



केन्द्रीय इलेक्ट्रॉनिकी अभियान्त्रिकी अनुसंधान संस्थान
CSIR-Central Electronics Engineering Research Institute

पिलानी (राजस्थान) 333 031

Pilani (Rajasthan)-333 031,INDIA

Fax : 01596 – 242135,242294

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Gram : "ELECTRONIC" Pilani

No. 243/P-50/SSA/10-Pur/2017/T-38

Dated: 5.12.2017

OPEN/GLOBAL TENDER DOCUMENTS

M/s. _____

Sub: Supply of High Resolution X – ray diffraction system for thin film characterization.

Dear Sirs,

The Director, Central Electronics Engineering Research Institute (CSIR-CEERI), Pilani – 333 031, invites you to quote for the stores as per the **SCHEDULE OF REQUIREMENT ANNEXURE-I ON FIXED PRICE BASIS**. Sealed quotation must be submitted on the specified date & time. **THE QUOTATIONS RECEIVED THROUGH FAX/E-MAIL/TELEGRAM/TELEX in open condition will be considered on suppliers risk.**

2. Quotation duly completed in all respects must reach **THE STORES & PURCHASE OFFICER, CEERI, PILANI NOT LATER THAN 2.30 P.M. ON 10.1.2018 AND THE SAME WILL BE OPENED ON 10.1.2018 AT 3.30 PM.** The Due Date & Time and Opening Date & Time will not be extended at all.

YOU ARE ADVISED TO GO THROUGH THIS DOCUMENT CAREFULLY AND TO COMPLY WITH ALL THE REQUIREMENTS OF THIS DOCUMENT.

3. **SUBMITTING OF TENDERS:**

Your offer must be split in TWO parts and must be put in separate envelopes and be embossed clearly as follows:

(a) TECHNO COMMERCIAL BID

(b) PRICE BID

4. A pictorial representation of the embossment is as follows:

ENVELOPE – I

TECHNO COMMERCIAL BID
Sub.: High Resolution X-ray diffraction system for thin film characterization.
CEERI Tender No. 243/P-50/SSA/10-Pur/2017/T-38
Last date & Time for receipt of Tenders 10.1.2018 at 2.30 PM
Date of opening 10.1.2018 at 3.30PM

To
The Director
CEERI, Pilani

ENVELOPE – II

PRICE BID
Sub.: High Resolution X-ray diffraction system for thin film characterization.
CEERI Tender No. 243/P-50/ SSA/10-Pur/2017/T-38
Last date & Time for receipt of Tenders 10.1.2018 at 2.30 PM
Date of opening 10.1.2018 at 3.30PM

To
The Director
CEERI, Pilani

5. Envelope – I and Envelope – II are then to be put together in another envelope as outer cover. The outer cover should be addressed to THE STORES & PURCHASE OFFICER, CSIR-CEERI, PILANI – 333031 (RAJASTHAN) mentioning the details given below.

TECHNO ECONOMIC BID
ENVELOPE - I

PRICE BID
ENVELOPE - II

Tender No. 243/P-50/SSA/10-Pur/2017/T-38
Last date & Time for receipt of Tenders 10.1.2018 at 2.30 PM
Date of opening 10.1.2018 at 3.30PM
THE STORES & PURCHASE OFFICER,
C.E.E.R.I., PILANI – 333 031

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NOTE: BOTH TEHNO COMMERCIAL AND PRICE BID SHALL BE CLOSED WITH SEALED WAX.

6. Director, CSIR-CEERI reserves the right to accept any or all tenders either in part or in full without assigning any reasons thereof.

7. One cover should contain only one Tender.

8. The time, date and place of opening of Price bid will be intimated to the bidders in advance and all bidders or their authorized representatives are at liberty to be present during opening of the tenders.

TO SUMMARISE THE CONTENTS OF ENVELOPE-I AND ENVELOPE-II WOULD BE AS FOLLOWS:

Envelope – I (Techno Commercial Bid) must contain

Techno Commercial bid. It must contain the following :-

INSTRUCTIONS:-

1. Commercial Terms and Conditions without any indication of price.
2. The tender documents can either be downloaded from CSIR-CEERI's website www.ceeri.res.in free of cost or may be obtained from the office of Stores & Purchase Officer, CEERI, Pilani – 333 031 (Rajasthan) on payment of Rs. 300/- (NON REFUNDABLE) through a Demand Draft in favour of Director, CSIR-CEERI, Pilani.
3. Quotation should be submitted directly by the manufacturer/supplier. In case any sole authorized distributor, dealer or authorized Indian Agent should submit the quotation on behalf of their principal, sole authorized distributor, dealer or authorized Indian Agent must enclose a certified copy of the agency agreement between principal and their Indian Agent, in reference to CSIR letter No. 13-4(04)/15-16/S&P/Policy/Cir dated 13.9.2017, failing which their quotation will be summarily rejected. Please also enclose the manufacturer authorization along with bid as per Annexure – “G”.
4. **In reference to CSIR letter No. 13-4(04)/15-16/S&P/Policy/Cir dated 13.9.2017, it is a compulsion for the foreign bidders to disclose the name and address of their Indian Agent and representative in India and the same goes for an Indian bidder to disclose their foreign principal or associates, failing which their quotation will be summarily rejected.**
5. In case a bidder is not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post-warranty and post-warranty period.
6. The bidder shall bear all costs associated with the preparation and submission of its bid irrespective of the conduct or outcome of the bidding process.

