

INSTRUMENTS

ECTANE 2

The leading multi-technology instrument for surface and tubing applications is designed to be the most versatile, reliable, and powerful EC platform on the market.



- Surfaces
- Corrosion detection
 - Crack detection
 - Welds
 - Turbines
 - Castings
 - Etc.
- Tubing
- Ferrous and non-ferrous

REDDY FOR SURFACES

This turnkey ECA system is designed to perform critical surface inspections. Its fast and easy deployment, better PoD, length and depth sizing capabilities, data recording capacity, and consistent results help replace PT and MT.



- Surfaces
- Corrosion detection
 - Crack detection
 - Welds
 - Turbines
 - Castings
 - Etc.

REDDY FOR TUBING

Designed specifically for AC and tubing inspections, the system is compatible with all air-conditioner and ECT probes on the market without the need for adapters and the integrated software enables on-the-fly reporting.



- Tubing
- Non-ferrous
 - Air conditioners
 - Chillers

LYFT

Reinventing PEC, the solution is designed for CUI and other critical applications. Often superior to radiography/stripping because it does not require access to both sides or surface preparation, and has no health hazards, making it much more cost efficient.



- Corrosion detection
- Corrosion under insulation (CUI)
 - Corrosion blisters and scabs
 - Flow-accelerated corrosion (FAC)
 - Corrosion under fireproofing (CUF)
 - Splash zone and underwater
 - Surface corrosion
 - Corrosion under coatings
 - Waterworks

| | | | | |
|-----------------------------------|--|--|---|--|
| APPLICATIONS | Surfaces • Corrosion detection • Crack detection • Welds • Turbines • Castings • Etc. | Surfaces • Corrosion detection • Crack detection • Welds • Turbines • Castings • Etc. | Tubing • Non-ferrous • Air conditioners • Chillers | Corrosion detection • Corrosion under insulation (CUI) • Corrosion blisters and scabs • Flow-accelerated corrosion (FAC) • Corrosion under fireproofing (CUF) • Splash zone and underwater • Surface corrosion • Corrosion under coatings • Waterworks |
| TYPICAL BATTERY AUTONOMY | 8 hours | 6-8 hours | 6-8 hours | 6-8 hours |
| SUPPORTED INSPECTION TECHNOLOGIES | ECT, ECA, TECA, RFT, NFT, NFA, MFL, IRIS | ECA, TECA | ECT | Pulsed eddy current (PEC) Pulsed eddy current array (PECA) |
| DATA ACQUISITION | Up to 50 000 samples/s | Up to 50 000 samples/s | Up to 50 000 samples/s | Up to 75 mm/s (3 in/s) |
| SMARTMUX ECA CHANNELS | 64, 128, 256 | 32, 64, 128 | | |
| ECT PROBE INPUTS | 8 | 4 | 4 | |
| ECT FREQUENCY RANGE | 5 Hz-10 MHz | 5 Hz-10 MHz | 5 Hz-10 MHz | |
| IRIS TURBINE SPEED | Up to 100 RPS | | | |
| NOMINAL WALL THICKNESS | | | | Up to 100 mm (4 in) |
| LIFTOFF TOLERANCE | | | | Up to 300 mm (12 in) |
| SETUP TECHNOLOGY | | | | SmartPULSE |
| UNDERSIZING COMPENSATION | | | | Compensated wall thickness (CWT) tool |
| SUPPORTED WEATHER JACKETS | | | | Stainless steel up to 1.5 mm (0.06 in) Aluminum up to 1 mm (0.04 in) Galvanized steel up to 1 mm (0.04 in) |
| SUPPORTED PART GEOMETRY | | | | From 25 mm (1 in) OD to flat |
| AUTOMATIC REPORTING | | ✓ | ✓ | ✓ |
| UNIQUE FEATURES | <ul style="list-style-type: none"> • Multi-technology instrument • Field-proven—hundreds of units in service | <ul style="list-style-type: none"> • Dedicated surface ECA inspection solution • Portable and rugged | <ul style="list-style-type: none"> • Instant, automated reporting • Shortest complete inspection time in the industry | <ul style="list-style-type: none"> • Accessible CUI integrity management solution • Most powerful and easy-to-use screening system on the market |

