NDTS would like to wish all their customers, principals and well wishers a very bright & prosperous 2008.

Firstly, we would like to apologize for not bringing out July - September 2007 News Letter issue, as your own News Letter was in the process of make-over and hence forth you can expect a printed copy also. In order to streamline the data base, we request you to kindly share your updated contact details.

We also look forward for your valuable feedback & suggestions to enhance the quality of News Letter.

EQUOTIP Bambino - the new portable hardness tester

The EQUOTIP Bambino is an easy-to-use portable hardness tester for precise measurements on most metals. The BAMBINO combines modern electronics and an innovative impact device to offer an unmatched price/performance ratio. This stand-alone tester does not require a separate indicating device, cable, or PC hardware. Through its light and compact design, the Bambino is ideal for quality control and testing for incoming inspection and throughout production. Its user-friendly operating interface and its practical function make the Bambino the most ergonomic integrated

rebound hardness tester available.

The EQUOTIP Bambino also features:

- standardized testing according to DIN 50156 and ASTM A956
- automatic recognition & compensation for the impact direction - highly accurate
- large easy-to-read high-contrast LCD display - makes readings easier
- converts the individual readings and mean test results to all common hardness scales (HV, HB, HRC, HRB, HS)
- easy operation - setting of all test parameters via the 3-button keypad
- self diagnostics
- scratch-resistant aluminum housing - rugged and durable
- intelligent On/Standby power switching for optimum battery charge life
- the internal Li-ion battery can be recharged through the USB port or using the optional external charger
- compact size for easy carrying just 145mm x 44mm x 20mm
- anytime upgrade to EQUOTIP Piccolo.

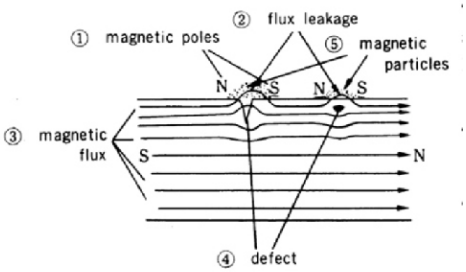
The EQUOTIP Bambino measures the Leeb hardness value (HL) of materials, which is a ratio of the rebound velocity to the impact velocity. This HL value can then be converted to other standard hardness scales such as Rockwell, Brinell, Shore and Vickers using conversion tables generated from the original Leeb standard and stored in the display unit. Thus, EQUOTIP instrument readings from today will match any EQUOTIP instrument readings since production started back in 1975. EQUOTIP Bambino can be used with a variety of support rings that allow for measurements on a wide variety of part geometries.

For more information, kindly log to www.proceqasia.com or write to us.

Magnetic Particle Testing Chemicals

Magnetic particle testing so called MT or MPT. This method is suitable for the surface/sub-surface testing of ferro-magnetic materials as steel. This method is based on the principle that iron sand shall be attracted by magnet. In this method, at first, the material or part to be tested shall be magnetized, then apply the magnetic particles to the objective surface. The magnetic particles shall be attracted by the leakage flux formed at the defect and forms an indication. The formed indication is as 10 or more times large as the defect in its width. So, we can detect the defect easily.

There are 2 types of magnetic particle, one is non-fluorescent (White, red, Black) for the



observation under white light, the other is fluorescent for the observation under UV light. The other categorization is based on the application; those are Dry method and Wet method. In Dry method, magnetic particle shall be applied to the surface as it stands. In Wet method, magnetic particle shall be dispersed in oil or water. Some water conditioner shall be used for water suspension usage for uniformity ensuring and wettability improvement.

Super-Magna / Eco-Magna

Choose the suitable Super-Magna or Eco-Magna depending upon your application.

Fluorescent Magnetic Particle	
General purpose	LY-10 & LY-40 (for water) LY-50 (for oil)
High brightness/ Automatic testing	LY-20 (for water)
Precision testing	LY-30 (for water)
Super-precision testing	LY-2000

Concentrated Fluorescent Magnetic Particle Suspension - Eco-Magna	
General Purpose	LY-10 Conc., LY-40 Conc.
High brightness/ Automatic testing	LY-20 Conc.
Precision testing	LY-30 Conc.

Fluorescent Magnetic Particle Aerosol Type	
Oil based	LY-10 sol (oil)
Water based	LY-10 sol (Water)
Rapid dry	LY-10 sol (rapid dry)

Non-fluorescent Magnetic Particle	
For Dry usage	White: WD-55, WD-103Y
For Wet usage	Black: BW-333

Major application

Steel, Ferrous Metals: Billet, Bar, Wire, Plate, Mill roll, Forging, Seamless tube, Welded tube.

