



INDIAN INSTITUTE OF TECHNOLOGY MADRAS
Chennai 600 036

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V. Sathyanarayanan
Senior Manager (Project Purchase)

Ref: ASE/ASAM/036/2017
Date: 16.11.2017

Open Tender No: ASE/ASAM/036/2017

Due Date: 07.12.2017, at 2.00 pm

Pre-Bid meeting: - Not Required

Technical Bid opening meeting on 08.12.2017 at 3.30 p.m.

Dear Sir/Madam,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of

“TOMO PIV SYSTEM WITH ACCESSORIES”

conforming to the specifications given in Annexure.

A Vendor who can supply and integrate the above equipment alone need to respond to the tender please.

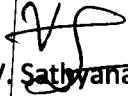
Instructions to the Bidder

- (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 addresses either by post or by courier so as to reach our office before the due date and time specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date and time specified in the schedule. The tender box is kept in the office of the

**Senior Manager,
Project Purchase
IC & SR Building 2nd floor,
I.I.T. Madras,
Chennai – 600 036.**

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

Yours sincerely,



V. Sathyanarayanan
Senior Manager (Project Purchase)
IC&SR Building, I.I.T. Madras,
Chennai – 600 036

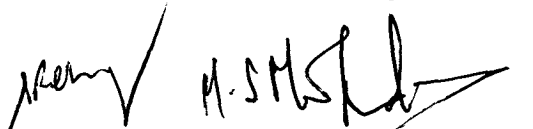
5. The offer/bids should be sent only for a machine that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted.
6. Original catalogue (not any photocopy) 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.
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 not 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.
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).

Specification
Specifications of the Time-resolved TOMO PIV system with accessories

1. Dual pulsed laser: At least 20 mJ/pulse, maximum repetition rate ≥ 1000 Hz (1000 pairs of pulses/sec.), 527 nm wavelength – 1 No.
2. 10 W Continuous Wave Laser, 532 nm, tunable in power, modulation up to 10 kHz – 1 No.
3. PIV-compatible camera with min. 1450 FPS @ 4 MP, 12 bit, min. 36 GB internal memory – 3 nos.
4. Zeiss lens 50 mm, f/1.4– 3 nos.
5. Camera filter for 527 nm and 532 nm, 90% transmission efficiency up to 20° angle of incidence at 527/532 nm – 3 nos.
6. 1-Axis Scheimpflug mount for camera (item 3) and lens (item 4), 1 mount per camera – 3 nos.
7. Light sheet optics for 3-D volume of min. 15cm x 15cm x 15cm, along with requisite traverse system – 1 no.
8. Mounting bench for Scheimpflug mounts, 1000 mm – 1 no.
9. Software & Hardware for Image acquisition and Laser-camera synchronization and calibration: 1 no.
10. Tomographic PIV Software (1 no.) for
 - (i) 3C3D velocity field estimation
 - (ii) 3C2D velocity field estimation
 - (iii) 2C2D velocity field estimation
11. High Performance Volumetric Imaging Workstation – 2 nos.
12. High volume 3 bar back pressure liquid seeder – 1 no.
13. Calibration kit for Tomo PIV– 1 no.
14. Accessories for camera (cables, Manfrotto tripod with tiltable 3-way head of min. 8 Kg capacity) – 3 no.s
15. Cables, adapters, switches, guided arms and traverse as required for the full PIV system
16. Any other accessories required for a fully functional Tomo PIV system.

Additional Requirements:

1. Quotation to include costs of individual components of the PIV system



2. Vendors should provide continuous technical support and maintenance of equipment during warranty period with no additional expense.
3. Vendors have to provide warranty for a minimum of one year.
4. Provision for extended warranty for minimum one year, which cannot be considered for the selection of lowest bidder.
5. Vendors must have sufficient experience in supplying equipment in reputed organizations for research purpose. Experience of the end users will also be used as a criterion for the selection of bids that meet technical requirements.
6. Vendors must provide detailed documentation for the equipment.
7. Vendors may be called to visit and give presentation/demonstration on the equipment after opening the technical bid. They need to provide the approximate date for this presentation in the bid. The time period for this presentation would be 14 days from the date of opening of the bid.
8. Vendors must provide training to our technical staff for using the equipment, free of cost.
9. All the expenses for installation and training will be borne by the vendor.
10. Warranty starts from the date of successful commissioning of full Tomo-PIV system.