7. The bidder should not indulge in any corrupt, fraudulent, collusive, coercive practices during the entire process of procurement and execution of contract/order.
8. Before the deadline for submission of the bid, CSIR-CEERI reserves the right to modify the bidding document and to extend or not to extend the date of submission. Such amendment/modification will be notified to bidders receiving the bidding document in writing or by cable/fax/email and will also be hosted on CSIR-CEERI website.

9. Conditional tender will be summarily rejected.

10. A bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice signed by the authorized signatory before the date of submission of the bid. Any re-submission or modification in the bid should be submitted before the date and time of submission of bid as originally conveyed in the invitation of bid.
11. No bid may be withdrawn, substituted or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof.
12. First envelope marked "WITHDRAWAL" shall not be opened, but returned to the Bidder subject to submission of valid authorization to request the withdrawal. In case of substituted and modified bid, only the substituted bids and modified bids will be opened subject to production of authorization from the bidders.
13. The Bid shall be prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and CSIR-CEERI shall be written in English language only.
14. The vendor must quote on FOB/FCA value up-to shipping Airport of the exporting country showing Ex-works prices, packing, forwarding and inland handling etc.
15. The price quoted by the bidder shall remain un-changed during the contract period and shall not vary on any account.

- 16. The vendor must quote all lots and items listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.**
17. **Custom Duty** – We are registered with Department of Scientific and Industrial Research (DSIR) vide TU/VIRG-CDE(39)/2001 dated September 25, 2001 for availing custom duty exemptions under Government Notification No. 51/96 Custom dated 23 July, 1996. We shall pay concessional custom duty.
18. **Excise Duty** – We are exempted from the payment of Excise Duty under notification number 10/97. Hence Excise Duty if any, should be shown separately for which excise exemption certificate will be issued.
19. **GST** – CSIR-CEERI is registered with Government of India and Government of Rajasthan, vide GST registration No. 08AAATC2716R1ZF. The percentage of GST as applicable should also be specified clearly in the quotation.
20. **Indigenous Supplies** – For Indigenous supplies, the prices should be FOR CSIR-CEERI inclusive of packing, forwarding, installation and commissioning, freight and insurance charges. In case of Ex-Works Prices, The Packing, Forwarding Freight, Insurance, Installation/ Commissioning charges must be clearly quoted in your quotation. No other charges than those mentioned in the quotation will be paid.
21. **Bid Currencies** – The vendor shall be quoted prices in Indian Rupees for offers submitted for supply within India and in freely convertible foreign currency in case of the items offered of foreign countries.
22. The technical details and specifications of the items must be indicated clearly point by point conforming to the description of the item/specifications enclosed to this tender Annexure – I along with Commercial terms & conditions such as payment terms, delivery date applicable packing, forwarding, freight, insurance, taxes and duties, installation and commissioning. As per Annexure – I. **WHERE THERE IS NO MENTION OF THE ABOVE TERMS AND CONDITIONS SUCH QUOTATIONS SHALL BE REJECTED AS INCOMPLETE.**

- 23.** Our tender specifications/drawings and technical documents duly stamped and signed by your authorized signatory on all pages in token of acceptance of our tender specifications/technical requirement and terms and conditions.
- 24.** Comparative statement of technical offers drawing a comparison between your offered specifications and our tender specifications bringing out clearly the deviations, if any.
- 25.** **THE VENDOR MUST BE OFFERED THE VALIDITY OF QUOTATION AS MENTIONED IN TENDER DOCUMENT. IF THE BID VALIDITY IS SHORTER THAN THE REQUIRED PERIOD, SUCH QUOTATIONS SHALL BE REJECTED AS INCOMPLETE.**
- 26.** **Deadline for Submission of Bids :- Bids must be received by the CSIR-CEERI at the address specified in invitation for bids no later than the time and date specified therein. In the event of the specified date for the submission of Bids being declared a holiday for the CSIR-CEERI, the Bids will be received up-to the appointed time on the next working day.**
- 27.** **LATE BIDS :- Any bid received by the CSIR-CEERI after the deadline for submission of bids prescribed by the CSIR-CEERI will be rejected. Such tenders shall be marked as late and not considered for further, evaluation. They shall not be opened at all and be returned to the bidders in their original envelope without opening.**
- 28.** **The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.**

Envelope – II (Price Bid) must contain

1. Complete quotation both TECHNO COMMERCIAL AND PRICE with commercial terms and conditions along with charges of Packing, forwarding, freight, insurance, Taxes/duties and installation and commissioning and payment terms, delivery date and validity of quotation etc. As per format. **WHERE THERE IS NO MENTION OF THESE TERMS AND CONDITIONS SUCH QUOTATIONS SHALL BE REJECTED AS INCOMPLETE.**
2. The quotes must signify the capacity in which the quotation has been signed i.e. whether as a Sole proprietor, authorized Partner or as authorized signatory of a company.

TERMS AND CONDITIONS

1. **PRICE (A) In case of Import of goods :- The price must be quoted on FOB/FCA value up-to under mentioned international Shipping Airport of the exporting country showing Ex-Works prices, packing, inland handling, forwarding and documentation charges separately.** The Vague terms mentioned in the quotation like “packing, forwarding charges etc. extra” without mentioning the amounts of these charges will not be accepted. The airfreight and insurance shall be arranged and paid directly by CSIR-CEERI in Indian Rupee at our end.