Vehicles: Crank shaft, Cam shaft, Automotive parts, Aircraft engine, Landing gear, Airframe, Railway vehicle, Axle, Undercarriage, Rail.

Power / Petro / Chemical Plant: Tank bottom plate, Welding, LPG holder, Turbine shaft, Bearing, Casing of power plant, Pressure Vessel, Pump, Valve, Joint, Tubing.

Machinery and parts: Bearing, Pump, Valve, Joint, Hydraulic unit, Bolt, Construction machinery, Loader.

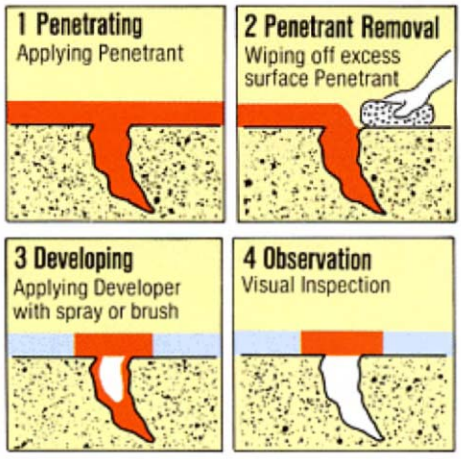
Electric: Insulator cap.

Liquid Penetrant Testing Chemicals

Liquid penetrant testing so called PT or LPT, this method can be applied to the surface inspection of almost every products and materials regardless their properties. LPT is based on the simple rule called capillary phenomenon. The penetrant penetrates into the narrow gapped defect, and the defect shall be fulfilled with the penetrant.

Then the fulfilled penetrant shall be taken up from the defect to the surface by developing material and it spreads around the defect on the surface.

Usually, LPT materials are composed of Penetrant (P), Developer (D) and Remover (R). The process shall be (1) Pre-cleaning (2) Apply penetrant (3) Remove penetrant (4) Developing (5)Inspect the surface (6)Post-cleaning.



There are 2 kinds of penetrant; those are Dye-penetrant and Fluorescent-penetrant. Developer shall be 3 kinds; those are Dry Developer, Aqueous Developer and Non-aqueous Developer. Remover shall be used for pre-cleaning, penetrant removing and post-cleaning.

Visible Dye Penetrant Testing Chemicals - Super-Check / Eco-Check

Super-Check Product List	
General Purpose	U-ST Series
Water washable	U-G III Series
Low halogen / low sulfur	U-T Series
Non-inflammable	U-NU-G Series, NU-C Series
For high-temperature	H Series

Eco-Check Product List	
General Purpose	E-ST Jumbo
Water washable	EP-W
Low halogen / low sulfur	E-T

Major application

Steel Metals: Facility maintenance, Slab, Pipe, Casting, Aluminum, Titanium, Lost-wax products.

Vehicles: Automotive engine, Aircraft engine, Vessel, Engine leak, Crank, Camshaft, Connecting rod, Airframe, Railway vehicle, Rail.

Power/Petro/Chemical Plant: Boiler, Turbine, Piping of Nuclear/ Fire/Hydraulic power plant, Pressure Vessel, Heat Exchanger.

Machinery & parts: Bearing, Valve, Joint, Construction machine, Farm machine, Hydraulic unit.

Electric & Electronics: Power equipment welding, PCB, Ceramic package, Spark plug, Ceramic sensor.

Transportation: Railway, Vehicle, Wheel, under carriage maintenance.

Civil engineering & construction: Structure, Piping, welding, Concrete.

Fluorescent Dye Penetrant Testing Chemicals - Super-Glo / Eco-Glo

Super-Glo/Eco-Glo is the fluorescent penetrant materials to be used for higher sensitivity testing. The principle and usage is the same as Super-Check / Eco-Check, but UV Light shall be used for observation. Qualified materials of AMS, aircraft manufacturers also available.

Super-Glo Product List			
Penetrant	General Purpose	Water washable	OD-18S, OD-1800, OD-2800N
	Precision Testing	Water washable	OD-2800 I, II, III, IV
		Post-emulsifiable	OD-7000
	For water recycling		RP-2000C
Developer	Dry		DN-600P
	Non-aqueous		DN-600PS
	Aqueous		DN-905D
Emulsifier	Oil-based		OD-1700B
AMS qualified, for aircraft, Penetrant: P series Developer: D series, Emulsifier: R series, Remover: S series			

Eco-Glo Product List			
Penetrant	General purpose	Water washable	EG-2000

Major application

Steel, Metals: Mill roll, Zirconium alloy tube, Castings and Forging, Aluminum, Titanium, Lost-wax products.

