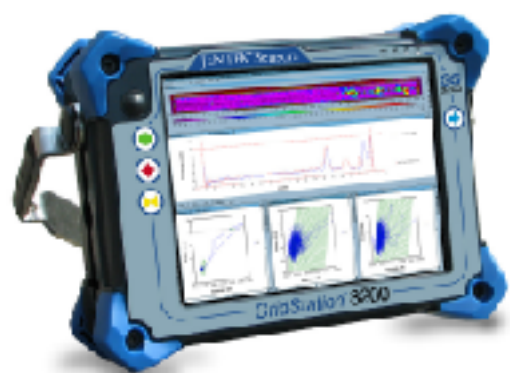


Corrosion Imaging for Multi-layered Aircraft Structures

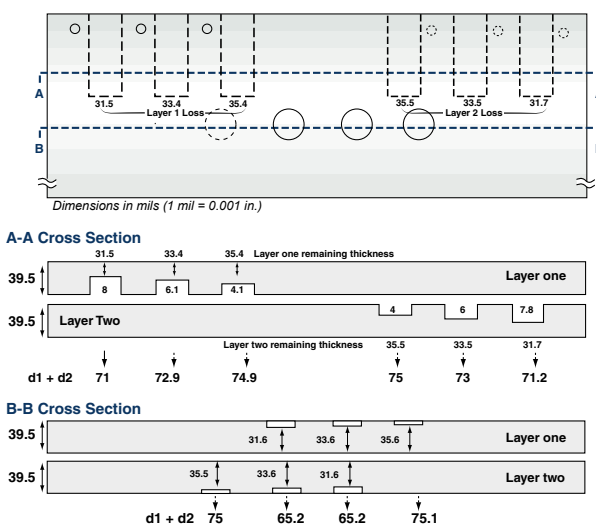
GridStation® 8200 System Capabilities:



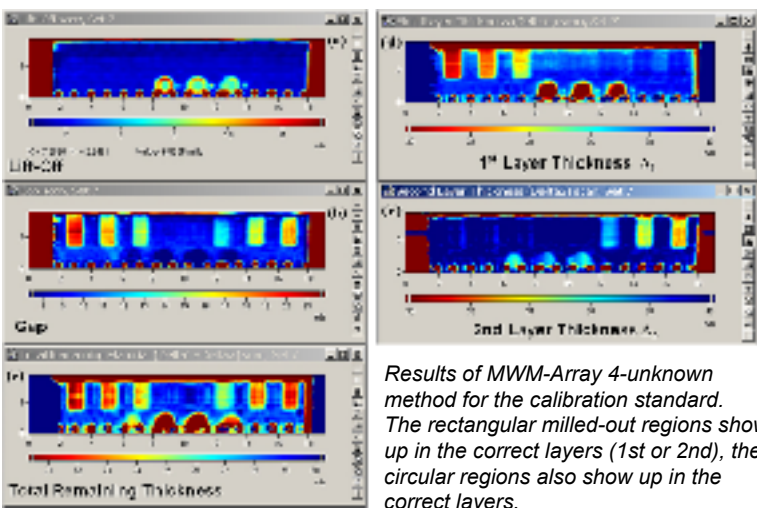
- First and second layer corrosion imaging and sizing
- Inspection through coatings and composite skins
- Inspect a square foot in seconds
- Simple calibration procedures
- Light weight (system less than 10 lbs)
- Can use simple low cost scanners
- Improved reliability and robustness, using HyperLattice-based inverse methods (see ASTM Standard E-2338)
- Immediate data analysis and automated reporting with minimal training required

