



NWTF

NATIONAL WIND TUNNEL FACILITY

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Enquiry No. NWTF/IITK/2013/06

Date: September 26, 2013

Closing Date : 14.10.2013

Sealed quotations are invited for the following items for the Stereo PIV system from the authorized suppliers:

S No.	Description	Qty
Laser Illumination system and accessories		
1.	Nd:YAG PIV laser with dual cavities, 200 mJ (x2) at 532 nm at 15 Hz <ul style="list-style-type: none"> • Pulse to pulse < 2% RMS • Pulsed width ≤ 10 ns • Beam divergence < 4 mrad • Flash lamp lifetime ≥ 100 million shots 	1
2.	Light sheet optics with continuously adjustable focal length between 0.3m and 3.5m, 2 sets of cylindrical lenses of -15 mm and -25 mm F.L.	1
3.	90° mirror attachment with provision to attach light sheet optics	1
CCD Cameras, lens and accessories		
4.	High Quantum Efficiency, low noise Digital CCD camera with interface card <ul style="list-style-type: none"> • Pixel Resolution 4008 x 2672 pixels (11MP) • Intensity Dynamic Range 12-bit • Frame Rate 4.8 fps in Frame Straddling Mode • Frame Straddling Time ≤ 200 ns • Lens Mount F-mount Camera cable length 10m Standard Camera Lens 50 mm-F1.4/1.8, 28 mm -F2.8, 85 mm-F1.8, 100 mm- F/2.8	2
5.	Stereo PIV Assembly for the CCD cameras, including the Dual Plane/Dual Sided (DPDS) calibration target, base, brackets, camera mounts, scheinpflug mounts and alignment kits <ul style="list-style-type: none"> • DPDS target size: 400 mm x 700 mm, 200 mm x 200 mm 	1
6.	Remote Stereo PIV mounts for: <ul style="list-style-type: none"> • Scheinpflug angle control • Focus and aperture controls for CCD cameras. • Cable length 10m 	1
7.	Fiber cable extender for the CCD camera, <ul style="list-style-type: none"> • Fiber optics Cable length 50 m 	2
Synchronizer		
8.	Laser Pulse synchronizer with computer or front panel control, digital display, 8 independent output channels, 2 input channels, 250 picoseconds resolution, communication through USB or RS-232 <ul style="list-style-type: none"> • Delay 0 - 5,000 s • Pulsewidth 10 ns to 1,000 s • Resolution 0.25 ns • RMS jitter ≤ 50 ps Outputs <ul style="list-style-type: none"> • Outputs TTL/CMOS, Adjustable 2 - 20 V • Impedance 50 Ohms External Trigger <ul style="list-style-type: none"> • Rate DC to 5 MHz • Threshold 500 mV to 15 V 	1

Computer and software		
9.	Dual Intel Xeon X3430 Eight Core 2.40Ghz processors, 48GB DDR3 RAM, 1TB HDD, 22" monitor, Windows 7 64-bit OS.	1
10.	PIV image capture, analysis and display software platform built on Windows 7 64-Bit OS. The 2D and Stereo PIV software modules must include: <ul style="list-style-type: none"> • Hart Correlation & Rohaly Hart analysis. • Optimal Boundary deformation scheme. • Ensemble correlation processing, background removal and related techniques, • Detailed time-series analysis and proper orthogonal decomposition (POD) • MATLAB-based toolboxes and integrated Tecplot data presentation. 	1
3D Traverse		
11.	3D long traverse system: <ul style="list-style-type: none"> • X axis: 1000mm ; Y axis: 1000mm ; Z axis: 1000mm • With Motion control drive • Compatible and operated through PIV software. 	
Supplier capability:		
12.	Following conditions are required to be put in to ensure after Sales support and services <ul style="list-style-type: none"> • The Supplier has to indicate with contact details of reputed parties where similar PIV systems which have been installed and are functional for the last 5 years. • Availability of after sales service and support in India. Supplier to compulsorily indicate details of facilities / expertise/ qualification of support staff in India. Factory trained engineer/s should be available in India for complete product support. 	

Terms and Conditions for the Offer:

1. All sealed quotations should reach the undersigned by 14-10-2013.
2. Quotations must be valid till 31-12-2013.
3. Please quote giving unit price for each items.
4. The Institute reserves the right to place partial order. Depending on the availability of funds, not all items may be purchased.
5. PIV laser should be supplied in priority basis
6. Quantity of any item may increase or decrease
7. Payment Terms: 90% on delivery and balance 10% after satisfactory installation & demonstration of the working of equipment. In case of foreign currency, payment is through LC.
8. IIT Kanpur is exempted from excise duty.
9. IIT Kanpur is exempted for partial custom duty (5.15% CD applicable to IIT Kanpur).
10. Please mention the tax rates clearly, if they are extra

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