



**Vibrant NDT Services Pvt Ltd**

Quality | Innovative | Reliable

Phased Array UT

# Non Destructive Testing

Inspection & Consulting | Manufacturing & Products | Training & Placement

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## 1.0 Introduction

Introducing Vibrant NDT Services Pvt. Ltd., an adaptable Service provider and Manufacturer in the field of Non Destructive Testing, standardized with ISO 9001:2015 & ISO/IEC 17025:2005 certifications.

The company has shown continuous growth and development, by addressing a wide range of dynamic and challenging demands in Service and Manufacturing in the field of Non Destructive Testing. It has sophisticated manufacturing facilities at Ambattur, Chennai. Our Training Institute supported by a team of Intellects and a well-equipped Laboratory serves as a source of supplying Efficient and Reliable NDT Professionals to the world.

Our goal is to maximize your plant's uptime by minimizing downtime with fast, consistent and reliable inspection techniques and Providing Solutions through Creativity & Innovations in various NDT Techniques.

## 2.0 Services Offered

VNSPL leads the way with new inspection techniques driven by the needs and specific applications of the industry to offer you a broader range of inspection solutions & NDT Equipment. We offer the following services to our clients,

1. Non Destructive Testing (NDT) & Partial Destructive Testing
2. Manufacture, Supply, AMC and Calibration of NDT Equipment
3. Training & Certifications for ASNT Level-II & Welder Qualifications
4. Manpower Supply & NDT Equipment Rental

### 2.1 Inspection Services

1. Advanced UT - Phased Array UT(PAUT) & TOFD / IRIS
2. Ultrasonic Flaw Detection(UFD)
3. Magnetic Particle Inspection (MPI)
4. Penetrant Testing (PT)
5. Visual Inspection & Videoscopy/Boroscopy (VI)
6. Ultrasonic Thickness Gauging /D Metering (UTG)
7. In-situ Oxide Scale Thickness Measurement (IOT)
8. Coating Thickness & Thru-Coat Thickness Measurements (CT)
9. Nodularity Inspection by Ultrasonic Velocity Measurement
10. Leak Testing using by Helium, Hydrogen& Nitrogen (LT)
11. Eddy Current Testing & Tube Inspections (ECT/ RFET/MFL)
12. Eddy current Metal Sorting
13. Positive Material Identifications (PMI)
14. Infra-Red Thermography Testing (IRT)
15. Residual Life Time Assessment(RLA) of Pressure Vessels, Boilers, Rotor & Turbines
16. Conditional Assessment (CA) of Pressure Vessels, Boilers, Rotor & Turbines
17. Corrosion Monitoring & Corrosion Mapping
18. Vibration Analysis (VA)
19. Ultrasonic Concrete Testing-Pulse Velocity (UCT)



20. Hardness Testing (HT)

21. In-situ Metallography Replica (IMR)

### 3.0 Phased Array UT

Ultrasonic Phased Array technology is a very useful technique. Normal as well as angle inspection (at multiple angles) can be done with the same probe. Also the speed of testing as well as the probability of detection is high. Results can be viewed in A, B, C scan and sectional scan. The complete data captured can be stored during testing, and post processing can be carried out later as required. This technique is very useful for weld inspection, in a range of 0.84" small tube to a flat plate, with the use of a variety of scanners and phased array probes. It can also be used in composite examinations.

#### For Service Enquiries

Olympus OmniScan is modular equipment. Different modules - Phased Array UT, Conventional UT modules 8 channels/4 channels/2 channels, ECT, Eddy Current Array - can be used based on requirements.

### 3.1 OmniScan MX2

The result of over 10 years of proven leadership in modular NDT test platforms, the OmniScan MX has been the most successful portable and modular phased array test instrument produced by Olympus to date, with thousands of units in use throughout the world.