Vehicles: Automotive engine, Aircraft engine, Engine leak, Body leak, Airframe, Aluminum / Titanium parts, Turbine blade, Railway vehicle, Rail.

Power/Petro/Chemical Plant: Turbine blade of power plant, Pressure Vessel, Condenser leak, Pump, Valve, Joint.

Machinery and parts: Bearing, Valve, Joint, Hydraulic unit.

Electric and Electronics: PCB, Ceramic package, Spark plug, Ceramic sensor, Insulator.

For more information, kindly log to www.marktec.co.jp or write to us.

Ultrasonic Bond Testers

Three new BondaScope series, ultrasonic bond testers are available to meet simple to complex applications. All units offer tremendous mix of high speed performance, features and value. Highlights of each model are outlined below:

BondaScope 300 - Pitch-Catch Mode (Tone Burst & High Energy)

The BondaScope series of ultrasonic bond testers defines a new standard for ease of use, performance, features & portability in a handheld composite bond tester. The BondaScope 300 bond tester operates in a user selectable tone burst or pulsed, pitch-catch mode with pulse rates up to 300Hz. Primary applications include impact damage assessment, skin-honeycomb, skin-skin composite, AL-AL honeycomb and more.

Three simple direct access keys set the desired operational mode from full screen RF-phase bond profile, RF-amplitude bond profile and exclusive bond "signature" mode. Setup can be as easy as turn the instrument on, plug in the probe and press mode 1, 2 or 3 and start inspecting.

BondaScope 350 - Resonance and Pitch-Catch (Tone Burst and High Energy Spike)

The BondaScope 350 ultrasonic bond tester is a step up from the BondaScope 300 offering a flying-dot, impedance plane resonance mode in addition to a user selectable tone burst or pulsed, pitch-catch mode with pulse rates up to 300Hz.

The BondaScope 350 composite bond tester is well suited to inspecting metallic, nonmetallic and combination metallic-nonmetallic structures for a variety of anomalous conditions. These include measurable levels of unbonds, voids, delaminations, inclusions, porosity, fiber damage, core damage, bondline thickness variations and certain material properties. Inspectable configurations include adhesively-bonded laminates, advanced fiber composites and honeycombs.

Multi-layered Laminates	Graphite-Resin Composites
Boron Fiber Composites	Kevlar Composites
Glass Fiber Composites	Composites-to-Substrate
Composite-to-composite	Honeycomb Structures
Skin-to-Honeycomb	Honeycomb-to-Honeycomb
Impact Damage	Rub Strip

BondaScope 3100 - Multi-mode ultrasonic bond tester - resonance, pitch-catch &

mechanical impedance analysis (MIA) mode

The BondaScope 3100 composite bond tester is the latest in a full series of affordable, feature rich, and high performance ultrasonic bond testers available from NDT Systems, Inc., USA **the originators of the first microprocessor based, impedance plane resonance bond tester.**

BondaScope 3100 include bond profile mode, split screen, high energy - pulsed pitch-catch mode, unique sweeping mechanical impedance analysis mode (sweep MI), separate phase and amplitude alarm ability, X or digital phosphor EL display mode, true user adjustable display persistence & much more.

Applications include the inspection of metalic, non-metalic and combination metalic/non-metalic structures for a variety of anomolous conditions. These include measurable levels of unbonds, voids, delaminations, inclusions, porosity, fibre / core damage, bondline thickness variations, & certain material properties. Inspectable configurations include adhesivly-bonded laminates, advanced fiber composites & honeycomb to mention a few. Some typical applications include:

Multi-layered Laminates	Graphite-Resin Composites
Boron Fiber Composites	Kevlar Composites
Glass Fiber Composites	Composites-to-Substrate
Composite-to-composite	Honeycomb Structures
Skin-to-Honeycomb	Honeycomb-to-Honeycomb
Impact Damage	Rub Strip

For more information, kindly log to www.ndtsystems.com or write to us.

What's New in RVI (Remote Visual Inspection)

iCapture Smart

The iCapture Smart is a mini image capture and display device for use with Videoscopes and CCD Cameras. The iCapture features a bright LCD display to view live video or stored still images. Images can be effortlessly saved to a memory card for later transfer to a personal computer.

In addition to its image capture capabilities, the iCapture can provide power for IT Concepts Videoscopes and CCD Cameras. This feature means the iCapture is a practical and highly portable alternative to a fully featured video imaging hub. A typical iCapture Videoscope system would make use of a K series Videoscope, a hand-held light source and a single umbilical cable between the iCapture device and the Videoscope.

The iCapture Smart is powered by a 100-240V AC adapter with a stabilized 9-12V DC output.

