Eddyfi Technologies
Beyond current

Technical
Specifications

MOTIX

Advanced chain driven automated & battery operated, remote-access conventional and phased array testing solution

WELD INSPECTION & CORROSION MAPPING SCANNER

Eddyfi Technologies' advanced inspection solution leads the way for non-ferrous surfaces like stainless steel, Glass Fiber-Reinforced Plastic (GFRP or GRP), Carbon Fiber-Reinforced Plastic (CFRP or CRP), High Density Polyethylene (HDPE), plastic and others.

The battery-operated, chain driven versatile system can mount up to four PAUT or TOFD probes in a single scan for weld inspection, whilst also has the capability for effective corrosion mapping.

Applications are easily interchangeable to meet diverse inspection requirements , The system operates flawlessly on ferrous & non-ferrous surfaces with diameters ranging between 15.24 and 106.7cm (6 and 42in).

This versatile solution delivers high-performance in a variety of Non-Intrusive Inspection (NII) applications, helping customers achieve critical integrity assessments with minimal downtime and reduced operational costs.

BENEFITS

- Fully automated, remote-controlled systems
- Portable, battery-operated for onsite flexibility
- Adjustable quick release chain links
- Ferrous & Non-ferrous surfaces
- Weld & Corrosion Inspections
- Lightweight— crawler only weighs 4.6kg (10.2lb)

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. Our team of technical experts have invested time in creating ready made kits ensuring we deliver highly optimized turnkey solutions

PHASED ARRAY CORROSION MAPPING

Eddyfi Technologies' automated corrosion mapping solutions leverage advanced Phased Array Ultrasonic Testing to deliver precise, high-resolution data with a 1mm (0.04in) resolution. These systems are engineered to optimize productivity while maintaining a high Probability of Detection (PoD), ensuring even the smallest defects are detected with unparalleled accuracy.

The phased-array configuration utilises a specially designed water box which produces a controlled and stable water-column 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 conformance and improved coupling.

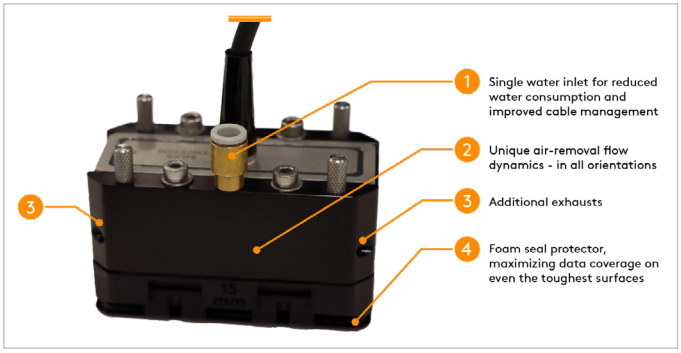

Figure 1: Aqualock V2 for rapid high resolution corrosion mapping.

AUTOMATED WELD INSPECTION

Eddyfi Technologies offers battery-operated, portable scanning solutions for comprehensive weld inspections on both ferrous and non-ferrous materials. Utilizing phased array ultrasonic testing and time of flight diffraction techniques, these systems ensure accurate defect detection, even on challenging material compositions.

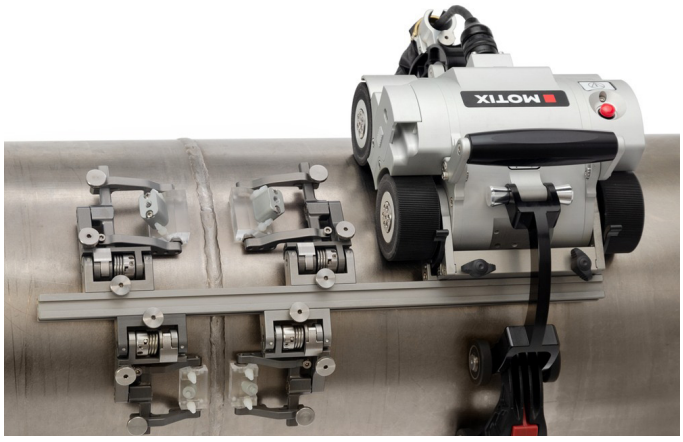

Figure 2: Motix automated scanner.

CONVENTIONAL ULTRASONIC CORROSION MAPPING

Eddyfi Technologies' recommended conventional ultrasonic testing solution, when paired with an automated system, utilizes a single crystal focused probe with a local immersion water column, housed in a gimbaled holder. This setup ensures stable coupling and high-quality data acquisition, even in challenging environments.

One key advantage of this approach is that advanced corrosion mapping surveys can be performed without the need for phased array-qualified personnel. Despite this, it still delivers the high productivity, high PoD, and application-specific software features associated with more advanced systems. Twin crystal UT options are also available, further enhancing versatility.

Figure 3: Motix Raster Arm.

WORLDWIDE SUPPORT YOU CAN RELY ON

Eddyfi Technologies provides global after-sales support. We are on standby to lend a hand in the case of unforeseen situations. With nine service centers and full technical support teams, you can continue to rely on us to calibrate and maintain your system for optimal operating conditions

2024-12

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SPECIFICATIONS

NON-FERROUS INSPECTION SOLUTION

Crawler Weight	4.6kg (10.2lb)
Crawler Dimensions	Height: 14.7cm (5.8in) Width: 20.6cm (8.1in) Depth: 26.2cm (10.3in)
Circumferential Pipe Range	With Standard Overtop Link: 15.2cm (6in) to 106.7cm (42in) With Large Overtop Link: 20.3cm (8in) to 106.7cm (42in)
Encoder Resolution	220.4 counts/mm (5598.4 counts/in)
Maximum Payload	9kg (20lb)*
Maximum Speed	Variable 0-14.2cm/sec (0-5.6in/sec)
Power Requirements	100-240VAC, 50/60Hz, 1.4 Amps
Maximum Umbilical Length	30m (98.4ft)
Inspection Surface	Non-Ferrous and Ferrous
Operating Environment	-20°C (-4°F) to 50°C (122°F)
Environmental Sealing	Dust-tight, watertight**
Regulations	CE compliance FCC compliance Industry Canada compliance UKCA compliance
NOTES	* Performance may vary with surface condition. Umbilical and attachments are considered payload. ** Not submersible.

ATTACHMENTS

General	Raster Arm Module Encoder: 240.2 counts/mm (6101 counts/in) Raster Arm Module Speed: 0 - 76.2 cm/sec (0 - 30 in/sec)
Stroke	300mm Raster Arm: 300mm (11.8in) 600mm Raster Arm: 600mm (23.6in) 900mm Raster Arm: 900mm (35.4 in) 11600mm Raster Arm: 11600mm (45.7in)
Weight	300mm Raster Arm (12in): 2.4kg (5.3lb) 600mm Raster Arm (24in): 3.33kg (7.2lb) 900mm Raster Arm (35in): 4kg (8.7lb) 1160mm Raster Arm (45in): 4.6kg (10.2lb)

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