

NEWS LETTER



Last quarter was a bit hectic for NDTs as most of the time was invested in working for upcoming technologies and solutions.

In this quarter we tied up with three new principals namely **M/s. Sonotron NDT** from Israel, **M/s. Controle Mesure Systeme (CMS)** from France and **M/s. Techna NDT** from USA.

We also organized seminars on Metal Hardness Testing in Mumbai, Pune and Chennai in this quarter.

Contents of this issue:

- Portable Digital Ultrasonic Flaw Detector with Recording & Imaging capabilities
- What's new in Eddy Current Testing
- What's new in Coating Thickness Measurement
- What's new in Portable Hardness Testing
- Inspection Services
- High Intensity Radiographic Film illuminator
- Company News

Portable Digital Ultrasonic Flaw Detector with Recording & Imaging Capabilities

Sonotron NDT manufactures ISONIC range of portable digital ultrasonic flaw detectors with recording & imaging capabilities

The standard features of ISONIC range of portable digital ultrasonic flaw detectors includes:

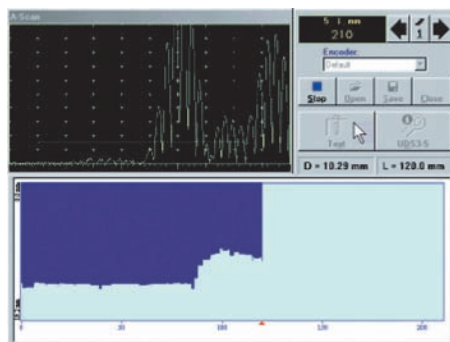
- Large bright high resolution color touch screen
- Built-in encoder interface
- USB, LAN, VGA outputs
- Huge Data Storage Capability
- Longitudinal, Shear, Guided, and Surface Waves
- A-Scan, B-Scan, CB-Scan, and TOFD
- Corrosion Profiling and Flaw Imaging
- Up To 20m Length of One Line Scanning Record
- Playback A-Scans for Recorded Images
- Enhanced Signal Evaluation - Live and Frozen A-Scans
- Defect Sizing and Pattern Analysis
- Compliance with ASME & RBIM Procedures

ISONIC 2005

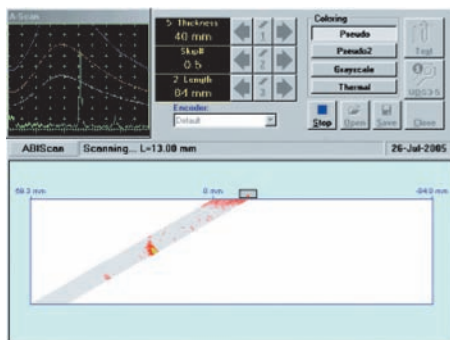
Apart from standard digital flaw detector ISONIC 2005 can be used for a variety of ultrasonic inspection tasks.



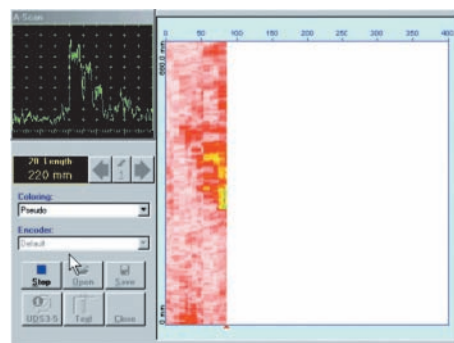
Thickness Profile B-Scan imaging and recording which is presented in the format compatible with various Risk Based Inspection and Maintenance procedures.



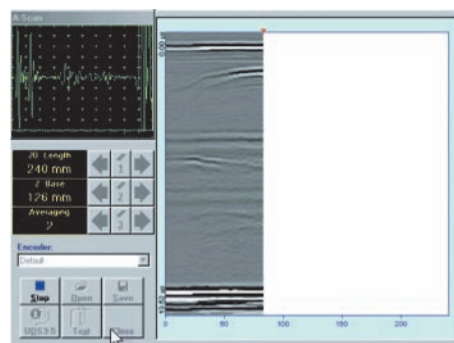
B-Scan cross-sectional imaging and recording of defects for longitudinal and shear wave inspection is performed through continuous measuring of echo amplitudes and reflectors coordinates along the probe trace.



CB-Scan horizontal plane-view imaging & recording of defects for shear, surface and **guided wave inspection** is performed through continuous measuring of echo amplitudes & reflectors coordinates along the probe trace.



TOFD Inspection RF B-Scan and D-Scan Imaging



For all scanning, A-Scans are captured for each probe position along the probe trace. The same can be played back and evaluated off-line at post processing stage.

This unique feature makes it possible off-line defect characterization through echodynamic pattern analysis

ISONIC range of portable digital ultrasonic flaw detectors has practically unlimited capacity for storing of:

- Single A-Scans accompanied with corresponding instrument settings.
- Ultrasonic signal spectrum graphs (FFT) accompanied with corresponding RF A-Scans and instrument settings.
- Various A-Scans sequence records along with corresponding Thickness Profiles, B-Scans, CB-Scans or TOFD Maps depending on mode of operation selected; each record is accompanied with corresponding instrument settings.