EDDYFI PRODUCT LINE

THE EDDYFI LINE PROBES

THE BEST EM TESTING PRODUCTS — BAR NONE

The Eddyfi product line focuses mainly on high-performance advanced electromagnetic solutions for the inspection of critical components and assets. Eddyfi products are the industry's best performing and most reliable test instruments, acquisition and analysis software, as well as standard and—more importantly—specialized surface array and tubing probes.

Eddyfi-line products constantly propel the limits of electromagnetic testing to new heights in an attempt to respond to your ever-changing inspection challenges.

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Butt Weld Shark Fillet Weld Shark Pencil Shark High-Res. Shark

I-Flex Padded Semi-Flex Gear

TECA



| APPLICATIONS | Welds and plates | Welds | Welds and plates | Pipes and plates |
|-----------------------------|------------------------------|------------------------------|------------------------------|--------------------------------|
| MATERIALS | Ferrous | Ferrous | Ferrous | Ferrous |
| SURFACE-BREAKING CRACKS | ✓ | ✓ | ✓ | ✓ |
| LENGTH & DEPTH SIZING | ✓ | ✓ | ✓ | ✓ |
| DETECTABLE DEFECTS (L×D) | 3.0×0.5 mm (0.12×0.02 in) | 3.0×0.5 mm (0.12×0.02 in) | 3.0×0.5 mm (0.12×0.02 in) | 2.00×0.25 mm (0.08×0.01 in) |
| MAX. MEASURABLE CRACK DEPTH | 7 mm (0.28 in) | 7 mm (0.28 in) | 7 mm (0.28 in) | 3 mm (0.12 in) |
| SIZING ACCURACY | ±2 mm (0.08 in) ±10–20 % | ±2 mm (0.08 in) ±10–20 % | ±2 mm (0.08 in) ±10–20 % | ±10 % |
| SCAN SPEED | Up to 200 mm/s (8 in/s) | Up to 200 mm/s (8 in/s) | Up to 200 mm/s (8 in/s) | Up to 600 mm/s (24 in/s) |
| LIFTOFF TOLERANCE | Up to 3 mm (0.12 in) | Up to 3 mm (0.12 in) | Up to 3 mm (0.12 in) | Up to 2 mm (0.08 in) |
| COVERAGE | 53 mm (2.1 in) | 30 mm (1.2 in) | 7 mm (0.3 in) | 71 mm (2.8 in) |

ECA



| APPLICATIONS | Smooth, curved surfaces | Welds | Smooth, curved surfaces | Gears |
|--|------------------------------|------------------------------|-----------------------------|---------------------------|
| MATERIALS | Ferrous, non-ferrous | Ferrous, non-ferrous | Ferrous, non-ferrous | Ferrous, non-ferrous |
| FAR-SURFACE CORROSION | ✓ | | ✓ | |
| SUBSURFACE DEFECTS | ✓ | | ✓ | |
| SURFACE-BREAKING DEFECTS | ✓ | ✓ | ✓ | ✓ |
| LENGTH SIZING | ✓ | ✓ | ✓ | ✓ |
| MIN. DETECTABLE CRACK LENGTH | 0.5–1.5 mm (0.02–0.06 in) | 0.5–1.0 mm (0.02–0.04 in) | 0.5 mm (0.02 in) | 5 mm (0.20 in) |
| FREQUENCY RANGES | 0.6–800 kHz | 50–800 kHz | 0.6–800 kHz | 0.25–1 MHz |
| PENETRATION (STAINLESS STEEL/ALUMINUM) | Up to 6 mm (0.24 in) | | Up to 6 mm (0.24 in) | |
| COVERAGE | 34–128 mm (1.34–5.04 in) | 34–58 mm (1.34–2.28 in) | 34–128 mm (1.34–5.04 in) | 50–112 mm (2.0–4.4 in) |