Desired Port of shipment: U.S.A. – New York, Los Angeles, Chicago, Boston, San Francisco, Dallas, Atlanta, U.K. – Heathrow, Germany – Frankfurt, Japan – Tokyo, Netherlands – Amsterdam, France – Paris, Canada – Montreal, Singapore – Singapore, Switzerland – Zurich, Italy – Milan, Hong Kong – Hong Kong, Sweden – Stockholm, Australia – Melbourne, Austria – Vienna, Belgium – Brussels, Denmark – Copenhagen, Taiwan – Taipei, Malaysia – Kuala Lumpur, Korea – Seoul, Russia – Moscow, China – Beijing.

- (B) In case of Indigenous Supplies :-** For Indigenous supplies, the prices should be FOR CEERI inclusive of packing, forwarding, installation and commissioning, freight and insurance charges. In case of Ex-Works Prices, The Packing, Forwarding, Freight, Insurance, Installation/Commissioning charges must be clearly quoted in your quotation. No other charges than those mentioned in the quotation will be paid.

2. **PACKING :-** The goods must be packed by standard packing material and standard export / import packing material in case of import failing which supplier will only be responsible for any damages / discrepancies to the consignment due to poor packing of goods.
3. **PERIOD OF DELIVERY :-** The goods must be delivered within 6 Months from the date of firm order positively at CSIR-CEERI, Pilani. However if this delivery period is not acceptable to you, please quote your fixed date of delivery.
4. **VALIDITY OF OFFER :-** The prices must be valid for a period of **six months** from the date of opening of the quotation. No upward changes in prices will be acceptable in any condition after opening of tender.
5. **PRE INSTALLATION REQUIREMENTS** – Pre installation requirements like Space, Power Supply, Water Line or any other essential requirements which are to be kept ready / completed by CSIR-CEERI before supply of equipment, must be quoted by the bidder clearly in their quotation to avoid the delay in Installation & Commissioning of equipment.
6. **INSTALLATION/COMMISSIONING:-**The equipment must be installed/ commissioned and demonstrated by the supplier at CSIR-CEERI, Pilani within 30 days after call letter of CSIR-CEERI for installation/commissioning and the same will be put under operation as per the contract specification. CSIR-CEERI, technical expert/scientist will test the performance of the equipment. No separate charges for installation etc. will be paid to the party beyond the quoted prices.
7. **GUARANTEE :-** The equipment must be guaranteed / warranted for a period of **Three Years** (Un-conditional warranty) from the date of its satisfactory installation/commissioning against all manufacturing defects. If the equipment is found defective during this period the whole equipment or part thereof will have to be repaired/replaced by the supplier free of cost at CSIR-CEERI, Pilani. However, if the items are guaranteed/warranted for a period of more than **Three Years**, it may be specifically mentioned in the quotation. In case the firm fails to rectify the defects and equipment is not put to proper function as per contract specifications, the whole equipment will be returned to the supplier at their cost. Either the supplier will replace the whole equipment as per contract specifications or whole money paid FOR CSIR-CEERI, Pilani on the account of purchase of the equipment will be refunded by supplier to CSIR-CEERI.

8. **SPARE PARTS:-** The availability of spare parts must be guaranteed for a period of 10 years. In case of discontinuation of the equipment, you have to intimate us in advance.
9. **AFTER SALE SERVICE:** It must be clearly indicated in the quotation whether the after sales service would be provided by the supplier himself or by their authorized agent after satisfactory installation/commissioning of equipment during the warranty period.
10. **INDIAN AGENTS :-**
 - (a) **As per CSIR letter No. 13-4(04)/15-16/S&P/Policy/Cir dated 13.9.2017, Indian Agent must enclose a certified copy of the agency agreement between their principal and them. As well as it is a compulsion for the foreign bidders to disclose the name and address of their Indian Agent and representative in India and the same goes for an Indian bidder to disclose their foreign principal or associates, failing which their quotation will be summarily rejected.**
 - (b) **The Indian Agents Commission must be declared by the Foreign Supplier/ Indian Agent in the quotation which will be paid in Indian Currency after satisfactory installation & commissioning/ functioning of the equipment.**
11. **FOREIGN SUPPLIER:-** Foreign supplier / manufacturer is required to submit their quotation directly to CSIR-CEERI with in due date and time. In case foreign supplier / manufacturer is willing to submit their quotation through his authorized agent in India, The Indian Agent must enclose a certified copy of the agency agreement between its principal and him, failing which the quotation shall not be considered.
12. **PAYMENTS :- A. FOR IMPORTS :**
Through Letter of Credit :- L/C will be opened for 100% order value after receipt of acceptance of order from the successful tenderer along with performance bank guarantee for 10% amount of order value valid up to expiry of warranty period plus 2 months. The 90% amount (cost of the equipment) of L/C shall be released on presentation of complete shipping documents. Balance 10% of equipment cost and other charges shall be released after satisfactory installation and commissioning of the equipment at CSIR-CEERI, Pilani.

BANK CHARGES:- The bank charges out side India will be to the account of Supplier.

