निविदा आमंत्रण / INVITATION TO TENDER

Date : 18.07.2016

Tender Due on : **05.09.2016 at 14.00 Hrs**
Tender opening on: **06.09.2016 at 10.30 Hrs**

Dear Sirs,

Separate Sealed TWO PART tenders are invited from accredited manufacturers / suppliers / agents for the supply of the following equipments:

Sl. No.	Tender No.	Item Description	Qty/ Nos.	Cost of Tender (Rs.)
1.	2016003367	**Camera For PIV Application**	1 No.	**500+VAT @5% (525/-)**
		Software For PIV recording and Processing	1 No.	
		Computer for Controlling Laser System and PIV data Processing.	1 No.	
		Specifications :		

(a) Technical specifications for digital Camera for PIV application (1 Number)

Sl. No	Parameter	Technical Specification
1	Double shutter	Inter frame duration between the double pulses should be less than 150 ns
2	Digital Output of the camera	Minimum 12 bits
3	Resolution	2048×2048 pixels
4	Memory	4 Gigabytes
5	Pixel size	Minimum ($7\ \mu m \times 7\ \mu m$)
6	Frame rate	Minimum 15 frames per second
7	Spectral range	$290 - 1100$ nm
8	Max. QE	typ. 55 % @ 500 nm

	9	Lens Mount	standard	
	10	Operating temperature	5-40 °C	
	11	External Triggering of camera	by TTL signal using standard delay generators	
	12	Camera mount	Height adjustable stand	
	13	Frame Grabber card and other interfaces to record or transfer the images to the computer	According to the camera requirement	

(b) Technical specifications for 2D PIV software (1 number)

2D PIV Software for Image Acquisition, Processing and Analysis: (1 No)

- ➤ Windows 7 64 bit compatible high speed 2D PIV image acquisition, processing and analysis software.
- ➤ Cross or auto-correlation technique for high accuracy velocity and velocity gradient calculations.
- ➤ Velocity, vorticity and derivative analysis modules
- ➤ Analysis of uncertainty of PIV Processing
- ➤ Dynamic masking of object in the image field captured by PIV
- ➤ Integrated Tecplot link for data presentation.
- ➤ All hardware components of the PIV system would be controlled using this software.
- ➤ Easy upgrade to Stereo PIV &Volumetric PIV in future.
- ➤ Other preferred features are: PIV routines for optimization of recording and processing parameters, export/ import of images in varied formats, integrated movie generator etc

(c) Computer for PIV processing

Dual Intel Xeon quad core 2.4 GHz processor or higher, 128 GB DDR4 RAM, 2 TB HDD, Windows 8, 64 bit OS or higher. The PIV software would be installed in this computer. Communication and control of all the PIV system hardware would be done from this computer using the PIV software. The acquired PIV images would be stored and processed in this machine

Commercial terms and Conditions Tender No. 2016003367 dated 18.07.2016

1. **General Requirements:**

1.1   Detailed Catalogue/ Data Sheet of the quoted item.
1.2   Clientele List
1.3   Performance Letter from the Clients.

2. **SPECIAL INSTRUCTIONS TO TENDERERS**

2.1   **The bidder is required to submit quotation for the entire scope in** *TWO PART* **viz, Technical and commercial bid and price bid separately.   The first cover shall contain the technical and commercial details along with the format of price quotation without the price superscribing in the cover** *"Technical and Commercial-Tender No.* ***2016003367 Due on 05.09.2016.*** *The second cover shall contain the prices superscribing in the cover price bid- Tender No.* ***2016003367 Due on 05.09.2016.*** **All the covers to be sealed and insert in another cover super scribing the** *Tender No.* ***2016003367 Due on 05.09.2016*** *and submit immediately but not later than the due date mentioned against each tender.* **If the tender is received after the due date and time, the same shall be summarily rejected.**

2.2   The cost of tender stated against each tender shall be submitted ***along with Technical & Commercial bid by Demand Draft*** drawn in favour of the Sr. Accounts Officer, IIST and payable at State Bank of India, Valiamala Trivandrum-695 547. ***In case the Demand Draft is not enclosed with the quotation, the bid shall be summarily rejected.***

2.3   **Test certificate**: Wherever required, test certificates should be essential.

