case of online transfer of EMD) if any	
11	Warranty, if any	
12	Delivery period	
13	Payment Terms	
14	PO to be placed in favour of	
15.	Bank details copy	

Your faithfully,

Date: Place:



#### <u>CERTIFICATE BY THE BIDDER (FOR TENDERS)</u> (ON COMPANY LETTER HEAD)

I have read the clause regarding restrictions on procurement from a bidder of a Country which shares a land border with India. I certify that this bidder is not from such a company or, / if from such a country, has been registered with the competent Authority (copy of the registration Certificate enclosed). I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered.

Date: Place:



#### CERTIFICATE OF DECLARATION (ON COMPANY LETTER HEAD)

Ι	hereby	certify	that	we	M/s

\_\_\_\_\_\_(name and address of the firm) is neither blacklisted by any Central/State Government/Public Undertaking / Institute nor is 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 every aspect 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: Place:

# CHECK LIST

# BIDDER HAS TO FILL IN THE CHECK LIST GIVEN BELOW (Following documents are to be submitted online and manual as part of Technical Bid. Bidders are requested to state Yes / No against each column)

SI. No.	Description	Online Submission
1.	If bidder is not an original equipment manufacturer, authorization letter attached.	
2.	Whether Tender Fee and EMD Submitted	
3.	Whether Technical Bid Submitted	
4.	Whether Commercial Bid (BoQ) Submitted	
5.	Vendor BANK DETAILS, PAN / GSTIN Number from concerned authorities	
6.	Details of Products and Components	
7	Whether declaration form signed and Submitted (Scanned Copy by online)	
8.	Whether warranty clause mentioned	
9.	Whether all pages of tender document signed on all pages along with bidders seal	
10.	Payment terms	-
11.	Optional items, if any (Separate cover enclosed with Technical bid)	
12.	HSN/SAC CODES for the item mentioned in technical bid	
13.	Technical Compliance Statement (Annexure II)	
14.	Declaration of Local Content (Annexure III)	
15.	Tender Acceptance Letter (Annexure IV)	
17.	Certificate by the bidder (For Tenders) (Annexure V)	

18.	Certificate of Declaration (Annexure VI)	
19.	Brochure/Catalogue/Datasheet	
20.	Previous Purchase Orders (if any)	
21.	Statutory Registration Certificates	
22.	This Checklist	

#### NOTE:

- 1. Please ensure all the relevant boxes are marked YES/NO against each column.
- 2. Tenderers must ensure that all the required documents indicated in the Tender documents are submitted without fail. Tenders received without supporting documents for the various requirements mentioned in the tender document are liable to be rejected at the initial stage itself.