ISONIC 2006

ISONIC 2006 has built-in airborne ultrasound encoder controller and appropriate interface which is used for XY- Scanning.



ISONIC 2006 is a successor of very well known ISONIC 2001 model, which became world's leading multitask portable ultrasonic testing and imaging equipment during recent years. Comparing to its predecessor ISONIC 2006 has significantly improved portability and weight, battery life, ultrasonic performance, data processing speed, and human interface.

ISONIC 2007

ISONIC 2007 is a **dual Channel** Portable Digital Ultrasonic Flaw Detector and Recorder on ISONIC 2005 platform.



ISONIC 2008

ISONIC 2008 is a portable **8-Channel** Digital Ultrasonic Flaw Detector & Recorder and can be used as:

- Affordable portable AUT Solutions
- Single & Multi-Channel Inspection
- Manual, Semi-automatic & Automatic Scanning
- Parallel/Sequential Pulsing Receiving & Recording

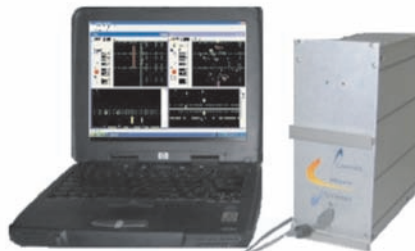


All ISONIC range of portable digital ultrasonic flaw detectors complies with requirements of International Codes.

For more information on ISONICs, kindly log to www.sonotronndt.com or write to us.

Eddy current testing of tube, bars & wires

CMS is a globally recognized leader for testing semi-finished products and has more than 20 years of experience in offering testing systems for all types of semi-finished metal tube, bar and wire both during production and in final inspection.

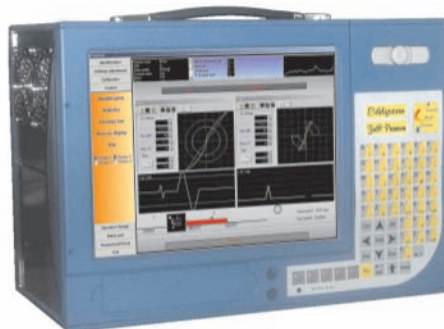


Zet@Micro

Zet@ Micro is a economical eddy current tester, it comprises of latest digital electronics and a computer .It is used for on-line or off-line flaw detection, metal sorting etc.

It displays real time process and complies with all requirements (ASTM, API, DIN, SEP...)

Zet@Premium & Master



Zet@Premium & Master has an in-built computer / display and can be used for on-line or off-line flaw detection, metal sorting of wires, bars, automotive parts, tubes made of austenitic, ferrous and non ferrous steel metal

Zet@Premium & Master has multichannel capabilities and is recommended to use with multi sensors, Rotating systems, Hot Inspection etc.

Eddyscan 30X

Eddyscan 30X allows control of multiple lines (up to 6 lines). simultaneously with only one equipment.



Advantages: High inspection speeds, Noise immunity, Simultaneous and/or multiplexed injection, Wide dynamic range, Multi-channel, Multi-frequency, Versatile, user-friendly.

Rotary Magnetic Flux Leakage Tester

Magnetic Flux Leakage inspection system is developed for the detection of longitudinal oriented defect on the surface of black or bright metal bars.

Rotating System: With 5 different head sizes, the system is adaptable to any production line.



Advantages: Changing probes is quick and easy, setup time for different diameters is fast & simple. High rotating speed (up to 9000 rpm for size 1), 2-4-8 probe configuration (no contact with the product, Automatic GAP control).

Eddy Current Accessories, Coils & Software

CMS offers a series of eddy current accessories like:

Standard/opening or sectorial magnetizing units, standard and specific demagnetizing units AC and/or DC, marking systems, rotating gun, 2 axes table, support coils, centering devices etc.

Coils like: Opening encircling coils, encircling coils, I.D. Probes, floating coil, hot inspection coil etc.



Softwares for: faster equipment settings, data acquisition, and statistical display of results, controlled product history & reports etc.

For more information on CMS Eddy Current products & solutions, kindly log on to www.cmseddyscan.com or write to us.

Eddy Current and Ultrasonic Probes for Aviation Industry

Techna NDT manufactures probes/transducers, standards & accessories used for the inspection of aircraft airframe and powerplants related to both commercial & military operations.



For more information on Techna NDT products, kindly log to www.technandt.com or write to us.

Magnetic Inductive Measurement Probe for thin coatings

In addition to standard probes, operating on the Hall effect principle, Automation Dr. Nix has introduced a magnetic inductive measurement probe i.e. **MI Fe 500 μm** . The MI Fe 500 μm is capable of measuring non-ferromagnetic metal coatings (such as: chromium, copper, zinc, etc.) as well as lacquer, enamel or plastic coatings on steel substrates especially within the lower measuring range of 0 - 500 μm .



