

Press Release

Date: 08.10.04

Reference: PR-0039-AMA-081004-PSV3

AFIT Uses Polytec's 3-D Scanning Vibrometer To Measure Aerospace Structures

Polytec, the leader in the design and manufacture of scanning laser vibrometers for experimental modal analysis, announces the newest application for the advanced PSV-400-3D. The Air Force Institute of Technology (AFIT), Wright Patterson AFB, Ohio will utilize this 3-dimensional scanning vibrometer to measure vibration characteristics of Unmanned Aerial Vehicles (UAV) and other intricate aerospace and vehicular structures. Polytec's first North American sale of this premier instrument to AFIT permits engineers to perform complete 3-D vector component analysis on complex structures.



Publication free of charge

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PR-0039-AMA-081004-PSV3-E.DOC

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Simultaneous measurement using 3 independent sensor heads offers non contact vibration mapping at extremely high spatial resolution for aerospace, defense and automotive applications. By auto-positioning laser light instead of instrumenting tri-axial accelerometers (locating, attaching, wiring, phase-matching and eventually removing), the PSV-400-3D decreases setup time and simplifies data acquisition. This also improves measurement accuracy by eliminating mass loading and local stiffening while increasing sampling density and total points sampled to over 250,000. Other key features of Polytec's flexible system include intuitive animated data visualization and data compatibility with commonly used modal/FEM analysis programs.

The PSV-400-3D is an ideal experimental modal and structural analysis tool that utilizes the Doppler (frequency) shift of back-scattered laser light to determine the instantaneous velocity and displacement of a point on a vibrating structure.

Important aerospace applications include measuring the vibration characteristics of intricate prototypes and preproduction products for design verification, characterizing manufactured or assembled airframe components for production and quality control, and evaluating aging aircraft structures for maintenance and repair.

Polytec GmbH is providing world class high-tech solutions for the microstructure, data storage, automotive, aerospace, transportation, steel industry, mechanical engineering and scientific research markets for decades. Polytec is known throughout the high-tech world for its leadership in the design and manufacture of laser-based vibration, speed & length measurement instruments.

Global sales offices are located throughout Europe, the United States and Japan.

More information can be found at www.polytec.com

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