



**DEPARTMENT OF MECHANICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY KANPUR
KANPUR – 208016, INDIA**

Dr. Arvind Kumar
Assistant Professor

Ph: +91-512-6797484
Fax: +91-512-2597408
E-mail: arvindkr@iitk.ac.in

Enquiry number: IITK/ME/AK/2018/PIV

Opening date: 28-06-2018 Closing Date: 19-07-2018 (3.00 pm)

Add-on accessories to upgrade the existing PIV system from TSI Incorporated, USA

We would like to upgrade the existing PIV system which was supplied by TSI. The add-on upgrade accessories are as follows:

1. Accessories required to upgrade our PIV system to a PLIF system for solidification and melting experiments.
 - Suitable dye and camera filters for measurement of temperature in the liquid and solid regions (Range: $-40\text{ }^{\circ}\text{C}$ to $150\text{ }^{\circ}\text{C}$).
 - Suitable dye for measurement of dissolved salt concentration in the liquid and solid regions.
2. Long distance Microscope and appropriate lenses for visualization of solidification grain growth and flow in small and narrow cross section of the order of few mm.
3. Seed particles, camera filter, etc for PIV measurements in Molten wax.
4. Cylindrical lens with -50 mm Focal Length for light sheet optics.
5. Light arm (Minimum 1.8 m long. Should include Spherical lens with 10 m Focal Length and alignment kit), and laser feet for better alignment of laser sheet.
6. Image splitter (Image doubler) for LIF measurements (simultaneous measurements of temperature and concentration) using one camera, as well as for measuring the liquid and solid phase velocity together using this hardware.

The items listed above MUST be Compatible with the existing PIV system from TSI. Details can be provided upon request.

Terms and Conditions:

1. Prices should be on Ex-Works and CIP New Delhi Airport basis.
2. Prices should include installation and training cost, and all additional charges including freight, insurance etc.
3. Discount: maximum educational-discount to be provided .
4. Provide pricing for individual items.
5. Warranty: no less than one (01) year after installation.
6. Quotation validity: no less than 90 days from the date of quotation submission.
7. Quotations should carry proper certifications such as, agency certificates, proprietary certificates, printed company profile, detail technical specification.
8. Availability of after sales service and support in India: Supplier has to compulsorily indicate details of facilities/ expertise/ qualification of support in India. Factory trained engineers should be available in India for complete product support.
9. Delivery should be in approx 3-4 months.

Please mention "IITK/ME/AK/2018/PIV" on sealed envelope carrying quotations and additional literature including technical details. **Technical and Financial bids** need to be submitted in **separate envelopes and the two put in the main envelop**. The envelopes, duly sealed, should reach the following address **on or before 19-07-2018 (3.00 pm)**. Any questions, technical or otherwise should be directed to the undersigned.

Dr. Arvind Kumar
Dept. of Mechanical Engineering, IIT Kanpur
Kanpur - 208016
E-mail: arvindkr@iitk.ac.in / alokkr@iitk.ac.in