B. FOR INDIGENEOUS : The payment will be made against bill only after supply of goods in good working conditions and satisfactory installation/commissioning and performance of the equipment at CSIR-CEERI, Pilani and after acceptance certification by our technical expert/scientist. However, supplier will be required to submit performance bank guarantee for 10% amount of the total value of order along with acceptance of our order valid up to expiry of warranty period plus Two months. In case of non-fulfilling the commitments the Bank Guarantee will be forfeited.

C. No advance payment will be made to any supplier

13. TRAINING:- The supplier shall arrange extensive operation and maintenance training to CSIR-CEERI officials after Installation/commissioning of the equipment for a period of Five working days, FREE OF COST at CSIR-CEERI, Pilani.

14. INSPECTION:- The consignment shall be opened in the presence of firm's representative and inspection of the system will be done by our technical expert /scientist in the presence of firms representative at CSIR-CEERI, Pilani. In case firm's representative is not available, the inspection will be done by technical expert/scientist at CSIR-CEERI, Pilani. The discrepancies will be intimated to supplier accordingly. All short supplies will be arranged by supplier on FOR CSIR-CEERI, Pilani basis. In case of receipt of the material in damaged or defective condition the supplier will have to arrange the replacement of goods free of cost pending the settlement of the insurance case wherever applicable, as the insurance is to be arranged by CSIR-CEERI from supplier's warehouse to CSIR-CEERI, Pilani warehouse.

15. EMD :- EMD of Rs. 4,00,000/- OR equivalent in respective Foreign Currency TOWARDS EARNEST MONEY IN THE FORM OF BANK GUARANTEE valid for Six months plus 45 days from the date of opening of the tender must be submitted along with quotation (techno-commercial quotation in case of two bid system), otherwise quotation will not be considered. The firms, if registered with DGS&D, NSIC, Govt. Public Undertakings, Central Autonomous Bodies and with CSIR Labs. / Institutes as

manufacturer for supply of the same item for which the party is submitting the quotation, will be exempted from submission of EMD. These parties will have to submit registration certificate along with their quotations. EMD of the unsuccessful bidders shall be refunded at the earliest after finalizing the purchase of the concerned item. The parties must, therefore, submit a pre-receipted Receipt along with quotation to enable us to refund their EMD. In case the tender is failed to accept our order or failed to execute our order the EMD will be forfeited. **BID(s) NOT ACCOMPANIED WITH AN EMD IS /ARE LIABLE TO BE REJECTED.**

16.PENALTY:- In case the delivery of goods is not made on or before the prescribed date of delivery or the installation and commissioning is not completed within stipulated period by the supplier a penalty @ 0.5% per week of order value will be charged to a maximum of 5% from the successful tenderer.

17.PERFORMANCE SECURITY:- An unconditional performance bank guarantee from scheduled bank for 10% amount of order value has to be furnished by successful tenderer along with acceptance of our order towards the performance security within 21 days of the placement of order failing which the order shall be deemed as terminated. The bank guarantee must be valid up to delivery period and installation & commissioning period warranty period plus 2 months. In case of any breach of contract the bank guarantee will be forfeited.

18.DELETION OF NAMES OF DEFAULTING PARTIES:- Names of parties backing out/defaulting after opening of tenders will be recommended for deletion from the list of suppliers in addition to forfeiture of EMD submitted by the party. Those firms have already been Black listed by CSIR / Govt. of India, need not apply /quote.

19.UNSOLICITED QUOTATION/LATE QUOTATION:- Unsolicited quotation/incomplete quotations / late or delayed tenders shall not be considered at all. Post tender revision/corrections shall also render their tender liable for rejection. It is the responsibility of the bidder to ensure that the bid complete in all respect is received in CSIR-CEERI before the last date of receipt of tenders. CSIR-CEERI will not be responsible for the loss/delay in transit of any bid.

20.COMPLIANCE STATEMENT:- Tenderers are required to furnish a compliance statement of each and every specification of our tender supported by the technical literature/leaflet in the following format, preferably giving the price of each of the specification or part/accessories of the equipment required to be quoted. The deviations, if any from the tendered specifications should be clearly brought out in the statement. Similarly, the compliance of each of the required terms and conditions of the tender may also be stated in the form of a separate compliance statement along with quotation (with techno commercial bid in case of two bid system). Deviations may be given in separate column.

The firms are advised to submit both the compliance statements essentially along with their quotation failing which their offer will be treated incomplete and can be ignored. It must be certified that the quoted equipment is of latest technology.

FORMAT OF COMPLIANCE STATEMENT OF SPECIFICATIONS

S. No.	Name of Specifications/ part/ Accessories of tender enquiry	Specifications of quoted Model / Item	Compliance Whether “YES” OR “NOT”	Deviation, if any to be indicated in un-ambiguous terms
1	2	3	4	5

FORMAT OF COMPLIANCE STATEMENT OF TERMS & CONDITIONS

Tender Terms and Conditions	Whether acceptable or not	Deviation from Tender Terms, if any
1	2	3

21.FORCE MAJEURE:- Neither of the Parties hereto shall be liable for damage or have the right cancel for any delay or default in performing it's control including but not limited to Fire, Storm, Floods, Earthquakes, acts of God, Government restriction, continuing domestic or international problems (such as wars, rebellion, insurrections, strikes, riots, work stoppages, labour dispute) or delay as to ancillary materials, which affect the dates of fulfillment of any obligations as per the Purchase Order. Such dates will be respectively postponed for the period of continuance of such force majeure circumstances and the other party can suspend the performance of it's obligations correlated to the postponed obligation of the effected party. The obligation thus postponed shall be resumed after the force majeure circumstances have ceased. At the beginning, during and at the pre-visible end of the force majeure circumstances the parties shall promptly consult with each other about appropriate counter measures to be taken. If the performance of obligations of any party should be delayed more than six (06) months by reasons of force majeure circumstances mentioned above, the parties shall mutually consult about subsequent performance of obligations.

