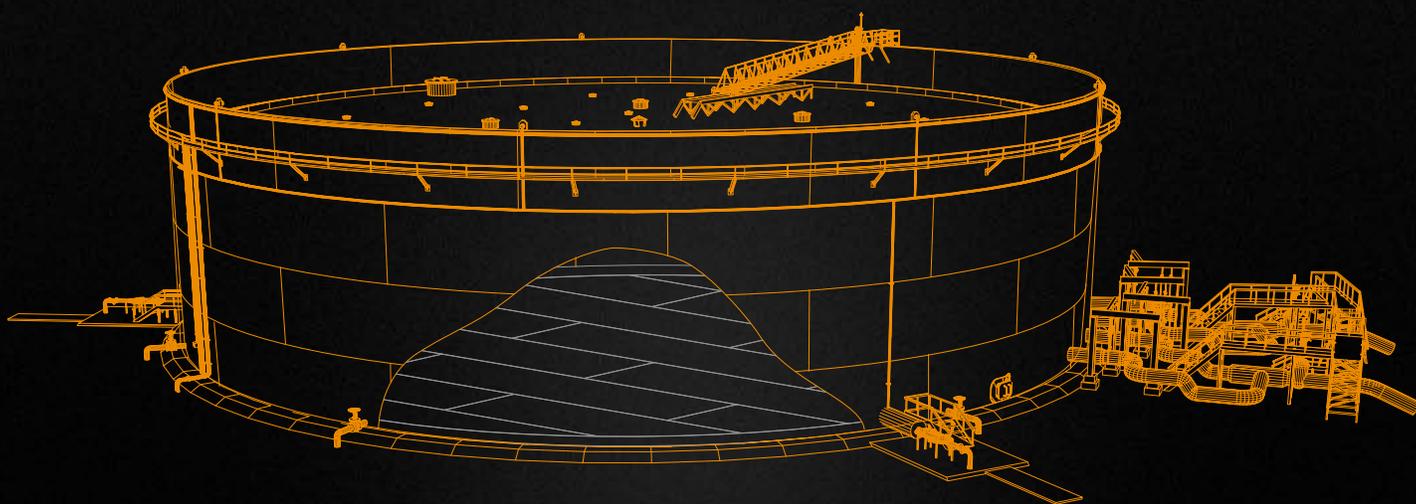


# Tank Integrity Inspection Solutions

Increase your tank's productivity



Everything you need for a confident integrity  
assessment

# EDDYFI TECHNOLOGIES STORAGE TANK INSPECTION SOLUTIONS

Greater coverage with a higher probability of detection leads to a more confident maintenance decision.

Tank inspection ensures the safety and integrity of aboveground storage tanks. It contributes to extending the asset's life cycle and preventing accidental leaks and costly decontamination and environmental issues while providing critical data for lifetime assessment and repair strategies.

Two common inspection standards are EEMUA 159 and API 653. When followed, tank owners and operators can determine an optimal repair and maintenance strategy. Calculating corrosion rates from trend information can increase the interval between inspections resulting in increased asset revenue.

There are continued advances in modern non-destructive testing (NDT) technologies that improve detection of defects and sizing accuracy while minimizing inspection turnaround times.

