

INDIAN INSTITUTE OF TECHNOLOGY MAORAS

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V.Sathyanarayanan

Ref: CIE/KRAG/012/2017

Senior Manager (Project Purchase)

Dated: 03.07.2017

**Open Tender for supply of "Xenon Arc Weatherometer"
Tender No: CIE/KRAG/012/2017**

Due Date: 26.07.2017 at 2:30p.m
Technical bid opening on 26.07.2017 at 3.30p.m

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of "Xenon Arc Weatherometer (CIE/KRAG/012/2017)" conforming to the specifications given in (Annexure-I):

Instructions to the Bidder

- i). **Preparation of Bids:** - The tenders should be submitted under two-bid system (i.e., Technical bid and Financial bid).
- ii). **Delivery of the tender:** - The tender shall be sent to the below-mentioned address either by post or by courier so as to reach the following address before the due date and time specified in the Schedule: **Senior Manager, Project Purchase, 2nd floor, IC & SR Building, I.I.T.Madras-600036.**
- iii). **Opening of the tender:-** The offer/Bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements. In respect of opening the financial bid, those bidders who are technically qualified alone will be called for.

- iv). **Prices:-**The price should be quoted in nett per unit (after breakup) and must include all packing and delivery charges to various Departments/Centres/Institutions. The offer/bid should be exclusive of taxes and duties. The percentage of tax & duties should be clearly indicated separately.

The price should be quoted without custom duty (and excise duty). IIT Madras is exempt from payment of excise duty, and eligible for concessional custom duty.

In case of import supply, the price should be quoted on **EX-WORKS** and **CIP** basis indicating the mode of shipment.

- v). **Agency Commission:** - Agency commission, if any, will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in the case of 'Nil' commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent. The foreign Principal should indicate about the percentage of payment and it should be included in the originally quoted basic price, if any.
- vi). **Terms of Delivery:-** The item should be supplied to our Department(s) as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.
- vii). **Technical Bid Opening:-**The technical bid will be opened on **26/07/2017 at 3.30pm** at the BSB 106, Department of Civil, IIT Madras and the financial bids of technically qualified tenders will be opened at a later date under intimation to them.

IIT Madras reserves the full right to accept / reject any tender at stage without assigning any reason.

Yours sincerely,



Senior Manager (Project Purchase)
IC&SR, IIT Madras, Chennai, India.

वि. सत्यनारायणन

V. SATHYANARAYANAN

वरिष्ठ प्रबन्धक (परियोजना क्रय)

SENIOR MANAGER (PROJECT PURCHASE)

आईसी एवं एसआर केन्द्र / Centre for IC & SR

आईआईटी मद्रास / I.I.T. MADRAS-600036

SCHEDULE

Important Conditions of the tender

1. The due date for the submission of the tender is **26.07.2017, 2:30pm**.
The offers / bids should be submitted in two bids system (i.e.) Technical bid and Financial bid. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The Technical bid and Financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Tender for supply of “**Xenon Arc Weatherometer (CIE/KRAG/012/2017)**” should be written on the left side of the Outer bigger cover and sealed.
2. **EMD:** -EMD should be at 2% (two percent) of the tender value quoted by the bidder. The EMD should be included in the Financial bid which will not be opened for Technical evaluation. Enclosing the EMD in the Technical bid will automatically disqualify the tenderer. EMD should be in the form of DD in favour of “The Registrar, Indian Institute of Technology Madras” and payable at Chennai. The tender without EMD would be considered as UNRESPONSIVE and REJECTED. Photo/FAX copies of the Demand Draft/Banker’s pay orders will not be accepted. No interest will be paid for the EMD and the EMD (Bid Security) will be refunded to the successful bidder on receipt of Performance Security. EMD is exempted for Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or registered with the Central Purchase Organisation or with IIT Madras as on the date of submission of bids.
3. **Performance Security:**-The successful bidder should submit Performance Security for an amount of 5% of the value of the contract/supply within 21 days from the issue of work/purchase order. The Performance Security should be furnished in the form of an Account Payee DD / FD Receipt from the commercial bank (or) Bank Guarantee from any nationalized bank in India.

Performance Security in the form of Bank Guarantee:- In case the successful bidder wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end user bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee from a Nationalized Bank of India.

The Bank Guarantee should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including the warranty obligations.

4. **Indian agent:-** If an Indian agent is involved, the following documents must be enclosed:
Foreign principal’s proforma invoice indicating the commission payable to the Indian Agent and nature of after-sales service to be rendered by the Indian Agent.
Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.

