**DEPARTMENT OF APPLIED MECHANICS AND BIOMEDICAL ENGINEERING**

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS, IIT POST,**

**CHENNAI — 600 036, INDIA**

**PHONE: 044 22575057, FAX: 044 22574052**

**Dr. M.S. Sivakumar, Date: 07.03.2024**

**Professor & HoD**

**Ref No: AMBE/2023/MS/003 Angle Meter Due Date: 15-03-2024**

Dear Sir,

Quotations are invited in duplicate for the various items shown below overleaf/enclosed list.

1. The quotations are to be in two parts as:

Technical Offer and as Commercial offer

The two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in separate envelopes must be enclosed in one bigger envelope duly sealed and super scribed with reference numb r and due date and must be addressed to the undersigned so as to reach him on o before the due date stipulated above.

2. The quotations duly sealed and subscribed on the envelope with reference no. and due date, should be addressed to the undersigned so as to reach him or before the due date stipulated above.

3. Quotations should be valid for 60 days from the due date and period of delivery indicated.

4. Local firms to quote for free delivery to the Institute. If quoted for Ex-godown delivery charges are indicated separately.

5. Relevant literature pertaining to the items quoted with full specifications.

6. Sales Tax/General Taxes/ED if applicable and such other taxes legally legible and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage.

7. Goods should be supplied in carriage paid and insured.

8. Goods shall not be supplied without an official supply order.

9. Every effort will be made to make payment within 30 days from the to of bill/acceptance of goods whichever is later.

10. The Guarantee period of the item may be indicated clearly.

11. In case of LC. Payment 90% of the payment will be made after completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the equipment.

12. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.

13. 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 rejects it in full without assigning any reason.

14. Fax and Email quotations are not acceptable.

Yours faithfully,

Head of the Department – AMBE.

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**Specifications for Contact angle meter**

|  |  |
| --- | --- |
| **Specification** | **Minimum requirement** |
| Measuring method | Sessile drop method |
| Analysis method | Automatic curve fit analysis |
| Optics | aberration-corrected imaging lens with precise manual focus adjustment |
| Measurement angle range | 0 - 180 degree |
| Measurement accuracy | ≤ 1 degree |
| Camera type | CMOS Sensor |
| Image Resolution in Pixels | 2592 x 1944 |
| Video system | CMOS sensor and suitable shielded cable of minimum 3 m length |
| Dispenser to camera positioning unit | Top view |
| Illumination mechanism | LED-based diffused lighting |
| Illumination Units | Fixed backlit LED illuminator and angled illuminator for top-view imaging |
| Liquid dispenser | Through motorised syringe pump; suitable for both motorised and mechanical type |
| Syringes | 50, 100 and 250 microlitre capacity |
| Temperature of test base | Adjustable from ambient to 100°C |
| Substrate/sample holder | rotatable in the range +/- 180° from horizontal position (total 360°)  Height adjustable |
| Substrates | Aluminum, brass and stainless steel |
| X - Y stage | ≥ 75 mm travel with optics assembly to fine-focus the image |
| accessories | Windows operating system (OS) compatible processing software for measuring (a) Static and dynamic contact angle measurement (b) Contact angle hysteresis |
| Input power | 230 VAC, 50Hz |
| Warranty | minimum one-year warranty from the date of installation |

Terms & Condition:

* Payment : 90% advance & 10% after installation
* Delivery : 1 Week from the date of the confirmed order.
* Installation & Commissioning : The Installation & Commissioning should be provided free of cost at IIT Madras.
* Training : Training to be provided by the supplier for one week.
* Minium 1 year warranty should be provided.
* Proof of supply of similar equipment to government or academic institutes to be provided.
* Distributers need to provide authorization certificate from the equipment supplier.
* Two-bid system will be followed. Technical compliance statement and price quotation to be submitted in separate envelops.

Yours faithfully,

Head of the Department – AMBE.

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**INFORMATION OF TENDER TO UPLOAD IN CPP PORTAL Date: 07.03.2024**

|  |  |  |
| --- | --- | --- |
| **1** | **Purchase from** | **INSTITUTE** |
| **2** | **Tender Reference No.** | **AMBE/2023/MS/003 Angle Meter** |
| **3** | **Name of the item** | **CONTACT ANGLE METER**  Measuring method: Sessile drop method.  Analysis method: Automatic curve fit analysis.  Optics: aberration-corrected imaging lens with precise manual focus adjustment.  Measurement angle range 0 - 180 degree.  Measurement accuracy: ≤ 1 degree  Camera type: CMOS Sensor  Image Resolution in Pixels: 2592 x 1944.  Video system: CMOS sensor and suitable shielded cable of minimum 3 m length.  Dispenser to camera positioning unit: Top view.  IIIumination mechanism: Led-based diffused lighting  IIIumination Units: Fixed back LED illuminator and angled illuminator for top-view imaging.  Liquid dispenser: Through motorised syringe pump: suitable for both motorised and mechanical type.  Syringes: 50,100 and 250 microlitre capacity.  Temperature of test base: Adjustable from ambient to 100 C  Substrate/sample holder:  rotatable in the range +/- 180° from horizontal position (total 360°) Height adjustable.  Substrates: Aluminum, brass and stainless steel  X – Y stages: ≥ 75 mm travel with optics assembly to fine-focus the image.  Accessories: Windows operating system (OS) compatible processing software for measuring (a) Static and dynamic contact angle measurement (b) Contact angle hysteresis.  Input power: 230 VAC, 50 Hz  Warranty: Minimum one-year warranty from the date installation |
| **4** | **Tender Category**  **(GOODS/WORKS/SERVICE** | Goods |
| **5** | **Type of Tender (Limited)** | Limited |
| **6** | **No. of Bids : ( 1/ 2)** | 2 |
| **7** | **Tender Start Date** | 01.03.2024 |
| **8** | **Tender Due Date & Time** | 11.03.2024 & 3 PM |
| **9** | **Bid Opening Date & Time** | 11.03.2024 & 4 PM |
| **10** | **Bid Opening venue** | Dept of Applied Mechanics& Biomedical Engg, FMB 106 |
| **11** | **Pre-bid meeting Date & Time** | - |
| **12** | **Pre-bid meeting venue** | - |
| **13** | **Quotation Validity Days** | 30 days |
| **14** | **Tender Validity Days** | 60 days |
| **15** | **Completion of work** | - |
| **16** | **Quotation May be Sent to (Inviting officer Name & Address)** | **Dr. M.S. Sivakumar,**  **DEPARTMENT OF APPLIED MECHANICS AND BIOMEDICAL ENGINEERING**  INDIAN INSTITUTE OF TECHNOLOGY MADRAS,  IIT POST,  Chennai – 600036. |
| **17** | **No of documents to be uploaded in CPP portal** | 3 |

Yours faithfully,

Head of the Department – AMBE.