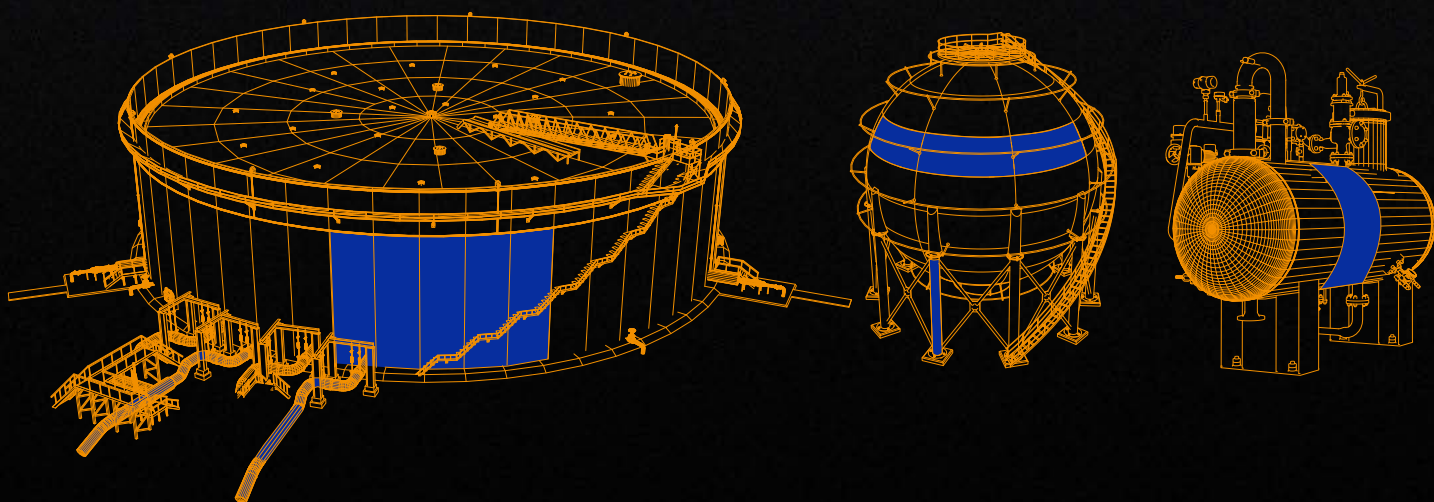


CORROSION MAPPING SOLUTIONS

Keeping critical assets in safe operating condition



Complete turnkey phased array solutions from
instruments to scanners, probes, and accessories

COMPLETE TURNKEY CORROSION MAPPING SOLUTIONS

Fully integrated solutions to cover a wide range of applications.
Designed to work seamlessly with software embedded controls and onboard scanner commands.

Ultrasonic corrosion mapping is a non-intrusive inspection technique that maps material thickness using ultrasonics. Variations in material thickness due to corrosion can be identified and graphically portrayed as an easy to interpret picture.

Recognition from various inspection bodies and asset integrity engineers has resulted in phased array ultrasonic testing (PAUT) becoming the preferred technique for corrosion mapping.

PAUT is widely used for the in-service detection and characterization of corrosion in pipes, tanks, vessels, and other critical assets. Due to a larger footprint, PAUT probes can cover a larger surface at higher speeds leading to a significant time reduction and enhanced resolution.

Applications

- Pressure vessels
- Storage tanks
- Pipelines
- Spheres
- Restricted access areas
- Ship hulls and other marine vessels
- Other critical assets



Our Solution

Eddyfi Technologies offers a complete solution with advanced phased array instruments, a range of automated and manual scanners, and a full range of probes and wedges.

- Complete turnkey package
- Integrated scanner control built into the software
- Onboard electronics for all manual scanners
- Aqualock utilized in all scanners
- Driven by Capture software
- Remote analysis via TeamViewer
- Range of modular scanners

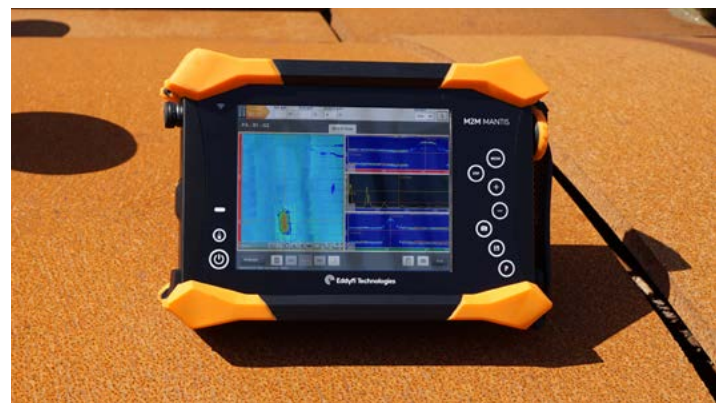
Instruments

M2M Gekko®

The powerful Gekko comes with conventional UT, TOFD, and all beam-forming phased array UT techniques for single-beam and multi-group inspection, plus its 3-encoded axis capabilities make the Gekko ready for any challenging inspection.

M2M Mantis™

Designed for corrosion mapping, the portable Mantis system is a light and economical version of Gekko using the same technologies and software interface, Capture™.



