

Kratos SRE: Nondestructive Solutions Development

UltraSpec® Swept-Frequency Ultrasonic Testing (UT)

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PROBLEM STATEMENT

Challenging NDE for ship structure integrity:

MATERIAL VARIABILITY and COMPLEXITY

- Multi-layered structures with dissimilar materials
 - Coated or bonded structures
- Materials with property variability
 - Porosity, grain structure, anisotropy
 - Thickness changes or repairs
- Structures with curvature, bends
- Inspections in which reference standards cannot represent all real-world conditions

NEED for IMPROVED DEFECT CHARACTERIZATION

- Sizing and Characterizing Defects

BENEFITS

IMPROVED DETECTION, ENHANCED INTERPRETATION

- Alleviate need to remove coatings to assess disbonds, interior damage
- Improved penetration and signal-to-noise ratio for **enhanced material understanding**
- Characterize materials to assess structure health
- Advanced Interpretation Module (AIM) includes easy-to-use human-assisted interpretation that requires minimal inspector training
- Robust self-referencing algorithms can be applied to assist when inspections have insufficient or invalid reference samples
- Manual or automated scanning solution options available

TECHNOLOGY SOLUTION

Kratos SRE is a worldwide leader with more than 75 years of independent materials characterization and technology development for government agencies and contractors. Leveraging decades of material test experience, the Nondestructive Solutions Development group specializes in novel approaches and solutions to a variety of NDE inspection challenges. One of their premier technologies is UltraSpec®, swept-frequency UT, which provides **increased material penetration and signal-to-noise ratio with a robust spectral analysis**. Their team excels with thick, attenuative materials or complex material structures where traditional NDE methods are inadequate or inconclusive. Let Kratos help you “Inspect the Uninspectable.”

GRAPHIC