22 **CANCELLATION OF ORDER:-** In the event of vendor's failure to execute the order as per terms and conditions mentioned therein. CSIR-CEERI reserves the right to cancel the Purchase Order without any obligation. The Bidder may also specify obligations if CSIR-CEERI decides to cancel the Purchase Order for reasons attributable to CSIR-CEERI.

23 **EVALUATION OF TENDER:-** Before submission of bid, the bidder is expected to examine all the instructions, forms, terms and specifications in the bidding document and should ensure that the following conditions are fulfilled :

- (a) The price schedule should be enclosed and must be signed.
- (b) The bid validity should not be shorter than required.
- (c) The manufacturer's authorization should be enclosed in case the bidder is authorized dealer/distributor.
- (d) The bidders should agree to provide the Performance Security
- (e) The quoted goods should be as per required specifications.
- (f) In case the bid is substantially responsive, the purchase may request that bidder may submit the necessary information, documentations, within a reasonable period of time, to rectify, non-material, non-conformities or omission in the bid related to documentation requirements. Failure of the bidders to comply with

request may result in the rejection of its bids. But in case of the material deviation/reservation or omission which limits or is inconsistent with the bidding documents and the purchaser's rights or bidders obligations under the contract or which is rectified, would unfairly affect the other bidders, the bid will be rejected.

- (g) The purchaser shall correct arithmetical errors on the following basis
 - (i) If there is a discrepancy between the unit price and the line item total i.e. obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected.
 - (ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotal shall prevail and the total shall be corrected, and
 - (iii) If there is discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.
- (h) Sealing exchange rate/equivalent to Indian currency will be as on the date of bid opening in the case of single bidding and the rate on the date of opening on the priced bids in the case of two parts bidding.
- (i) The comparison between the indigenous and the foreign offers shall be made on FOR destination basis and CIF/CIP basis respectively. However the CIF/CIP prices quoted by any foreign bidders shall be loaded further as under.
 - (a) Towards customs duty and other statutory levies as per applicable.
 - (b) Towards custom clearance, inland transportation etc. – 2% of the CIF/CIP value.
- (j) The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the tender document without any change in unit price or other terms and conditions. Further, at the discretion of the purchaser, the quantities in the contract may be enhanced by 20% within the delivery period.

24. TECHNICAL EVALUATION OF TENDERS

- (a) On the due date the Technical bids will be opened and referred to the Technical Committee which is duly constituted by the Director, CSIR-CEERI.
- (b) 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.
- (c) After the technical evaluation is completed and approved, CSIR-CEERI shall inform to the bidders whose tenders have been rejected technically with the reasons for rejection.

25. The successful bidders will be informed regarding the date and time of commercial/ Price bid opening.

26. The purpose of obtaining two bids (technical and commercial) is to evaluate all the firms on technical basis with reference to the tendered specifications, performance of similar Solutions/Applications elsewhere, obtaining user's views with reference to the earlier supplies. This will enable the technical committee to arrive at a fair recommendation in the interest of the organization.

27. **ARBITRATION:-** All disputes or differences arising under and out of, or in connection with the contract, if concluded, shall be referred to the sole arbitration by an arbitrator appointed under the provisions of Indian Arbitration Act. 1940 by CSIR-CEERI. The same shall be binding on both the parties.

28. **ACCEPTANCE OF OFFER :-** The Director, CSIR-CEERI reserves the right to accept or reject any quotation / tender in part or full without assigning any reason thereof. No interim inquiries will be attended to.

29. **FALL CLAUSE:-** The supplier shall certify that if the prices go downwards before execution of our order than the quoted prices, the benefit in this situation shall be allowed to CSIR-CEERI by the supplier. The supplier shall certify that the equipment material shall not be supplied to anyone less than the contract price during the period of execution of CSIR-CEERI order.

STORES & PURCHASE OFFICER

ANNEXURE - I**SCHEDULE OF REQUIREMENT**

Tender No. 243/P-50/SSA/10-Pur/2017/T-38

Date: 5.12.2017

Last Date & Time for receipt of Tenders: 10.1.2018 at 2.30 PM

Date & Time of Opening: 10.1.2018 at 3.30 PM

Sl. No.	Description of Item	Qty.
01.	HIGH RESOLUTION X – ray DIFFRACTION SYSTEM FOR THIN FILM CHARACTERIZATION. (Detailed Specifications mentioned below)	01 No.
PLEASE QUOTE AS PER GIVEN FORMAT		
		Ex-Works cost of the item
		Discount
		Discounted Price
		Packing charges
		Inland handling charges
		Forwarding charges
		Training charges
		Installation/commissioning charges
		Total FOB/FCA price up-to International Shipping Airport

Stores & Purchase Officer

HRXRD Specifications

System Description

Supply, installation and performance demonstration of floor mounted, fully-automated **High resolution X-Ray Diffraction (XRD) System** with hardware and software having following specific applications and capabilities.