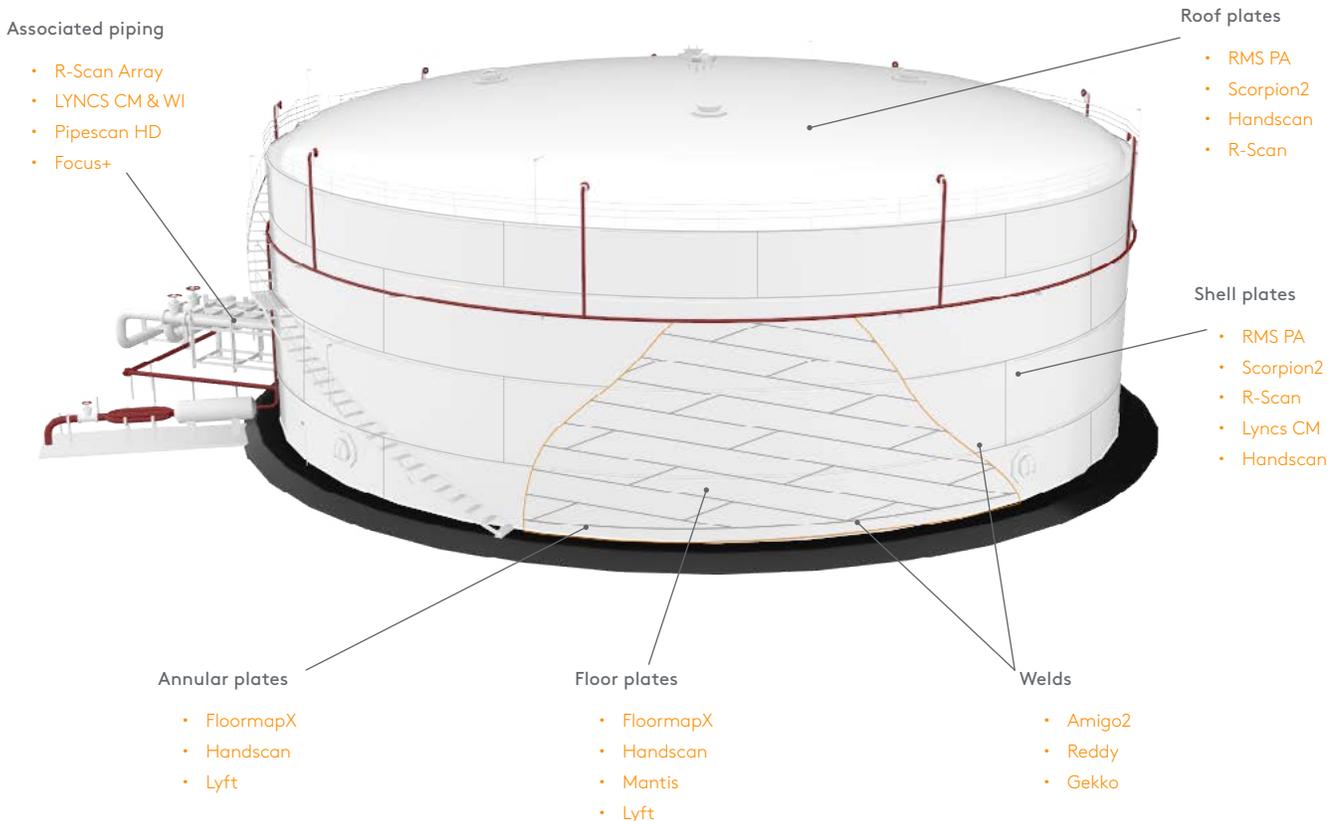
Knowing which tool is best for each NDT measurement is essential. NDT techniques can be complementary, and in some cases, they may need to be combined to give the best result.

## Technology Synergies

Eddyfi Technologies develops advanced NDT integrated systems to exceed today's inspection demands. Experts in multiple inspection techniques, we can provide a one-stop shop tank inspection solution.

### Techniques include:

- Magnetic Flux Leakage (MFL) and STARS
- Automated and manual Ultrasonics (UT)
- Automated and manual Phased-Array Ultrasonics (PAUT)
- Alternating Current Field Measurement (ACFM®)
- Pulsed Eddy Current (PEC)
- Eddy Current Array (ECA)
- Guided Wave Ultrasonics (GWUT)



# KEEPING STORAGE TANKS IN-SERVICE LONGER

Choose the right systems for a comprehensive, cost-effective storage tank integrity assessment.

## Tank Floor Plates

The most common technology used to inspect bottom plates for corrosion is Magnetic Flux Leakage (MFL) because of its sensitivity to corrosion pitting and the ability to inspect nearly 100% of the tank bottom efficiently.

Due to the nature of MFL, it is recommended that a percentage of the detected defects are accurately quantified using Ultrasonics (UT), typically with a UT flaw detector. With advances in technology and scanners, phased array (PAUT) has become the preferred technique due to its superior ability to categorize and size a type of defect, thus ensuring a more accurate integrity assessment.