5. The offer/bids should be sent only for a machine that is available in the market and supplied to a number of customers. A list of customers in India and abroad with contact details must accompany the quotations. Quotations for a prototype machine will not be accepted.
6. **Original catalogue** (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid, and catalogue.
7. Documentary proof for the claimed position and repetition accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.
8. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.
9. **Validity:** Validity of Quotation should not be less than 90 days from the due date of tender.
10. **Delivery Schedule:-** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.
11. **Risk Purchase Clause:-** In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.
12. **Payment:-** No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. In case of import supplies the payment will be made only through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done).
13. **Advance Payment:-**No advance payment is generally admissible. In case of specific percentage of advance payment is required, the Foreign Vendor has to submit a Bank Guarantee equal to the amount of advance payment and it should be routed through the Beneficiary Bank to the end user Bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee through a Nationalized Bank of India.
14. **On-site Installation:** - The equipment or machinery has to be installed or commissioned by the successful bidder within 15 to 20 days from the date of receipt of the item at site of IIT Madras. Installation should be done by the successful bidder at free of cost.
15. **Warranty/Guarantee:** - The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately (for more details please refer our Technical Specifications). At least one year warranty from the date of installation.
16. **Late offer:** - The offers received after the due date and time will not be considered. The Institute shall not be responsible for the late receipt of Tender on account of Postal, Courier or any other delay.

- 17. Acceptance and Rejection:** - I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.
- 18. Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.**
- 19. Disputes and Jurisdiction: -**

Settlement of Disputes: Any dispute, controversy or claim arising out of or in connection with this PO including any question regarding its existence, validity, breach or termination, shall in the first instance be attempted to be resolved amicably by both the Parties. If attempts for such amicable resolution fails or no decision is reached within 30 days whichever is earlier, then such disputes shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, 1996. Unless the Parties agree on a sole arbitrator, within 30 days from the receipt of a written request by one Party from the other Party to so agree, the arbitral panel shall comprise of three arbitrators. In that event, the supplier will nominate one arbitrator and the Project Coordinator of IITM shall nominate one arbitrator. The Dean IC&SR will nominate the Presiding Arbitrator of the arbitral tribunal. The arbitration proceedings shall be carried out in English language. The cost of arbitration and fees of the arbitrator(s) shall be shared equally by the Parties. The seat of arbitration shall be at IC&SR IIT Madras, Chennai..

- a) **The Applicable Law:** This Purchase Order shall be construed, interpreted and governed by the Laws of India, Court at Chennai shall have exclusive jurisdiction subject to the arbitration clause.
- b) Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Chennai in Tamil Nadu.
- 20. All Amendments, time extension, clarifications etc., will be uploaded on the website only** and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date/ time shall be considered on account of delay in receipt of any document by mail.

Acknowledgement:- It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.

SIGNATURE OF TENDERER

ALONG WITH SEAL OF THECOMPANY WITH DATE

ANNEXURE-I

Technical specifications of Xenon Arc Weatherometer)

We would like to purchase a Xenon arc weatherometer with the following technical specifications. This enable us to investigate the weathering mechanism(s) of materials by performing short-term accelerated weathering experiments, simulating the exposure conditions including solar spectral radiation, temperature and relative humidity as same as outdoor conditions.

- 1) The light source of the equipment should be of xenon arc lamp with wattage of 4500 or higher.
- 2) Xenon arc lamp must be water cooled type.
- 3) To minimize the down time of the equipment due to the frequent failure of the cooling system, the machine should be supplied with an inbuilt heat exchanger which can maintain the temperature of the cooling water using ambient air (without external recirculation unit).
- 4) The equipment should use single xenon arc lamp of adequate capacity, so that running expenses will be minimal.
- 5) The operating life of the xenon arc lamp must be at least 1500 hours, in continuous glow operation.
- 6) The equipment must be supplied with irradiance control photocells at 340 nm, and 300-400 nm.
- 7) The supplier/representative must have capability to calibrate the equipment on site using 2-point calibration protocol with respect to irradiance, temperature and humidity over the entire working range. The supplier/representative must also provide the calibration certificate as per ISO 17025 at the time of installation as well as every six months over the warranty period without any charges and additional two years, with academic discounted charges.
- 8) The equipment should have microprocessor based programmable controller with suitable display (must operate without an external computer).
- 9) The control panel must display all test parameter viz., irradiance, chamber temperature, black standard temperature, black panel temperature, relative humidity, spray on/off indication, and test duration, during the operation.
- 10) The equipment should have a capacity to turn off after specified exposure time or energy.
- 11) The equipment should have operating (black panel) temperature of range from 40 °C to 110 °C with variation not exceeding ± 2 °C; relative humidity of range from 10 % to 75 % with accuracy of 5 %; and irradiance of range from 0.40 W/m² to 1.50 W/m² for 340 nm, from 50 W/m² to 150 W/m² for 300-400 nm, with an accuracy of ± 4 % of set value.
- 12) The equipment should be capable of simultaneously controlling black panel/black standard and chamber temperature, during the operation.
- 13) The machine should be capable of high irradiance testing with an irradiance value of 170 W/m²