Applications:

- **Polycrystalline thin films: Inorganic/ organic semiconducting materials.**
- **Epitaxial thin films: Epilayers of III-V based materials like GaAs, GaN, InGaN, AlN, AlGaN, InGaN/GaN multi-quantum wells etc.**

Capabilities:

- a) θ - θ , θ - 2θ and other necessary modes for the stated applications.
- b) Grazing Incidence Diffraction (GIXRD) Setup/ mode for thin film measurement with software.
- c) Rocking Curve Measurement and analysis
- d) Reciprocal space mapping
- e) X-ray reflectivity measurements and analysis
- f) Stress analysis.

1. X-ray source:

- 1.1. Power Output: 3kW or higher.
- 1.2. High Voltage 50 kV or better (Voltage increment in steps of 1 kV)
- 1.3. Current 60 mA or higher (Current increment in steps of 1mA)
- 1.4. X-ray tube must be of standard insulation, with Cu as Anode material.
- 1.5. Provision of long fine line focus and necessary filter for $K\beta$ should be provided.
- 1.6. The X-ray tube should give drift free performance of minimum 10,000 hrs or more.
- 1.7. Stability $\pm 0.01\%$ or better for 10% input voltage variation.
- 1.8. Appropriate water cooling arrangement should be provided.
- 1.9. The Generator should automatically come to standby mode, when there is no measurement/analysis of sample.
- 1.10. Safety measures for overheating/overloading X-ray tube should be provided.

1.11 The X-ray machine must meet international standard of radiation safety, with supporting documents.

2. Goniometer:

2.1 High precision vertical goniometer with θ - θ , θ - 2θ , ω - 2θ scans and reciprocal space mapping configuration with approx. 500 mm diameter.

2.2 Goniometer angle positioning must be done with the help of stepper motors/ Servo Motor with optical encoders for optimum scanning and positioning precision.

2.3 2θ measurement range must be -10° to 160° or better, θ - 2θ grazing incidence diffraction (GID) geometry must be offered. The scan speed should be 0.01 to 50 deg/min or better.

2.4 The minimum step size: 0.0001° or better.

2.5 Angular reproducibility: $\pm 0.0002^\circ$ or better

2.6 Angular accuracy: $\pm 0.005^\circ$ or better

2.7 Peak position accuracy should be $\pm 0.02^\circ$ or better for 2θ on NIST standard sample over whole scan range.

2.8 Machine must have easy changeover from Bragg-Brentano geometry to high intensity parallel beam geometry and vice-versa.

3. Optics: Standard with necessary automation and following features

3.1 The optics must have all computer controlled optics components such as divergence slits, anti-scatter slits, receiving slits, soller slits and monochromator.

3.2 The optics must provide high peak to background ratio.

3.3 X-ray beam alignment for parallel beam geometry (GID).

3.4 Fully automatic alignment including source height and angle, incident beam optics, slit height, sample surface and detector.

3.5 Dual position graphite diffracted beam monochromator.

3.6 2-bounce high-resolution incident beam monochromator and analyser on receiving side.

3.7 Divergence slit, antiscattering slit and receiving slit should be computer controlled and automatically variable for better resolution.

3.8 Soller slits for incident and diffracted beam.

3.9 Long Soller slits/parallel plate collimator suitable for GID measurements.

4. Detector:

4.1 Solid state detector

4.2 0D-1D switchable detection with provision for 2D upgradation

4.3 Maximum counts per second (cps) for the system should be mentioned

4.4 Pixel size $100\mu\text{m}^2$ or better.

4.5 Capture angle should be ~ 3.0 deg or better.

4.6 Fast position sensitive detector ($\sim 100^\circ 2\theta/\text{minute}$)

4.7 Detection Element 190 line or higher

4.8 The quotation should contain all authentic documents and technical details from the original detector manufacturer on the quoted detector.

4.9 Detector should meet international standards and supporting documents should be provided.

5. Sample Stage:

5.1 Sample stage for GID measurement, θ - θ , θ - 2θ , ω - 2θ , reciprocal space mapping etc.

5.2 Mounting of multiple samples on the platform should be possible.

5.3 The stage should be capable to handle samples of various size and thickness Sample size (including substrate): 5mm, 25.4mm, 50.8mm, 76.2mm and 101.6mm diameter wafers Sample thickness (including substrate): 0.3mm to 2.0mm.

5.4 Suitable sample holding mechanism provided.

5.5 Standard sample holders for calibration and alignment of the X-ray source.

5.6 Ψ (psi) Range 0 degree to +90 degrees, step size 0.01Deg or better.

5.7 Φ (phi) Range: ± 360 degree; step size – 0.01 deg or better

5.8 Z Range: 10 mm or better; step size 1 μm or better.

5.9 X,Y Range: approximate 50 X 50 mm; step size – 0.01mm or better.

5.10 Stage should meet the international standards and supporting documents should be provided.

6. Power:

The complete instrument should be operational as per Indian electrical power standards i.e., in single phase 230V \pm 10%, 50Hz and three phase 400V \pm 10%, 50Hz supply.

7. Computer:

7.1 A desktop computer should be provided for all operations of the XRD with minimum Core i5 or higher processor, 8X DVD-RW drive facility, >1TB HDD, >8GB DDR RAM, 21" monitor, minimum 9 USB ports and windows operating system.