Discrimination Between Layers

Material Loss Calibration Standards as Configured for MWM®-Array

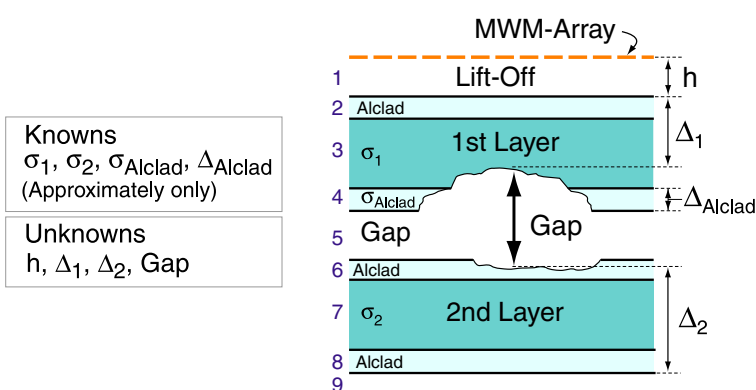


4-Unknown Method

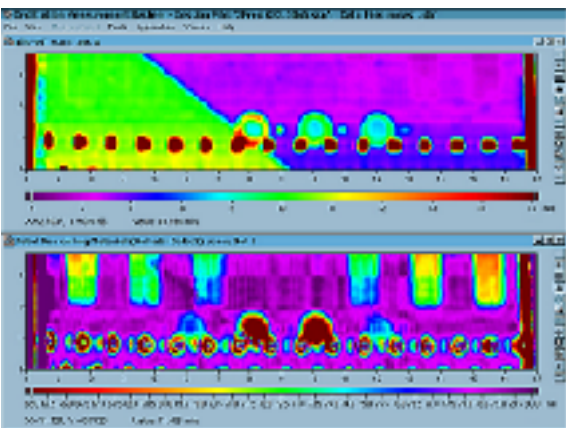


Results of MWM-Array 4-unknown method for the calibration standard. The rectangular milled-out regions show up in the correct layers (1st or 2nd), the circular regions also show up in the correct layers.

Multiple Layer Model used for Analysis of MWM-Array Scans

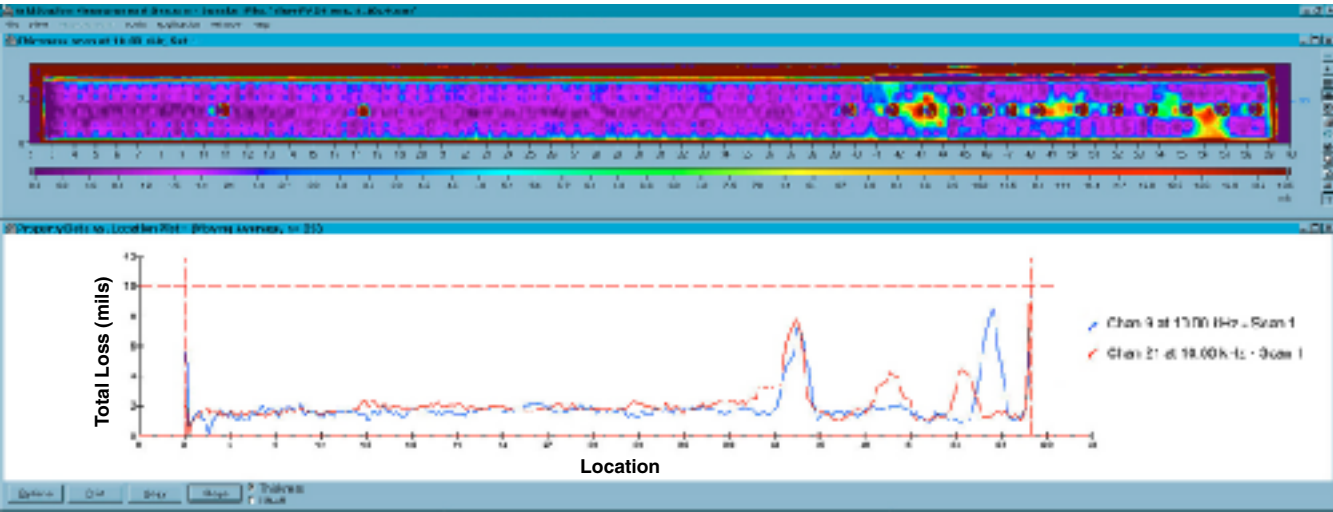


Capability to Correct for Variable Paint Thickness (see lift-off image below)