- 14) The equipment must be supplied with preloading testing protocols as per ISO 105 B02, ISO 105 B04, ISO 105 B06, ISO 16474-205/11341, ASTM D4355, ASTM G155, ASTM D7869, SAE J1885/2412, SAE J1960/2427, ISO 4892-2, JASO M346 etc.
- 15) The equipment must have a provision to program at least ten custom testing protocols with sub cycle facility.
- 16) The equipment must accommodate specimens of thickness up to 5 mm, with the total exposure area of at least 3200 cm².
- 17) Specimen rack should be made of corrosion proof stainless steel. To accommodate more number of specimens and to ensure the uniform irradiance the sample rack should be of 2-Tier type having inclination towards the xenon lamp.
- 18) The equipment must have facility to spray demineralized water on either side of the specimens at a user defined interval.
- 19) The equipment should have capability of housing sample specimens, and the black panel (standard) temperature sensor on a continuously revolving platform around the light source, so as to ensure uniform exposure of light, temperature and humidity to all the specimens.
- 20) The weatherometer should have the facility for simultaneous automatic control of both chamber temperature and humidity.
- 21) The weatherometer should be equipped with water purity indicator.
- 22) The equipment should have an observation window.
- 23) The equipment must have the capability of interchanging inner and outer filters of various types such as boro/boro, quartz/boro, boro/sodalime, rightlight/quartz, etc. to simulate various conditions as prescribed in testing protocols.
- 24) The equipment should be supplied with adequate number of sample holders of suitable size to house maximum geosynthetic specimens.
- 25) The equipment should be supplied with all required consumables (including xenon lamps, filters, cartridges for water purification) for continuous operation of 12 months as per ASTM D4355.
- 26) The supplier should quote price (as an optional) for all required consumables (including xenon lamps, filters, cartridges for water purification) for continuous operation of the equipment as per ASTM D4355, as optional. The quoted price must be valid up to 36 months.
- 27) The equipment should have the provision of a programmable damper so as to reduce test variability in chamber temperature and humidity and compensate for changes in ambient laboratory conditions.
- 28) The equipment should be provided with data acquisition software with live streaming data output via ethernet or USB Port.
- 29) The equipment should have safety measures such as auto shutoff for the xenon lamp in case of accidental opening of test chamber door, unusual rise in temperature of test chamber, unusual rise in temperature of cooling water, and unusual stoppage of cooling water to lamp.
- 30) The supplier shall upgrade software free of cost within 36 months if any upgraded version becomes available.
- 31) The equipment should be capable of operating at 220/380V, 3 Phase, 4 Wire, 50 Hz.

Terms and Conditions

1. The system should be delivered within 12-16 weeks from the opening of the letter of credit or issue of purchase order, whichever is later.
2. The cost should include 12 month warranty of the overall system with calibration and CIP up to Chennai.
3. The cost for additional 12 months of AMC (after the warranty period) with calibration at a discounted price should be quoted as optional.
4. Prices quoted should be valid for at least six months.
5. Individual costs should be indicated for the different items (parts) quoted. IIT Madras reserves the right to exclude some items from the purchase.
6. Costs and related information should be given only in the financial bid.
7. The system should be installed and commissioned with no additional cost. At least two days of training at IIT Madras should be provided with no additional cost. Installation and training shall be done by the suppliers' engineer(s).
8. System manual should be provided.
9. The list of at least three users of similar installations in India including contact details (name of the person in-charge, email and phone number) is to be provided.
10. There must be a local service agent in India.
11. The payment conditions consist of 90% LC at sight and 10% after installation and satisfactory training or within 60 days of delivery whichever is earlier.
12. The supplier/vendor must be an original equipment manufacturer.