For more information, kindly log to www.itconceptsworld.com or write to us.

Film Viewers

Compact Film Illuminators

A new concept in radiographic film viewing. The Verlux 550 range of film illuminators offers a unique, revolutionary, green light source which allows easy viewing of high density radiographs no need for high intensity spots, masking or darkened viewing areas.

Verlux illuminators use green light with a narrow wavelength band at 550nm which is the maximum sensitivity of the human eye; so when comparing equal intensity of green and white light, the green appears brighter. This has the benefit of making the radiographs easier to view. The Verlux 550 film illuminators meet the requirements of EN25580: 1992; ASTM E 1390-90 and ISO 5580: 1995

Advantages over conventional illuminators:

- Convenient no need to darken viewing room
- High density can view densities of up to 4.5 without spot
- Low heat will not damage films
- Low power energy saving
- Compact small, light weight
- Long life tube average lamp life 2000 hours
- Design modern stylish, simple safe sealed and insulated

FV Series

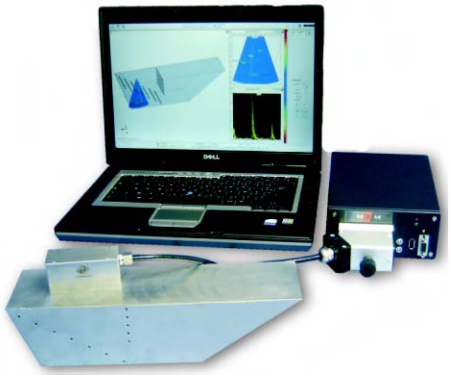
NDTS is pleased to announce the induction of FV Series Film Viewers in their product range. FV Series film viewers are designed and developed by NDTS team.

Salient Features

- 1000 Watt Halogen
- Built-in writing lamp
- Electronic brightness control
- Foot switch control
- Viewing Area: 4½"X17"
- Available in Stainless Steel & Mild Steel

For more information, kindly write to us.

Pocket 16X64 - New Ultrasonic Phased Array System



The Multi2000 Pocket 16X64 is the new generation of portable systems developed by M2M, France. Power is supplied by a battery. A USB connection allows the data transfer to a PC. Encoders input as well as external trigger are also available.

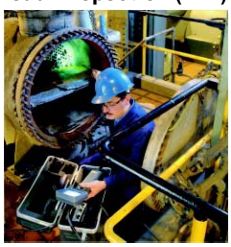
Both Multi2000 Pocket Hardware are integrated on a single electronic board for both the analog parts (transmission and reception of ultrasonic signals) and numerical parts (elementary signals processing and sum accordingly to focal laws).

For further information, kindly log to www.m2m-ndt.com or write to us.

Inspection Services 24X7

Presently, NDTS offers 24X7 inspection services in following disciplines:

Boroscopy / Remote Visual Inspection (RVI) Services



RVI 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.
- Piping systems such as service water, fire protection, oil, coal handling, steam, boiler, feedwater, and other piping.
- Condenser, feedwater heaters, steam generators, and other heat exchangers.
- Foreign material search and retrieval.

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 errosion & 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).

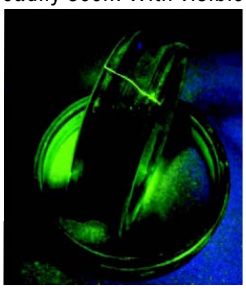
Surface and near-surface flaws produce magnetic poles or distort the magnetic field in such a way that the iron particles are attracted and concentrated. This produces a visible indication of defect on the surface of the material. Therefore, the method is most applicable for detecting the surface or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

Company News

NDTS displayed a gamut of NDT Solutions & latest Inspection technologies at **NMD-ATM 2007** organized by Indian Institute of Metals, **Foundry Forge India 2007, P-MECH India 2007 and NDE - 2007** an annual National seminar organized by the Indian Society for Non Destructive Testing (ISNT). Last year it was organized at Vadodara. The seminar was also supported by an industrial exhibition.

NMD-ATM 2007

P-MECH India 2007

NDE - 2007

We thank you for all the cooperation in the year 2007 and look forward to another successful business year together with you. - NDTS Team

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New Members in NDTS Team:

Kiran Badekar
Service Manager
Kiran has lot of experience with NDT instrumentation & will be in position to offer you our repair and maintenance services. Please feel free to email him at kiran@ndts.co.in or call him at 093223 08493.

Manohar Prabhu
Product Manager
Manohar has lot of experience with capital goods industry & he is ready to provide you sales and application support for portable hardness testers & RVI solutions. Please feel free to email him at manohar@ndts.co.in or call him at 093223 08491.

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