

# Automated Ultrasonic Corrosion Mapping

## Non-Intrusive Inspection (NII)

Pressure vessels and pressure systems require periodic inspection to ensure continued safe and reliable operation. We incorporate automated ultrasonic corrosion mapping to offer comprehensive non-intrusive inspection (NII) strategies that evaluate the condition of ferrous assets without taking a system offline.



### FEATURES

**100% coverage of axial and circumferential inspections**

**Wide range of applications up to 392° F / 200° C**

**Inspection material thickness up to 6 in / 150 mm**

# Automated Ultrasonic Corrosion Mapping

## Non-Intrusive Inspection

Our methods significantly increase the probability of detection (POD) of corrosion by providing 100% coverage in a band from 4 to 40 in / 110 mm to 1,000 mm wide. This enables engineers to determine the optimal risk based assessment (RBA) and risk based inspection (RBI) maintenance programs.

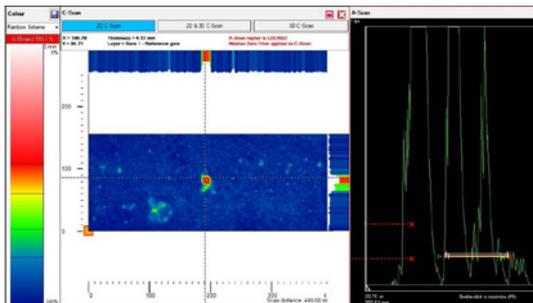
Collected data is available in real-time and displayed in multiple and layered views. This enables the technician to assure all potential anomalies are clearly identified before moving to the next inspection location.

### Applications

- » Pipework
- » Pressure vessels
- » Reactors
- » Storage tanks
- » Ship hulls
- » Critical equipment

### Features

- » Digital storage of inspection data
- » Comprehensive and fully auditable inspection data
- » Monitoring specific anomaly location over time produces confident and repeatable results
- » Inspection can be repeated with precision and accuracy to monitor anomaly locations over a period of time
- » Designed for use on ferrous materials
- » Suitable for pipe diameters 6 in OD and can be used in flat plate applications
- » Minimum detectable flaw typically 2.0mm WT, >2mm $\varnothing$  depending on resolution and material thickness



This enables simultaneous measurement of part thickness, internal surface profile, and external surface profile. The flexibility of the software enables the field technician to make the appropriate modifications and adjustments to highlight particular indications or anomalies.

We provide automated ultrasonic corrosion mapping methods including pulse-echo, high temperature scanning, and phased array.

### Scanning Head Options

- » The RMS2-600 scanning head maximizes scanning rates on large surface areas such as tank shells and pressure vessels.
- » The RMS2-450 scanning head operates circumferentially on curved surfaces such as pipelines or pressure vessels (up to 6 in / 152 mm diameter and flat plate).
- » The latest additions to the range of RMS scanning heads are the RMS ARC 24-36 and 36-48, designed to operate longitudinally on pipe diameters from 24 in to 48 in. The combination of longitudinal pipe scanning and 60° scan width (typically 4 to 8 o'clock) offers a major improvement to inspection efficiency for pipeline applications while maintaining

### Considerations

- » Requires 110V - 240V power and clean water supply
- » Outer surface of asset being inspected should be clean and free from loose impediments such as insulation or other debris
- » Not suitable for non-ferrous material

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