7.2 The computer should have preloaded software with standard interface with machine.

8. Software:

8.1 PC based software packages to control all instrument parameters and should provide best algorithms for solving analytical tasks. The software should enable both qualitative and semi quantitative analysis. Easy simulation and automatic refinement/ smoothing of measured data, Peak search, FWHM etc. should be possible with the software.

8.2 Software for rocking curve data analysis and fitting.

8.3 Multi-user (2 user) ICDD database PDF2 & ICSD database license should be offered as integrated with the XRD data processing software.

9. Chiller:

Suitable external closed loop water chiller of reputed manufacturer to support the XRD system and all standard accessories such as pumps. Insulated pipelines of required lengths etc., should be quoted.

10. Tool Kit:

Professional tool kit for the XRD system maintenance.

11. Documentation:

- 11.1 Vendor should provide complete documentation manuals, sub-manuals in hard and soft copy.
- 11.2 Installation, operation and maintenance manuals hard copy and their soft copy should be provided.

12. Safety:

- 12.1 The system should confirm to Indian and International safety standards and regulations pertaining to X-Ray Radiation and other hazards. Vendor to provide certificate stating the radiation dosage for the quoted model. This should be below 1 micro sievette/ hour at a distance 10 cms from the instrument at full load.
- 12.2 X-ray to be ON during the actual experiment only. It should have safety interlock system both for radiation and mechanical failure.
- 12.3 The system should have a floor-standing cabinet with fully safety interlocked doors for normal access at the front. This cabinet should have stringent safety requirements with respect to contamination of X-Rays and Radiation safety ensuring the negligible radiation outside the cabinet. The cabinet should have safety requirement as per international radiation and should have auto X-ray off upon accidental opening of the cabinet doors during the run.
- 12.4 The system should have an integrated shutter control and be capable of monitoring and controlling all diffractometer functions such as angle, counts, slits, generator safety etc.
- 12.5 Surge Protector is to be quoted and supplied with the instrument. Flawless safety mechanism against over-voltage, over-power, over-current, over load, abnormal input mains voltage or temperature.
- 12.6 Automatic switch off of X-rays in case the cooling water temperature rises beyond a certain limit or its flow rate drops beyond a certain limit.

13. Installation and training:

- 13.1 Machine has to be installed at CSIR-CEERi Pilani site.

- 13.2 Machine will be accepted only after successful installation and demonstration for thin film samples with given machine specifications at CSIR-CEERI Pilani.
- 13.3 Vendor has to provide training to two CEERI staff by authorized engineers of Original Equipment Manufacturers (OEM), at the time of installation at CSIR-CEERI Pilani.
- 13.4 Appropriate warranty for all parts from the date of installation of machine.
- 13.5 Vendor should guarantee the availability of the spares and accessories for the system for minimum of 10 years with supporting documents.
- 13.6 The vendor should provide 'Original Equipment Manufacturers (OEM)' certificate of complete XRD system, according to international standards with supporting documents.
- 13.7 The list of the R&D users of the HRXRD system of international repute in last five years, in India and abroad with their contact details should be provided.

14. Terms & Conditions:

- 14.1 Pre-installation requirements such as power, space, water chiller, compressed gas etc.) with full instructions has to be provided in two month advance before installation.
- 14.2 All other expenditures like installation, training etc, will be at no additional cost.
- 14.3 NIST standards related to intensity, 2θ and quantitative phase analysis (QPA) standards must be supplied with the system.

Optional Items

15. Two dimensional (2D) fast detector with accessories for upgrade. It should work in 0D, 1D and 2D without changing any hardware.
16. Critical spares for three years operation and maintenance. Detailed part no and quantity for smooth functioning of the equipment should be quoted.
17. Set of consumables with detailed part number and quantity for minimum three years for trouble free operation of the instrument to be quoted.
18. Suitable sample holders for powder samples to be quoted.

FORMAT/QUESTIONNAIR FOR COMPLIANCE OF TERMS AND CONDITIONS

Tender No. :.....

Date :.....

NOTE

1. **Quotation will not be considered without submission of the format.**
2. If a particular question is not at all applicable please write NA in compliance part in Col. No. 3 below.
3. Kindly see the relevant terms & conditions of the tender document.

S. No.	Terms & conditions of Tender documents	Whether acceptable (say YES or NO (preferably use different colour ink for NO)	Deviation from tender terms, if any, with reasons for noncompliance or alternative conditions quoted for
	2	3	4
1.	a) Whether quotation is direct from Principal supplier/manufacturer or their own office in India (Please specify)		
	b) Whether quotation is being submitted by Indian Agent along with certified copy of the agreement between the Indian Agent and its Principal.		
	c) Whether the agent is registered with DGS&D/NSIC/ Govt. Public Undertakings/ Central Autonomous Bodies and with CSIR Labs. / Institutes		

2.	a) Whether the Techno-commercial and price bids (for two bid tender system only) have been kept in separate envelopes duly marked with Techno-commercial Bid and Price Bids respectively.		
	b) Whether the tender Number, Due date and Opening dates have been written outside all the envelopes.		
3	Whether techno-commercial Bid contains EMD, technical literature/ leaflets, detailed specifications and commercial terms and conditions etc. as applicable.		
4.	a) Whether the required EMD is being submitted with the quotation		
	b) Please specify the form of EMD whether in the form of DD/Bank guarantee or Bankers cheque (Please mention No. date & amount of EMD documents) or Bid Security .		
5	a) Please quote the prices as per the Format mentioned above.		
	Whether specific amounts of expenses like packing, forwarding, Inland handling documentation have been mentioned in quotation separately in clear terms.		
6.	Whether prevailing rates of GST and other Govt. levies (for indigenous supplies) have been given in quotation.		