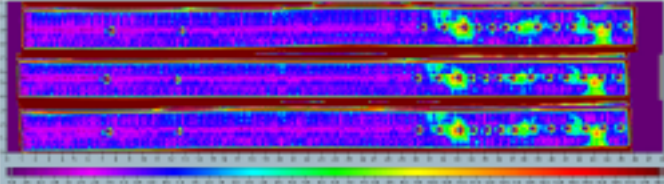


Rapid Scanning

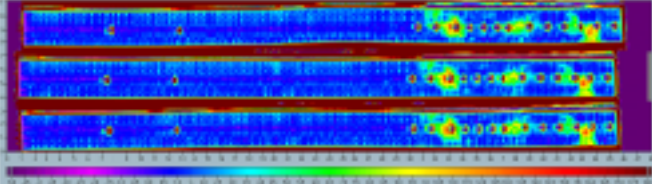
Scan entire lap joint in one pass at over 6 in./sec., using 2-Unknown screening method



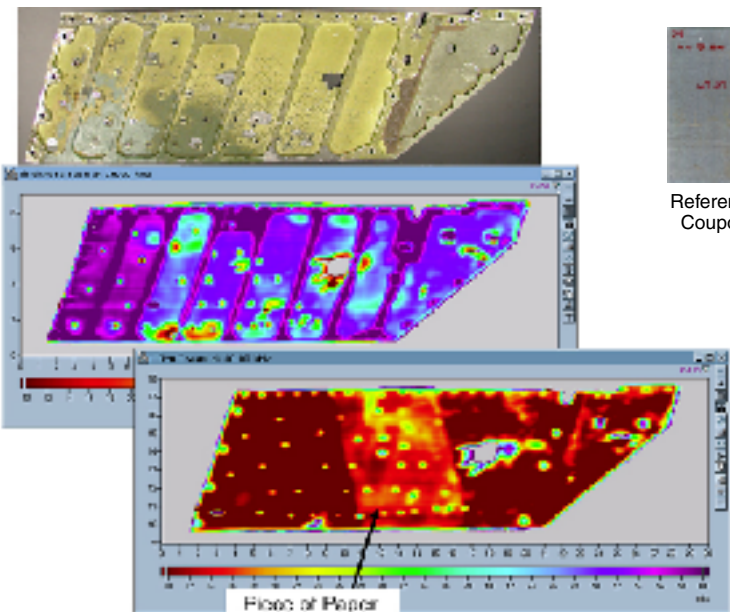
Without Alcad Correction



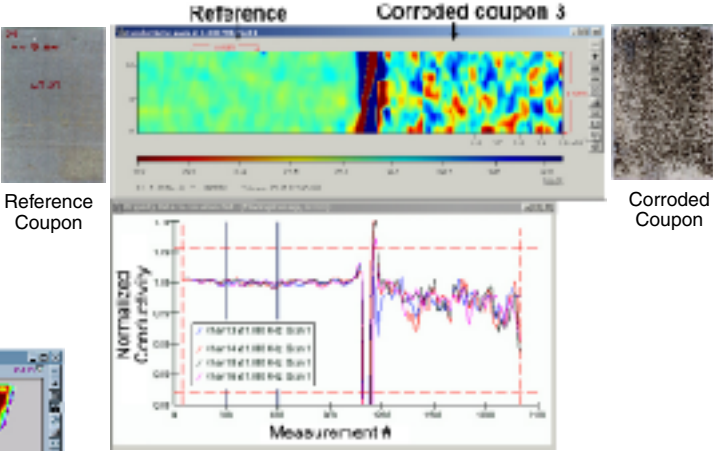
With Alcad Correction



Single Layer Chine Plate Thickness Image for Corrosion with Variable Coating (e.g.) Paint Thickness



Imaging of corrosion pitting through paint using high-resolution MWM-Arrays



Other Aerospace Applications for the MWM-Array and GridStation Systems Include:

- Engine component inspection for cracks with crack depth sizing
- Landing gear component inspection through metallic coatings
- Crack detection in lap joints
- Composite impact damage and thermal damage imaging
- Special coating characterization for engine components and structures
- Structural Health Monitoring (SHM) with permanently installed MWM-Arrays for cracks and corrosion
- Non-contact torque and load measurement using the patented JENTEK Magnetic Stress Gauges (MSGs)

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