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Last quarter was full of trade shows. NDTS participated in three trade shows: INDSEM-07 in Vizag, Asian Metallurgy 2007 in Mumbai and Engineering Expo 2007 in Pune.

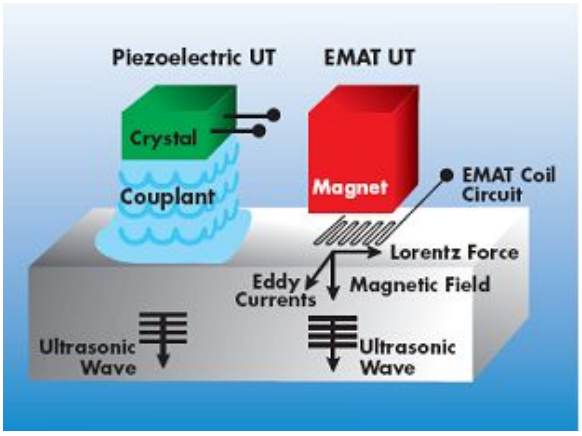
Back to Basis

Electro Magnetic Acoustic Transducer (EMAT) Technology

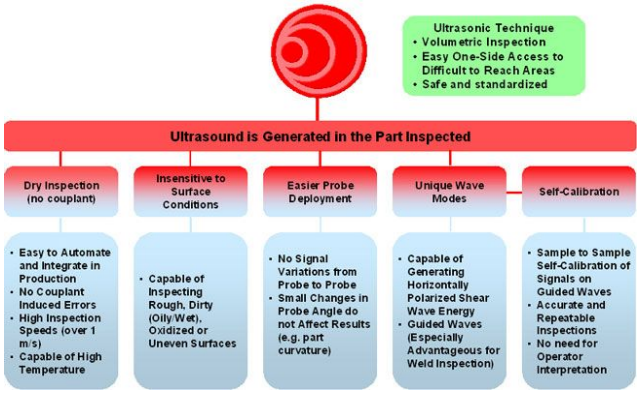
Electro Magnetic Acoustic Transducer (EMAT) is an innovative inspection technique that is already benefiting many industries around the globe. With EMAT, inspections that were once impractical or impossible are now a reality.

EMAT technology is an Ultrasonic (UT) Non Destructive Testing method that differs from the traditional piezoelectric transducers in the way the sound is generated. In traditional ultrasound technology a piezoelectric crystal is used to convert electrical energy into mechanical vibration. The vibration makes its way into the test piece via the couplant.

An EMAT consists of a magnet and a coil of wire and relies on electro-magnetic acoustic interaction for elastic wave generation. Using Lorentz forces and magnetostriction, the EMAT and the metal test surface interact and generate an acoustic wave within the material. The material being inspected is its own transducer, eliminating the need for liquid couplant.



EMAT provides all of the capabilities of ultrasonic testing plus some distinct advantages. These advantages make it especially well suited for automated applications in industrial environments. An EMAT probe becomes a simple end-of-arm tool that combined with the proper electronics and software can be integrated into a production line to provide reliable inspection without human intervention.



Using standard Ultrasonic Testing procedures like Pulse-Echo, Attenuation or Time-Of-Flight Measurement, EMAT can be adapted to perform a variety of inspections in almost any kind of metal and geometry. EMATs can easily generate Rayleigh, Creeping, Shear Vertical, Shear Horizontal, Longitudinal, Torsional and Flexural wave modes in frequency ranges from 100 KHz to 12MHz.

Type of Inspection	Material	Geometries
Flaw Detection Points (1D) Seams (2D) Surfaces (2D) Volumes (3D) Thickness & Distances Material Properties Hardness Nodularity Stress Anisotropy Others	Electrical & Magnetic Conductors Ferrous : Carbon Steel, Stainless Steel, Nickel, Cobalt Non-ferrous : Aluminum, Copper, Brass, Uranium & most other metals	Discrete & Continuous Geometries Plates (thin & thick) Cylinders, Rods, Tubes (round, square or others) Structural Elements

EMAT technique is choice for:

- ☞ Defect detection (surfaces, weld seams, volumes) in automated environments
- ☞ Precise thickness measurement with one-side access of hot and cold materials at production speeds
- ☞ Measurement of material properties (nodularity, anisotropy, grain structure) on rough surfaces without immersion tanks
- ☞ In-service inspections (tube & pipe, boilers, tanks, structural elements) where rough surfaces are present or when dry inspection and/or guided waves are required.

For more information on EMAT Solutions, Kindly write to us.