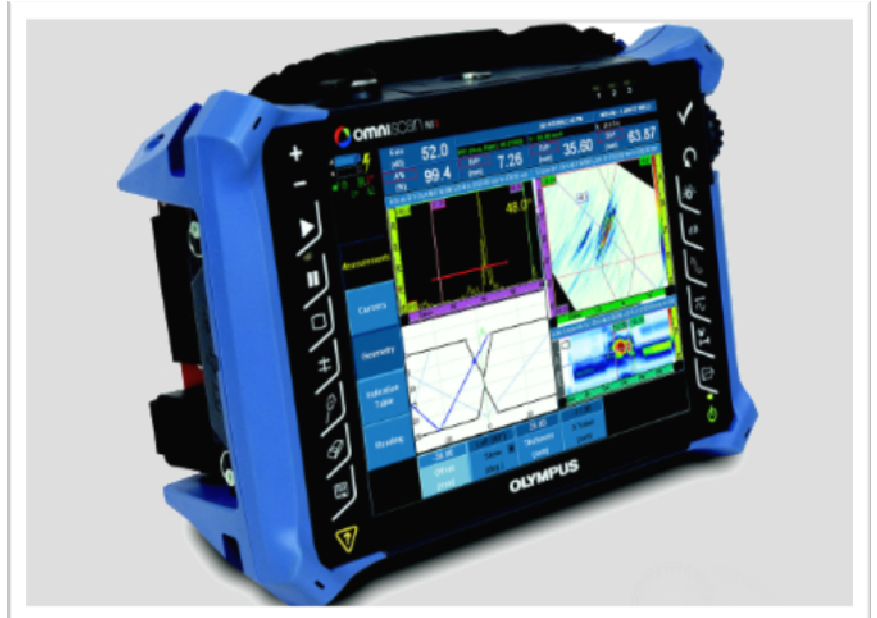
Olympus now offers a new PA module with TOFD, a new UT module, as well as new software programs (NDT SetupBuilder and new OmniPC version) that expand the capabilities of the successful OmniScan MX2 platform and improve the workflow efficiency of non-destructive testing inspections.

The latest 4.2 OmniScan software from Olympus includes many enhancements and new functionalities for the weld and corrosion markets.

In the effort for continuous improvement, the software interface was simplified and the response time optimised in order to provide the best experience possible for customers.

#### New features include:

- Export C-Scan
- New End-View with group merge
- Interleave
- Analysis attenuation gain
- Scrolling layouts for easy interpretation
- Improved accessibility with more interactive menus
- Optimised main menus and wizards



### 3.2 OmniScan SX

The OmniScan® SX from Olympus is a flaw detector that benefits from more than 20 years of phased array experience and shares the OmniScan DNA. For improved ease of use, the OmniScan SX features a new streamlined software interface displayed on an 8.4" (21.3 cm) touch screen. A single-group and non-modular instrument, the OmniScan SX is easy to operate and cost-effective for less demanding applications.

The OmniScan SX comes in two models: the SX PA and SX UT. The SX PA is a 16:64 PR phased array unit, which, like the UT-only SX UT, is equipped with a conventional UT channel for pulse-echo, pitch-catch or TOFD inspection. Compared to the OmniScan MX2, the SX is 33% lighter and 50% smaller, offering an unprecedented level of portability for an OmniScan.

The OmniScan SX touch screen offers a full-screen mode option that maximizes visibility, essentially converting many menu functions into easy touch-screen operations. The intuitive interface provides smooth menu selection, zooming, gate adjustments, cursor movements, and text and value input. These, along with other premium integrated features, including easy-to-follow setup and calibration wizards, a rapid refresh rate for both the S-scan and A-scan displays, and a fast pulse repetition frequency (PRF), make the OmniScan SX a highly efficient inspection tool.

The OmniScan SX is fully compatible with the extensive portfolio of Olympus scanners, probes and accessories, as well as with its dedicated software companions, NDT SetupBuilder and OmniPC. Combined, the complete family of software and hardware contributes to a streamlined and efficient inspection workflow, from design and setup to acquisition and analysis.



*OmniScan SX*

### 4.0 Phased Array UT Probes and Wedges

Phased Array probes and wedges are rigorously tested to ensure conformance to the highest standards. An extensive database is available, containing characterisation records for each probe.