Scanners

RMS PA

The automated, robust, field-proven RMS robotic scanner has been successfully deployed on various assets such as storage tanks, pressure vessels, pipelines, and other critical infrastructure. Ideal for extensive area inspections, difficult-to-reach assets or surfaces at an elevated temperature.

- Remote access up to 50m (160ft).
- Detachable R-scan Array.
- Range of 4 scanning heads to suit various applications.



R-Scan Array

The handheld R-Scan Array scanner allows semi-automated corrosion mapping with onboard data collection capabilities. The scanner is the perfect solution for the inspection of complex geometry components including curved surfaces, flat plate, pipelines, and restricted access areas.

- Onboard control buttons to pause scan and stitch data sets.
- One-handed control options and scanning handle.
- Perfect complement to LYNCS or maximized coverage.

LYNCS™

A modular manual scanner with interchangeable bar lengths to suit inspection requirements. The versatile scanner with onboard scan controls is ideal for corrosion mapping of pipes from 100mm (4in) diameter up to flat plate. Due to its light weight and ease of use, the scanner is perfect for rope access inspections.

- Easily switch from corrosion mapping to weld inspection.
- Low profile for tightly spaced pipe racks (110mm/4.3in).
- Magnetic wheel with brakes to stop slippage.



Probes and Accessories



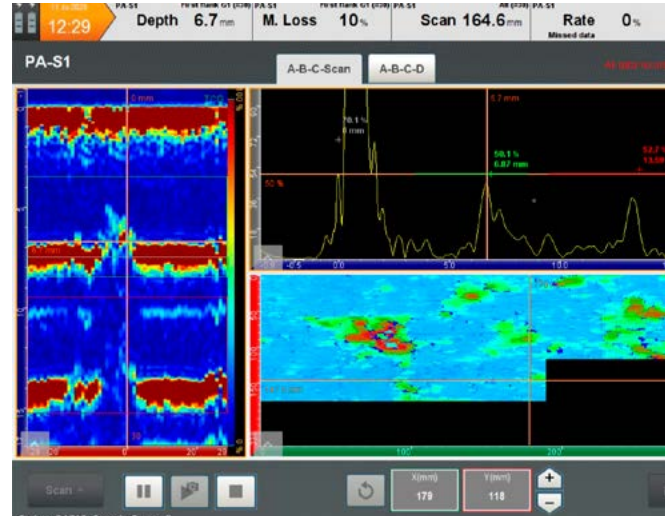
The phased array configuration utilizes a unique water box to create a water-column concept that eliminates the need for a wedge, thus providing the benefits of improved signal consistency, accuracy, and limited dead zone. This concept offers enhanced surface conformity and improved coupling.

- Dual air release to remove unwanted signal disturbance.
- Utilized in all Eddyfi Technologies corrosion mapping scanners.
- Quick release probe mechanism.

Software

Capture™ is the streamlined software embedded in instruments and also available for PC. It is dedicated to conventional Ultrasonic Testing, Phased Array UT, Time-of-Flight-Diffraction, Total Focusing Method and Adaptive Total Focusing Method (ATFM) while being continuously updated based on industry feedback.

- Intuitive and efficient workflow.
- Code-compliant TFM at industrial scan speed.
- Dedicated solutions for complex geometries.
- One software covers all your PAUT/TOFD inspections.
- Advanced analysis simplified.
- Continuous innovation driven by market applications.



Case Studies



The Efficiency of Phased Array for Corrosion Mapping

Introducing automated corrosion mapping to inspection can reduce the overall cost to access elevated positions in a safe manner. Automation can also dramatically increase the probability of detecting wall loss by rasterizing a UT probe across the surface and collecting spot UT measurements at a consistent interval.

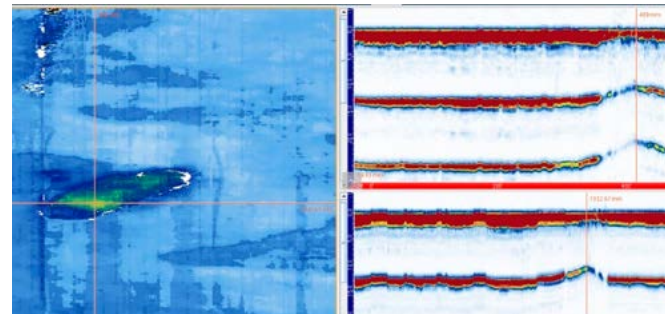
[Read more](#)

Remote Desktop Corrosion Mapping

Robotic crawlers are used to look for corrosion in the shell and dome ends and cracking in welds and nozzle attachments.

This case study explains how one Eddyfi Technologies customer has taken this initiative to the next level, demonstrating that with the correct vision and ability to implement, robotic inspection can do a whole lot more these days, even 1,000 kilometers (620 miles) away.

[Read more](#)



Sprint Robotics Trials with the RMS PA

Solutions for the inspection of online pressure vessels continue to be explored by large asset owners in the petrochemical industry. Eddyfi Technologies was invited to demonstrate a brand new advanced non-destructive testing solution directly relevant for online vessel inspection.

[Read more](#)

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www.eddyfi.com

sales-sw@eddyfi.com