2.4   **Payment:** Our normal payment term shall be E-Transfer / within 30 days after supply/installation and acceptance for imports and indigenous respectively.

2.5   The installation and commissioning of equipment to be done at our campus, Valiamala, Thiruvananthapuram-695 547. All pre-requisites such as foundation drawing, grouting and any consumables needed for carrying out the installation, if applicable, shall be separately mentioned in the technical bid.

2.6   Delivery terms shall be Ex-works/FOB/FCA for imports and FOR, Valiamala for indigenous.

2.7   For import cargoes, the purchase order shall be drawn directly to the foreign supplier through agents in India. We have our own freight forwarder and customs clearance at Trivandrum shall be done by us.

2.8   All duties and taxes, if applicable shall be quoted separately.

2.10   Accreditation documents such as current income tax/sales tax clearance certificate, clientele list with previous experience in the similar lines of supply must be provided with documentary evidence), Performance Certificate, authorization for import, after sales support in India etc. shall be explained in detail with proof.

2.11   **Guarantee & Replacement:**

   a) The contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

   b) For a period of twelve (12) months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from
       the date of acceptance thereof by the Purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

2.12   **Earnest Money Deposit (EMD):-** Interest free EMD to ensure the earnestness of the vendor in the participation of the procurement process to the tune of **Rs.75,000/-** by Demand Draft drawn in favour of the Sr. Accounts Officer, IIST, Valiamala, Trivandrum may be enclosed with Technical & Commercial bid sealed cover. The EMD will be refunded to the unsuccessful tenderers within 30 days after placement of Purchase Order.

2.13   **Security Deposit:-** Interest free Security Deposit @ 10% of the value of Purchase Order shall be payable by successful vendor for satisfactory execution of the Purchase Order.

2.14   **Performance Bank Guarantee** equivalent to 10% of order value shall be submitted by the Vendor for Warranty obligation.

2.15   **Liquidated Damages**: The period of completion indicated shall be the essence of the contract. In the event of delayed date of completion, the liquidated damages @ 0.5% per week or part thereof subject to a maximum of 10% of the contract value shall be recovered.

2.16   **Force Majeure**: During the continuance of the contract, should a part or whole of the items covered by this contract be delayed in delivery due to reasons of force majeure condition which shall include lockouts, strikes, riots, civil commotions, fire, flood, windstorm, explosion, labour disturbance, act of any Govt. or any agency, juditional action, sabotage act of civil disobedience, act of public enemy, technical failure, accidents, acts of God and war, stoppage of deliveries by Govt. etc, each party undertakes to advise the other as soon as it becomes a way of the circumstance of such force majeure, so that action under the

provisions of this contract can be mutually reviewed and agreed upon between contractor and IIST. If the force majeure condition extended over a period of six months, both the parties of the contract shall mutually discussed and arrived at an agreement for the continuation/ termination of the contract forthwith.

2.17   **Arbitration:** Dispute if any shall be settled mutually, failing which, it will be referred to a one-man arbitrator appointed by Director, IIST in accordance with the Arbitration and Conciliation Act, 1996 and any alteration/modifications thereof, whose decision shall be final and binding on both the parties

2.18   **After Sales Service Support**: The stock availability of spares and consumables for a minimum period of 5 years for up keeping the equipment shall be guaranteed to avoid obsolescence of systems.

2.19   **AMC:** The charges towards Annual Maintenance Contract (Comprehensive/Non-   Comprehensive) beyond the normal warranty period may be quoted separately as option.

2.20   IIST reserves the right to either accept/reject any tender/s without assigning any reason/s whatsoever.

2.21   **Separate quotations shall be submitted for each tender along with the tender fee by demand draft.**

3.   **Terms & Conditions of Tender Form No. DOS PM:20, Form No. DOS PM:22 & Form No. DOS PM:23 as per attachment.**

Sd/-
(M.B Subash Chandran)
Sr. Purchase & Stores Officer
For and on behalf of Director, IIST