## 5.0 Scanners

### 5.1 ChainSCANNER

This product has the following features:

- Standard configuration using one or two probes and optional configuration using four probes for TOFD, phased array, or pulse-echo inspections
- Pipe range with outside diameters from 45 mm to 965 mm (1.75" to 38")
- Encoded manual scan on one or two axis (depend on the model)
- Ergonomic handle to protect encoder connectors and provide cable management
- Independent chain links mounted on bearing wheels coated with urethane for smooth rolling
- Easy clamping device for quick scanner positioning
- Spring-loaded probe holders ensuring good probe contact in any scanner position or orientation
- Compatible with the OmniScan®, the TomoScan FOCUS LT™ (with optional adaptor), and other instruments using the appropriate encoder cable



*ChainSCANNER*



*COBRA Scanner*

### 5.2 COBRA Scanner

The COBRA manual scanner combined with OmniScan MX2 flaw detector and a 16:64 module is used to perform circumferential weld inspection on small-diameter pipes. The COBRA can hold two PA probes to inspect pipes with OD ranging from 0.84" to 4.5"

- Covers standard pipes from 0.84" to 4.5" OD (21 mm to 114 mm)
- Operates within 12 mm (0.5") clearance (on all standard pipes), permitting inspections in limited access areas
- Holds up to two phased array probes for complete weld coverage in one pass
- Easy installation and manipulation from one side of a row of pipes
- Can be configured to perform one-sided inspections for pipe-to-component evaluations
- Mechanical setup templates (included) eliminate need for pipe samples when preparing the scanner for standard pipes
- Design provides stable and constant pressure around full circumference of the pipe

- Urethane wheels provide smooth radial movement and limited axial drift
- Encoder resolution of 32 steps/mm
- Compact, lightweight, and portable
- Wedges and probes can be changed quickly and easily
- Distance between probes adjustable from 0 mm to 55 mm
- Spring-loaded scanner usable on Ferromagnetic and Non-ferromagnetic pipes
- Waterproof and rust-free

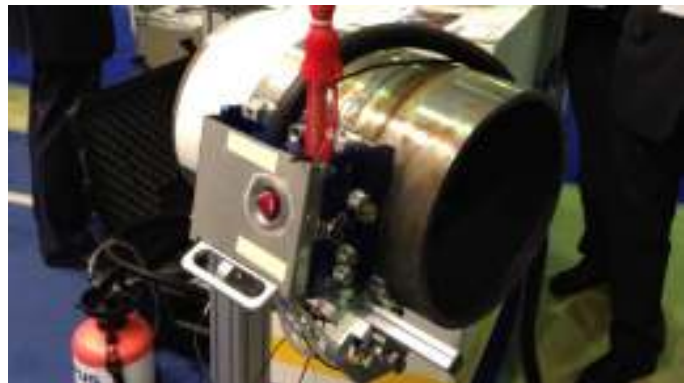
### 5.3 MapRover

**This product has the following features:**

- Four magnetic wheels that are motorised for constant data acquisition up to 147 mm/s
- Motorised raster arm allowing 600 mm scan width travelling at a speed up to 900 mm/s
- Touch screen remote control with two joysticks allowing performing jog or constant encoded motion as well as choice of two different complete automatic raster scan patterns
- Performs data acquisition using the OmniScan or TomoScan FOCUS instrumentation with less than five minutes configuration time
- Cable management system for increased reliability
- Emergency-stop button located on the scanner and on the power supply
- Divisible cable conduit umbilical offers cable protection and configuration flexibility
- Handle for scanner manipulation and umbilical attachment



*MapROVER*



*WeldROVER Scanner*

### 5.4 WeldROVER Scanner

The WeldROVER is a simple, industrial-strength, one-axis encoded motorised scanner that provides fully automated data acquisition. It makes efficient phased array weld inspections on ferromagnetic piping or vessel using up to 6 probes.

- Can support up to six probes for TOFD, phased array, or pulse-echo inspections
- Constant scanning speed control for smooth data acquisition at any speeds
- Compact motion controller allowing 10 different scan speeds from 5 mm/s to 50 mm/s
- Simple two-button remote control for jog or constant encoded motion either in backwards or forward direction

- Data acquisition using OmniScan or TomoScan FOCUS LT instrumentation with less than 5 minutes configuration time
- The four industrial-strength magnetic wheels are driven for use on ferromagnetic surface
- Integrated water manifold for simple and efficient couplant delivery
- Emergency-stop button located on the scanner
- Laser guide indicator helps the operator to follow the weld center line or any other inspection reference
- Room to integrate a remote pulser/preamplifier for improved TOFD-P/E inspections
- Divisible cable conduit umbilical offers cable protection and configuration flexibility; minimal time needed for probe reconfiguration
- Waterproof (IP65)

## Contact

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