Array Single-element GS Cladding Underwater Tank Floor

PEC



| APPLICATIONS | CUI, CUF, FAC | CUI, CUF, FAC | CUI, CUF, FAC | Corrosion under marine growth | Tank annular rings |
|--|---------------------------|---|----------------------|-------------------------------|--------------------|
| SUPPORTED WALL THICKNESS | 6–25 mm (0.25–1.00 in) | Up to 102 mm (4 in) | Up to 38 mm (1.5 in) | Up to 102 mm (4 in) | Up to 25 mm (1 in) |
| SUPPORTED CLADDING | Aluminum, stainless steel | Aluminum, stainless steel, galvanized steel | Galvanized steel | | |
| SUPPORTED LIFTOFF | 25–102 mm (1–4 in) | 0–305 mm (0–12 in) | 13–153 mm (0.5–6 in) | 0–300 mm (0–12 in) | 0–13 mm (0–0.5 in) |
| FOOTPRINT AT MIN. LIFTOFF | 46 mm (1.8 in) | 35–100 mm (1.4–3.9 in) | 62 mm (2.4 in) | 62–100 mm (2.4–3.9 in) | 35 mm (1.4 in) |
| WATERTIGHTNESS | | | | 100 m (330 ft) | |
| BLADE LENGTH | | | | | 400 mm (15.75 in) |
| MAX. DIRECT CONTACT SURFACE TEMPERATURE | 70 °C (158 °F) | 70 °C (158 °F) | 70 °C (158 °F) | 70 °C (158 °F) | 70 °C (158 °F) |
| MAX. DIRECT CONTACT SURFACE TEMP. W/PROBE SHOE | | 120 °C (248 °F) | | | |

TUBES



| APPLICATIONS | Heat exchangers, fin-fan air coolers | Air conditioners | Heat exchangers | Fin-fan air coolers | All tubing apps |
|-----------------------------|--|--|------------------------|------------------------|----------------------|
| MATERIALS | Ferrous, non-ferrous | Non-ferrous | Non-ferrous | Ferrous | Ferrous, non-ferrous |
| DETECTABLE DEFECTS | Pitting, wall loss, cracks, volumetric | Pitting, wall loss, axial, circumferential | Axial, circumferential | Axial, circumferential | Volumetric |
| INSPECTION SPEED | 0.3–1 m/s (1–3.3 ft/s) | 1 m/s (3.3 ft/s) | 1 m/s (3.3 ft/s) | 0.3 m/s (1 ft/s) | 0.1 m/s (4 in/s) |
| SEALED | ✓ | ✓ | ✓ | ✓ | ✓ |
| REPLACEABLE PARTS | ✓ | | ✓ | ✓ | ✓ |
| SIZING CAPABILITIES | ✓ | ✓ | ✓ | ✓ | ✓ |
| COMPATIBLE WITH COMPETITION | ✓ | | | | ✓ |
| HIGH DURABILITY | ✓ | ✓ | ✓ | ✓ | ✓ |
| C-SCAN IMAGING | | | ✓ | ✓ | ✓ |

PROBOT



| INSPECTION TECHNOLOGY | ECT, ECA, RFT, NFT, NFA, MRPC, MFL, IRIS |
|-----------------------|---|
| INSPECTION SPEEDS | 0–2.5 m/s (0–8 ft/s) |
| WEIGHT | 23 kg (50 lb) |
| DESIGNED TO IP65 | ✓ |
| SINGLE OPERATOR | ✓ |
| POLY DIAMETER RANGE | 6.35–9.53 mm (0.25–0.38 in) |
| ENCODED DATA | 2× for higher speed control |
| DATA SYNCHRONIZATION | All-in-one, linked to Ectane/Magnifi |
| AUTOMATION | Automated sequences controlled w/ probe gun |