Portable Ultrasonic Work Station MINISCAN©

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MINISCAN© is a small ultra portable (110 grams) unit which can be connected to any standard laptop or to a tablet PC via USB port which surveys as communication as well as power supply to MINISCAN©.

MINISCAN© is available in single or multi channels (1 to 4). other features include:

Pulser:
- Square negative
- Falling time <8 ns at 150 Volts & 50 Ohms impedance
- Pulse echo or separated transmit-receive mode
- Amplitude 50 to 200 Volts

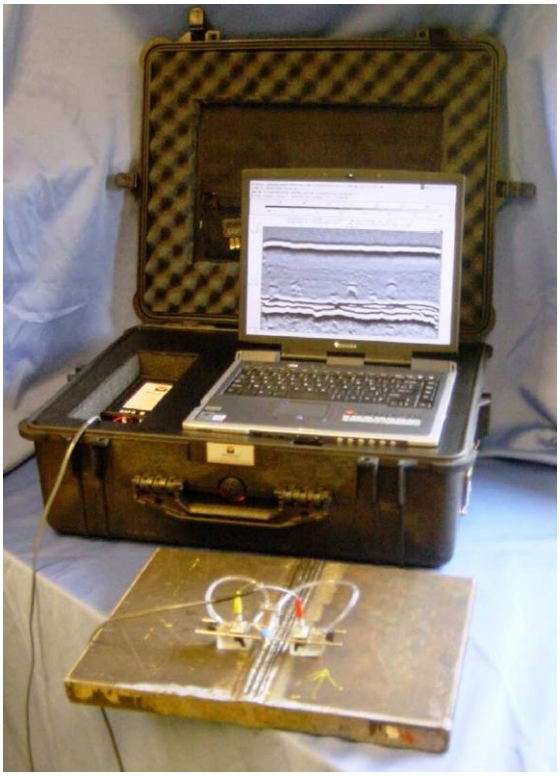
Receiver:
- 4 analog band pass filters
- Maximum bandwidth 0.5 to 25 MHz @ - 3dB
- Adjustable amplification from 0 to 80 dB
- Input impedance: 50 Ohms

TCG (DAC):
- 31 segments
- 80 dB maximum range (general gain + Corrected gain)

Gates: - Unlimited number
Digitalization frequencies: - 100 – 50 - 25 or 12.5 MHz
Recurrence frequency: - 100 Hz to 2 KHz
Analog output available
3 encoders output available (A-Scan, B-Scan, C-Scan acquisition)
Any standard transducers compatible
Warranty: 3 years

For more information on MINISCAN, Kindly write to us.

Digital Ultrasonic Testing System VENUS - BOOK©



The "VENUS-BOOK" system is a numeric ultrasonic device that is portable, battery-powered and upgradeable. It is based on the new ultrasonic extension board developed by METALSCAN fitted to an industrial-grade notebook type computer that is portable and battery-powered. All the functions may be programmed and controlled by the "VENUS" software package. Other features include:

- Single or Multichannels UT Board (1 to 16 Channels)
- PCI port
- A-Scan, B-Scan, TOFD
- Autonomous (up to 8 hours)

For more information on VENUS BOOK, Kindly write to us.

Immersion (Pulse Echo or Through Transmission) automated inspection systems BACUS - 2 to 6 axes

Salient Features of BACUS series Immersion Scanners:

- Single or Multichannels UT Board (1 to 16)
- Compatible with Phased Array UT devices
- Laboratories version (PVC tanks)
- Industrial version (Stainless steel tanks)
- A-Scan, B-Scan, C-scan
- Scan speed up to 1 m/s
- Dimensions up to: 5000 mm x 2000 mm x 800 mm
- Turntable
- Complex shapes inspection (Gantry trajectories software)
- 3 D C-scan (post treatment)

For more information on BACUS series of Immersion Scanners, kindly write to us.

Portable Gauss meters

The 5100 Series Hall effect portable gauss meters represent the most recent design from the world leader in magnetic measuring equipment. This new design incorporates the use of digital signal processing technology making it the world's first hand-held gauss meter to have a digital signal processor (DSP) on board. F.W. Bell's exclusive Dynamic Probe Connection allows measurements from 0 to 30 kG with a basic accuracy of 1%.

Key features include Auto Zero, Min./Max./Peak Hold, Auto Range and Relative Mode. Both models allow the user to select Gauss or

Tesla readings. The Model 5180 also has a selection for readings in Ampere/Meters and features a corrected analog output (±3V FS) and a USB communications port.