For more information on magnetic inductive probe, kindly log to www.qnix.de or write to us.



Changing Colours of Equotip



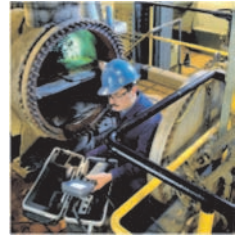
Proceq SA, Switzerland - the inventors of rebound testing principle and Equotip range of metal hardness testers have decided to change the old yellow Equotip to the new shade of blue colour which is also the Proceq's logo colour.

For more information on portable hardness testers, kindly log to www.proceq.com or write to us.

Inspection Services 24X7

Boroscopy/Remote Visual Inspection (RVI) Services

Remote Visual Inspection is used to visually inspect plant components for surface defects, general condition, degradation, blockages & foreign material. It can be used as stand alone inspection or as a complement to other non destructive evaluation (NDE) techniques, such as eddy current, ultrasonic or X-ray, in order to qualify unclear signals or pinpoint where a more thorough inspection is needed.



Applications:

- Electrical generators and transformers.
- Gas, steam and wind turbines.
- Sanitary piping and tubing.
- Boiler water piping & components. Nuclear reactor heads, reactor coolant pumps, demineralizers, containment structure, and other components and many more.

Ultrasonic Flaw Detection

In ultrasonic testing, high frequency sound waves, created by a vibrated crystal in probe, are transmitted into a material to detect imperfections or to locate changes in material properties. The most commonly used ultrasonic testing technique is pulse echo, where-by sound is introduced into a test object and reflections (echoes) from internal imperfections or the part's geometrical surfaces are returned to a receiver. This method is very sensitive to detect crack type defects but requires extensive training for operator to interpret the result.



Ultrasonic Thickness Gauging

Ultrasonic waves are used to determine the thickness of some metallic parts like plastic glass etc.



Applications:

To measure thickness of components structures etc. & also to measure reduction in thickness due to erosion & corrosion.

Magnetic Particle Inspection

This NDT method is accomplished by inducing a magnetic field in a ferromagnetic material and then dusting the surface with iron particles (either dry or suspended in liquid).



Surface and near-surface flaws produce magnetic poles or distort the magnetic field in such a way that the iron particles are attracted and concentrated. This produces a visible indication of defect on the surface of the material. Therefore, the method is most applicable for detecting the surface or sub-surface defects.

Magnetic particle can be applied in various types depending on the applications required. It could be wet, powder or fluorescent.

Liquid Penetrant

The test object is coated with a solution that contains a visible or fluorescent dye. Excess solution is then removed from the surface of the object but leaving it in surface breaking defects.

A developer is then applied to draw the penetrant out of the defects. With fluorescent dyes, ultraviolet light is used to make the bleedout fluoresce brightly, thus allowing imperfections to be readily seen. With visible dyes, vivid color contrasts between the penetrant and developer make "bleedout" easy to see. This method is only applied to detect the defects so called open-to-surface.



Hardness Testing

We offer on-site testing of heavy or large components difficult to access having confined test locations before or after installation by using state of the art portable hardness testing equipments.



For more information on Inspection Services, kindly log on to our website www.ndts.co.in or write to us.

FV Series High Intensity Radiographic Film illuminator.

Salient features

- 36 Watt X2 CFL tubes
- Lamp Life 15,000 Hours
- Built-in writing lamp
- Electronic brightness control
- Stainless steel corrosion resistance case
- Foot switch control



Specifications

Film Density: Can view densities up to 4.0D
 Dimensions: 550 mm X 220 mm X 200 mm
 Viewing Area: 250 mm X 100 mm
 Cooling: High speed two cooling fans
 Intensity Control: 10 ~ 100% Continuous
 Power Input: 230VAC 50/60 Hz
 Operating temperature: -10 to +60°C
 For more information on Film Viewers, kindly write to us.

Company News

With the support of ISNT (India Society of Non Destructive Testing, NDTs organized three seminars on Metal Hardness Testing, which were held at Mumbai, Pune & Chennai.

The speaker for these seminar was Dr. Ralph T. Mennicke - Product Manager (Proceq SA, Switzerland)



We once again request you to kindly update your contact details to receive a printed copy of the NDTs News Letter.

For suggestions, please write to: The Editor - NDTs News, **NDTS India (P) Limited** 612, The Great Eastern Galleria, Plot No. 20, Sector 4, Nerul, New Bombay 400706, India
 Tel.: +91-22-2770 3913 / 23, Fax: +91-22-2770 3903, E-mail: info@ndts.co.in
 Visit us at: www.ndts.co.in

BOOK - POST

If undelivered, please return to:
NDTS India (P) Limited. 612 The Great East ern Galleria, Plot No.20, Sect or 4, Nerul, New Bom bay 400 706