



NDT SOLUTIONS INC

# MAUS<sup>®</sup> V

Automated  
Inspection System



The MAUS V system is the most versatile product in the NDT marketplace. Components can be configured from a suite of system options to address many inspection applications in the production and maintenance of aerospace structures.

### *Unique Features*

- Equipment Portability
- Easy Setup
- Inspection Versatility
- Rapid Inspection Rates

### *Inspection Applications*

- Metals
- Monolithic Composites
- Hybrid Composite-Metals
- Bonded Structures

### *Portable C-Scan Inspection System*

- Integrates Traditional and Nontraditional Inspection Techniques Into a Single Package
- Effective for Process Quality Inspections, Damage Assessment, Aging Structure Evaluation, and Repair Validation Programs
- Variety of Scanning Platforms to Provide Production Floor Inspection of Complex Composite Structures.

The MAUS® V system is a turnkey package configured with a combination of components listed below. There are several choices for each component to customize the system for specific inspection requirements. In addition, optional equipment is available that can enhance the system operation.

**Standard Components**

- MAUS V Electronics Chassis
- Laptop Computer with MAUS Setup and ImagIn Software
- Multiple Options for Scanners including:
  - Mini Scanner
  - Small Hand Scanner
  - Variable
  - Stroke Track Scanner
  - Snake Scanner
  - X-Y Table Scanner

**Available Sensor Sets**

- Ultrasonic Longitudinal and Angle Beam
- Ultrasonic Arrays
- Resonance
- Pitch/Catch
- Mechanical Impedance
- Eddy Current
- Magneto-Resistive

**Performance Specifications**

- Adjustable Data Pixel Sizes: 0.010”-0.500”, Increments of 0.010”
- Inspection Rates: Up to 100 sq ft/hr Using Single Sensors, Up to 1000 sq ft/hr Using Array Technology

**Software Features**

- Point, Line, and Area measurement
- Histogram Calculations
- Waveform Analysis
- Data Merge Utilities
- Parameter Combine Functions
- Hard Copy Data Prints
- Digital Data Store/Retrieve

**Optional Equipment**

- VACRS-Couplant Delivery/Recovery Subsystems
- MAUS Mini Cart

**MAUS V Applications**

**Ultrasonic Arrays**

The MAUS V system configurations frequently use multiple arrays to cover multiple surfaces on a complex composite part during a single pass inspection. This multiple array capability is particularly useful when full inspection of all areas in a complex part is required.

**Ultrasonic Pulse Echo**

- Allows for the detection of delaminations, voids, porosity, and foreign objects in composite laminates
- Data from multiple arrays combined in the data display providing a full C-scan image of the part

**Thru-Transmission**

- Two arrays are positioned on opposite sides of the structure
- Sound transmits from one array through the part to the second array
- C-scan map indicates the locations where the sound was attenuated as it was transmitted through the part

**Single Point Sensors**

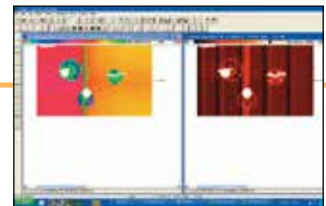
Several different types of sensors provide a menu of options when a MAUS V system is used to inspect many types of structures including metallic and/or composite materials.

**Bond Testing**

- Continuous wave sensors are used to detect bond line voids in adhesively bonded structures
- Displays the impedance changes that occur in the sensor signals as sensors are loaded by the local area of the structure

**Crack or Corrosion Detection**

- MAUS V eddy current C-scans easily identify corrosion between fuselage skin layers
- MAUS V eddy current scanner enables rapid inspection of many fastener holes without fastener removal



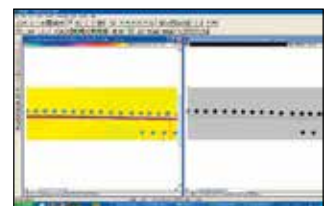
*Ultrasonic Pulse Echo*



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