The 5100 Series Hand-Held Gauss meter's built-in software eliminates the need for complex calibration procedures. User prompts on the custom formatted LCD allow fast, simple push button operation. All models come equipped with a detachable transverse probe, zero gauss chamber, instruction manual, hard carrying case, and four AA batteries. Axial and other style probes are available as options. All instruments are CE compliant.

For more information on Portable Gauss Meters, kindly write to us.

Handheld Bond Tester

The new BondaScope 300 from NDT Systems, Inc., USA defines a new standard for ease of use, performance, features and portability in a Handheld Bond Tester.

The BondaScope 300 operates in the Pulsed, Pitch-Catch mode with Pulse Rates up to 400Hz. Display Updates of 30Hz, fast enough for all but the most demanding applications. With the introduction of NEW, Leading Features including SplitView and SplitScan the BondaScope 300 presents the best indication and presentation of potential bond problems available today. The ability to scan a surface and map Bond Profile in real time! This mode can be significantly easier to interpret for users of all levels. Not only can the BondaScope 300 map the profile but, it also acquires 240 waveforms (RF or Detected) within the scanned window for review. Simply press Stop then Index through the scan for stored waveform presentation.

The concept of Scanning and presenting historic information on screen, in real time, allows the operator to asses the pattern over distance and/or time, thereby developing a trend pattern. This information provides the operator with a higher level of confidence.

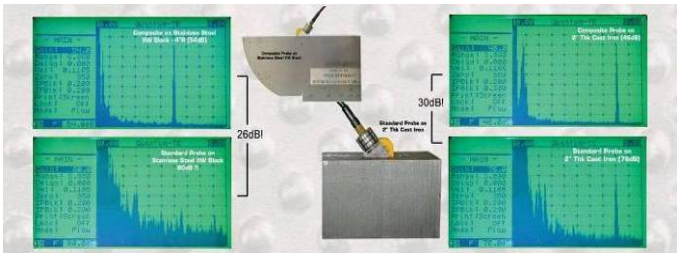
The high speed, fully sunlight readable, backlit display offers a full Quarter VGA resolution. The resolution of the display will appear to approach analog! User interface is via simple plain text menus located at the bottom of the display. Large numeric display zone offers full 7/16" high characters.

For more information on BondaScope 300, kindly write to us.

Optima Elite Series: Composite Element Transducers

The Optima Elite Series of Piezo-Composite Transducers defines a new class of ultrasonic testing capability.

In many applications, Piezo-Composite Transducers can significantly increase both gain and signal to noise ratio in highly attenuative materials such as cast iron, stainless steel, composite and fiberglass materials to mention a few.



The Optima Elite Series offers a very good alternative to conventional broad band ceramic transducers without the sacrifice in sensitivity.

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For more information on Composite Element Transducers, kindly write to us.

Inspection Services 24X7

Presently, we offer 24X7 inspection services in following disciplines:

Boroscopy/Remote Visual Inspection (RVI) Services

Remote Visual Inspection (RVI) is used to visually inspect plant components for surface defects, general condition, degradation, blockages, and foreign material.

Our experienced RVI Specialists will bring the latest technology at your site and perform RVI examinations of your applications. We offer a turnkey inspection solutions, whether it is inspecting high energy piping, performing a loose part retrieval or diagnosing an operational problem, we'll bring the right equipment to visually inspect (or retrieve) it, record it, and report it back to you.


Ultrasonic Flaw Detection & Thickness Gauging


We use the best equipment and skilled manpower to offer these services. If required, we use equipments & accessories as per customers or code requirements.

Magnetic Particle & Liquid Penetrant Inspection


We use the best equipment and consumables to offer these services. If required, we use equipments & consumables as per customers or code requirements.

We are certain that you would like to call us again!

For more information on Inspection Services, kindly write to us.

Company News

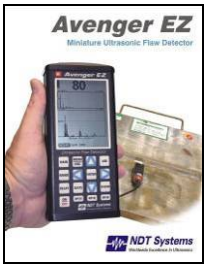
NDTS displayed a gamut of NDT Equipments & latest Inspection technologies at INDSEM-07 a seminar organized by Indian Navy, Asian Metallurgy 2007 & Engineering Expo 2007.

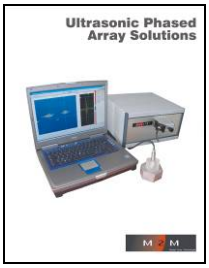
INDSEM-07, Vizag


Asian Metallurgy 2007, Mumbai

Engineering Expo 2007, Pune


We have printed some dedicated product brochures; if you need a copy, please feel free and write to us.





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