

The main BANG!

Quarterly Newsletter on Ultrasonic Inspection

Winter 2010

MISTRAS Introduces Portable, Motorized Non-Contact X/Y Ultrasonic Scanner

MISTRAS Group, Inc., announces their latest innovation in ultrasonic testing technology with the introduction of the portable Motorized Non-Contact Ultrasonic Scanner (Mot-Man TT).

In most conventional ultrasonic inspection it is required to use a couplant such as water or gel which enables the efficient transmission of the high frequency sound waves into the inspection material. However, there are many materials that can be damaged or compromised through the use of any liquid couplant exposure. In this case, an air coupled ultrasonic system can be applied, provided the material to be tested is compliant to lower frequency ultrasonic sound waves, making Non-Contact Ultrasonic Testing a safe, alternative method.

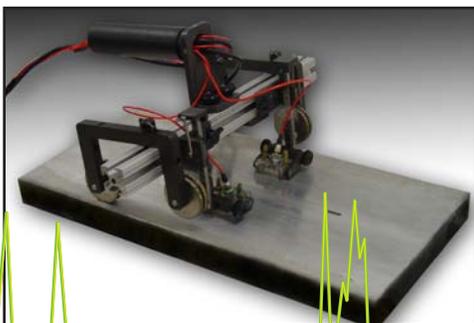


Using the new portable Mot-Man TT scanner allows on site testing and/or access to remote areas which would be difficult or impossible to test with a conventional full size stationary bridge scanner. The Mot-Man TT system is also compatible with squirters and bubblers, should the test allow liquid couplants.

MISTRAS has successfully demonstrated the use of Non-Contact Ultrasonic Testing around the U.S. for a variety of designs and structures. Non-Contact Ultrasonic inspection technology is available for system upgrades in the field and can also be adapted to new systems.

Ultrasonic Spotlight: Time of Flight Diffraction

Time of Flight Diffraction Technique (TOFD) is used as an ultrasonic technique for examination of heavy wall thickness welds on Pressure Vessels.



The TOFD-Scanner fixtures two angle beam transducers facing each

other to transmit and then receive the defraction of ultrasonic waves generated in this technique. The Pocket UT™ battery-operated, hand-held, stand-alone, full C-Scan acquisition system is used to computerize and display the scan, store, and evaluate indications in terms of height (through thickness weld), length and position with a degree of accuracy. The B-Scan image best represents the real-time data captured for evaluation.

A Look Inside MISTRAS RC&A

Driven by the need to support corporate services and customer requirements in engineering and applications, the MISTRAS, Research, Contracts & Application (RC&A) group was formed in 1992. This group is an important part of the MISTRAS team, developing technology for the future.

The talented group of NDT experts performs basic contract research and engineering applications, along with coordinating all MISTRAS research worldwide and working with universities and industries on various contracts.

Over the years, the RC&A group has continuously improved their technologies, while also offering comprehensive training and applications in acoustic



emission, advanced ultrasonics, thermography and advanced NDT systems and software.

“One day we may be testing the latest wireless AE system on a bridge, the next day we will look at signals from adhesive

bonds in Aerospace composites and by the end of the week we maybe developing pattern recognition classifiers for the pharmaceutical industry,” said Valery Godinez, Director of Research Contracts & Applications. “This is how our RC&A group pushes the technology ahead, always looking for those problems where everybody else said it couldn’t be done.”

Fall ASNT Giveaway!

During the annual ASNT Fall Conference in Columbus, Ohio, MISTRAS Group awarded an Acer Aspire One Netbook to Dwayne Cooper, UT Level III at RTI/RMI Titanium from Niles, Ohio. Over 100 attendees dropped their business cards in the MISTRAS fishbowl for a chance to win the 10.1 inch Netbook. When partnered with our newly released USB AE Node, any Netbook or laptop computer forms a complete, single channel battery powered acoustic emission testing system. Perfect for both a university lab environment or wherever a fully capable, fully featured portable AE system is required.



Stay tuned for more information about the USB AE Node and its many applications as this exciting product hits the AE market place!

Latest Thermography Technique

Line Scanning Thermography (LST) is the latest thermography technique for non-contact inspections of metallic and advanced composite materials.

Developed by a major national air and space facility and refined by MISTRAS Products and Systems, LST is capable of inspecting large areas, without loss of resolution, in a reduced amount of time due to the dynamic heat application used with the system. This technique allows LST to inspect layer bonding in advanced laminate composites, changes in material thickness, impact damage and the presence of inclusions or cavities inside structural components.

The LST technique has also been used to provide a measurement of tube thickness and to detect regions of thinning in boiler tubes. This approach can be applied to a variety of materials such as fiber reinforced plastics, concrete surfaces and any materials that will react to dynamic heat absorption.

Upcoming World AE/ NDT Events

| | | | |
|--|--------------|---|--------------|
| Transportation Research Board Meeting • Washington D.C | Jan. 10 - 14 | Concrete Bridge Conference • Phoenix, AZ | Feb. 24 - 26 |
| 14th Annual IPEIA Conference • Banff, AB, Canada | Feb. 3 - 5 | ASNT Spring Conference • Williamsburg, VA | Mar. 22 - 29 |
| 2010 NDTMA Conference • Las Vegas, NV | Feb. 9 - 11 | 2010 International Bridge Conference • Pittsburgh, PA | June 6 - 10 |

MISTRAS Headquarters: 195 Clarksville Road, Princeton Junction, NJ 08550 • P: 609-716-4051 • F: 609.716.0706 • www.mistrasgroup.com

MISTRAS International: Paris, France • Cambridge, UK • Tokyo, Japan • Rotterdam, Netherlands • Bahia, Brazil • Navi-Mumbai, India
Hamburg, Germany • São Paulo, Brazil • Moscow, Russia • Buenos Aires, Argentina • Kuantan, Malaysia
Beijing, P.R. China • Manama, Bahrain • Gothenburg, Sweden • Athens, Greece

MISTRAS Services: Princeton Junction, NJ • Houston, TX • Los Angeles, CA • Chicago, IL • Denver, CO • Monroe, NC
Regional Locations: Philadelphia, PA • Richmond, VA • Prudhoe Bay, AK

NYSE:MG