

Riser, Caisson & Conductor Inspection

MEC-MPS200+ Scanner with Integrated Ultrasonic
& Advanced Cleaning System



Overview

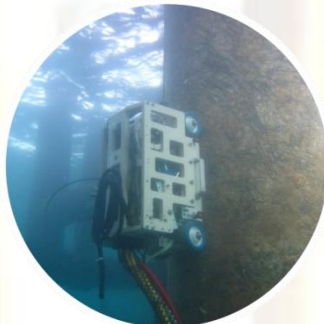


The marinised MEC-MPS200+ Scanner supports the internal and external splash zone inspection of risers, caissons, conductors and structures with wall thickness up to 1" and through coating of up to 15mm Neoprene and 4mm Monel clad.



It is based on the next generation MEC (Magnetic Eddy Current) technique. By operating on high frequency magnetic field controlled Eddy Current with specially developed Eddy Current sensors, the MEC technique offers enhanced inspection capabilities including the detection and sizing of internal and external defects at higher wall thickness and coating range.

The MEC-MPS200+ Scanner enables the integration of an Ultrasonic sensor array working in parallel to the Eddy Current sensors to provide additional information relevant to the asset integrity. It also allows the integration of an advanced cleaning system for the simultaneous removal of marine growth during the inspection operation.



The capabilities of MEC-MPS200+ with integrated Ultrasonic and advanced cleaning system are:

- High sensitivity in the detection of internal and external corrosion and defects through higher wall thickness with the integrated UT sensor array
- Smooth transition into the splash zone without a break in the continuity of remote controlled inspection
- Ability to work at various subsea depths

MEC-MPS200+ Scanner

The marinised MEC-MPS200+ Scanner enables the detection of internal and external corrosion and defects in risers, caissons, conductors and structures while scanning externally. A change-out of the curvature adaptation enables the MEC-MPS200+ Scanner to be used for internal inspection.

Its subsea deployment is flexible as it can be operated from the installations, driving downwards along the risers, caissons and conductors or be deployed by divers. The scanning is performed at a high speed of approx. 10-20m/min either horizontally or vertically along the pipes as well as on horizontal pipelines on the seabed.

The signal data is transferred in real time via the umbilical to the inspection computer located on the support vessel or on the installation to provide instantaneous inspection results. The advanced reporting software utilises a combination of comprehensive C-Scan mapping of the internal and external wall condition, individual defect sizing analysis as well as matrix data to provide reliable information about remaining wall thickness, thus forming a robust basis for asset integrity assessment.

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Technical Specifications

EXTERNAL DEPLOYMENT	
From Installation	By rope access support, running through the splash zone
Subsea Deployment	Only where required - supported by diver (ROV on request)
CAPABILITIES	
Wall Thickness Range	Up to 25.4 mm (1") – Higher WT on request
Coating Thickness Range	Up to 15 mm
Diameter Range	8" to flat
Depth Threshold for Detection	Defects \geq 10% WT wall loss (external or internal)
Defect Detection	Smallest calibration defect detection setup; From 3 – 5 mm diameter at depth threshold of 20% WT for far side wall defects
Accuracy	\pm 5% – 10% of nominal wall thickness
Defect Separation	External from internal defects with separate external / internal mapping report
DIMENSIONS	
Depth Rating	300 metre water depth (deeper rating on request)
Weight	80 Kg in air, approx. 20 Kg in water (depending on buoyancy setup)
Sizes (L x W x H)	500 mm x 280 mm x 300 mm
Sensors (MEC)	8 sensors in circumference with 180 mm scan width
Sensors (UT) ~ Optional	Multiple UT Sensor Array 8 or 16 UT channels operating at 3 or 5 MHz
Magnetisation Unit	Electromagnet
Camera	2x
Umbilical	Via standard winch – 350 metre (longer length on request)
ACCESS REQUIREMENTS	
Required Clearance	Dependent on the tool setup; 500 mm of external space is required to allow for axial scanning
Coating	Coating is not required to be removed for the inspection
Marine Growth	Heavy marine growth is required to be cleaned off. Offered by Innospection either with separate or integrated advanced cleaning system
Reporting	
Reporting Software	InnospectIT Software – Version 2.9 Recorded inspection data in high resolution d-base format is transferred by data logger

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