## Products

- Detailed MFL mapping: [Floormap®X](#)
- High-speed MFL screening: [FloormapX](#)
- Restricted area MFL screening: [Handscan](#)
- Manual phased array: [R-Scan Array](#) or [LYNCS™](#) and [Mantis™](#)
- Automated phased array: [RMS PA](#) and [Mantis](#)
- Annular plate with Pulsed Eddy Current (PEC): [Lyft®](#)



## Tank Shell Plates

Traditionally, an inspection technician would take three ultrasonic thickness measurements per shell course. The technician would use rope access, scaffolding, or a mobile elevating work platform to access the predetermined locations. This technique can result in misleading results due to the low Probability of Detection (PoD). In addition, providing access for manual inspection is extremely costly and is not productive.

Modern tank shell inspection utilizes automated robotic crawlers. The remote controlled crawlers drive up the tank shell collecting thousands of UT thickness measurements, or a more advanced PAUT system collects corrosion mapping data. This modern technique has many advantages, such as a much higher PoD, increased operator safety, reduced inspection costs, and recorded auditable inspection data.

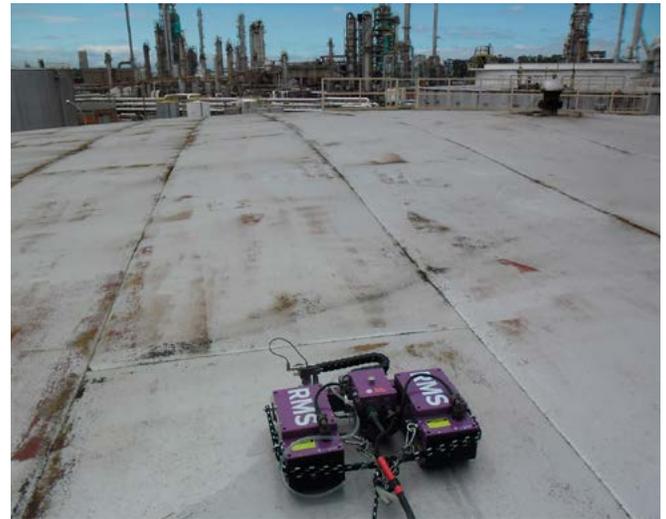
## Products

- High-speed, automated UT line scans: [Scorpion®2](#) with Swift UT
- Manual UT lines scans: [R-Scan](#) with Swift UT
- High-speed, automated PAUT corrosion mapping: [RMS PA](#)
- Manual PAUT corrosion mapping: [R-Scan Array](#) or [LYNCS](#) and [Mantis](#)

## Tank Roof Plates

Like the other components of aboveground atmospheric storage tanks, roof plates must be inspected for corrosion and deformation, and cracking in welding joints.

Inspection standards state that walking on tank roofs can be hazardous. The condition and thickness of roof plates should be confirmed before access is permitted. Automated remote access UT scanners can be utilized to determine the roof plate's condition without any human access.



## Products

- High-speed, automated UT line scans: [Scorpion®2](#)
- Manual UT lines scans: [R-Scan](#) (with extension pole)
- Automated PAUT corrosion mapping: [RMS PA](#) and [Mantis™](#)
- Manual MFL screening: [Handscan](#)



## Tank Welds

The traditional technology for inspecting welds for non-through-wall defects is Magnetic Particle Inspection/Magnetic Testing (MPI/MT).

Inspection authorities now recognize Alternating Current Field Measurement (ACFM) and Eddy Current Array (ECA) as an alternative method to MPI/MT.

These modern techniques do not require the removal of any coatings and can accurately detect and size a weld crack faster and more cost-effective than MPI and without the need for consumable chemicals.

## Products

- Advanced ACFM instrument: [Amigo™ 2](#)
- Portable ECA instrument: [Reddy®](#)
- Comprehensive PAUT and ToFD: [LYNCS™ WI](#) and [Mantis](#)

## Tank Piping

Piping connected to a storage tank has various vital roles in daily operation, such as product import/export, water drain off, and vapor recovery systems. This piping can be at a low level, high level or even buried underground. Selecting the correct NDT inspection technique is critical to the overall integrity of the storage tank system.

## Products

- PAUT corrosion mapping: [RMS PA](#) or [R-Scan Array](#) or [LYNCS](#) and [Mantis](#)
- Manual UT: [R-Scan](#) with Swift UT
- High-speed MFL corrosion mapping: [Pipescan HD](#)
- Insulated piping: [Lyft®](#) and [Focus+™](#)
- Buried and restricted access pipelines: [Focus+](#)



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