

4i-Laboratory

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Enquiry no.: 4i-Lab/2013-14/04

Enquiry Date: 9/12/2013

Closing date: 11/10/2013

Sealed quotations (commercial and technical offers in separately sealed packets) should reach the undersigned latest by 12.00 noon on October 01, 2013 for a 3D Digital Image Correlation (DIC) system for measuring full-field displacements and strains. Only well reputed manufacturers of such systems will be considered. Vendors should certainly have India-based competent technical support personnel. Vendors who do not meet this requirement will not be considered. Local support will be preferred. The system should have the following capabilities.

- Ability to measure inplane and out-of-plane displacements (u, v, and w).
- Ability to calculate strains from displacement field data. Demonstrable resolution of 50 micro-strains or better is expected.
- The system should be able to capture vibration modes of structures with resonant modes up to at least 25 Hz.
- Strong software capabilities for calculating principal strains (with direction), von-Mises, and Tresca strains.

The system should have following features/components/capabilities.

- 3D and 2D DIC software
- Modal analysis software
- Capability to trigger data acquisition with the click of a mouse, as well as with a trigger from an external sensor.
- Ability to detect unacceptable images which may potentially be unsuitable for subsequent data processing.
- Ability to verify goodness of calibration, and identify sources of error if any.
- Ability to set duration of image capture.
- Export of data and plots to Matlab, as well as in ASCII, JPEG, TIF, and movie formats.
- Robust ability to post-process data within DIC software, as well as ability to export data to other formats.
- Capability to acquire and process data on a laptop is preferred, though not necessarily required.
- Desktop (or laptop) should be part of the package.
- One license for desktop (or laptop), and another one for post-processing on a USB dongle.
- Speckle generator, and target generator software
- Calibration grids with aluminum honeycomb backing
- Air brush set
- Robust illumination device(s)
- Well designed mounting systems for cameras and illumination unit(s), with flexibility to adjust positions of devices and cameras.
- All cables as needed to run the system efficiently, and measure systems as large as 10 m X 10 m.
- Cameras with a minimum resolution of 2048 X 1048 at maximum fps, accompanied with two sets of Schneider lenses, with each set having 8 mm, 17 mm and 35 mm lenses.
- Robust carrying cases for all equipment.
- Power supply modules to support 220 V, 50 Hz AC supply.
- Well written users guide, and technical literature including papers on use of DIC, how to measure displacements for large structures (10 m X 10 m).

Additional Information

1. Please specify the cost of yearly AMC contract as an option.
2. Please also specify cost of spares and consumables as an option.
3. **Compliance statement with verifiable data to show that the specifications as laid out above are indeed being met should be offered while delivering the product.**
4. Your quotation should cover cost of training as well on two occasions.
5. Installation charges should be included in the quotation.
6. Please also include a list of references with their contact information, who have acquired similar system(s) from the vendor.
7. Warranty period and time of delivery should be mentioned in quotation.
8. Packaging, loading, unloading charges should be included in the quotation.
9. Delivery time should be clearly mentioned in the quotation.
10. The quotation should be accompanied with complete product description, technical literature, etc.
11. **Please send your technical and commercial offers in separately sealed packets.**
12. You are requested to submit your quotation in sealed envelope with complete product description, technical literature, price, warranty period, delivery time and other conditions by October 11, 2013 (12 noon) at the address given below.

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