7	Have you mentioned the validity period of the quotation as per our requirement.		
8	a) Whether the Price reasonability Certificate is submitted with quotation.		
	b) Whether copies of last two supply orders of the same item from other customers have been attached with quotation.		
	c) If there is any difference in price of last two orders & those quoted to us. If yes please give reasons for the same.		
	d) Whether supplied in CSIR Labs.		
9.	Have you gone through the specification Clause and complied with the same.		
10.	Whether the Make/Brand, Model number and name of manufacturer has been mentioned in the quotation and Printed technical literature/leaflets of quoted items have been submitted.		
11	Whether compliance statement of specifications has been attached with the quotation.		
12	a) Whether the delivery period for supply of the items has been mentioned		
	b) Whether mode of delivery and tentative size and weight of the consignment has also been indicated.		

13	Do you agree to the submission of Performance Bank Guarantee along with order acceptance and have you mentioned in your quotation about this.		
14	a) Do you agree with the payment terms for indigenous supplies?		
	b) Do you agree with the payment terms for imports supplies?		
15	Do you agree about the date of commencement of warranty period and its extension if necessary.		
16.	a) Who will install/commission and demonstrate the equipment at CSIR-CEERI, Jaipur Centre, Jaipur FREE OF COST?		
	b) Will you be able to do it within a month?		
17.	Have you mentioned the guarantee/warranty period in your quotation and do you agree with the guarantee clause?		
18	Spare Parts		
19	After Sales services		
20	a) Do you agree that on receipt of material in damaged condition or short supply you will replace the same on FOR CSIR-CEERI Jaipur Centre, Jaipur basis, free of cost pending the settlement of the Insurance claim?		
	b) Do you agree with the clause of physical inspection?		
21	Whether list of specific users for the same item and model as quoted along with performance certificates from the users is submitted with the offer?		
22.	Whether you agree to the penalty clause for late delivery & installation?		

23	Whether training to our Scientist/ Technical person will be given free of cost after completion of Installation for a period of three working days at CSIR- CEERI Jaipur Centre, Jaipur?		
24.	a) Whether all the pages have been page numbered?		
	b) Whether quotation has been signed and designation & name of signatory mentioned?		
25	Do you agree to settle the issue through the sole arbitration of the DG, CSIR or his nominee?		

Signatures of the authorized signatory

Name and designation of the signatory

(TECHNO-COMMERCIAL BID)

1. Schedule to Tender No. :
2. Name of the Tenderer :
3. Time & Date of Receipt of Tender :
4. Opening of the Techno Commercial Bid. :
5. The tender shall remain valid for acceptance for 180 days from the date of opening of the tender

S. No.	Description of stores	Qty.	Place & Date by which delivery is to be made

TERMS & CONDITIONS :

1	EMD in the form of Bank Guarantee for Rs _____ in favour of Director, CEERI, Pilani (Raj.)		
2.	Packing		
3.	Forwarding		
4.	Sales Tax		
5.	Excise Duty		
6.	Installation & Commissioning		
7.	Freight		
8.	Insurance		
9.	Validity of quotation		
10.	Delivery Period		
11.	Mode of Delivery/Shipment		
12.	Guarantee/Warranty		
13.	Spare Parts		
14.	After Sale Service		
15.	Indian Agent's Commission		
16.	Payment		
17.	Inspection		
18.	Training		
19.	Penalty		
20.	Performance Security		
21.	Compliance Statement		
22.	User's List.		

STATION:

DATE:

(Signature of the Supplier with Office Stamp).

Address:

Tel. Address

MANUFACTURER'S AUTHORIZATION FORM

(The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.

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

Tender No.: (insert number from Invitation for Bids)

To : (insert complete name and address of Purchaser)

WHEREAS

We (insert complete 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 and warranty in accordance with warranty clause of the conditions of the contract with respect to the goods offered by the above firm.

Signed : (insert signature(s) of authorized representative(s) of the Manufacturer)

Name: (insert complete name(s) of authorized representative(s) of the Manufacturer)

Title: (insert title)

Duly authorized to sign this Authorization on behalf of : (insert complete name of Bidder)

Dated on _____ day of
_____(insert date of signing)

MODEL BANK GUARANTEE FORMAT FOR FURNISHING BID SECURITY EMD)

Whereas(hereinafter called the “tenders”) has submitted their offer dated for the supply of (hereinafter called the “tender”) against the Purchaser’s tender enquiry No. KNOW ALL MEN by these presents that WEofhaving our registered office at are bound unto(hereinafter called the “Purchaser) in the sum of for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank thisday of20.....

THE CONDITIONS OF THIS OBLIGATION ARE :

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.

- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity :-
 - (a) If the tenderer fails to furnish the performance security for the due performance of the contract.
 - (b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the purchaser (CSIR/CEERI) having to substantiate its demand, provided that in its demand the purchaser will note that the amount claimed by it is due to it owing the occurrence of one or both the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up-to and including 45 days after t he period of tender validity and any demand in respect thereof should reach the bank not later than the above date.

Signature of the authorized officer of the bank

Name and designation of the officer

Seal, name and address of the Bank and address of the Branch.