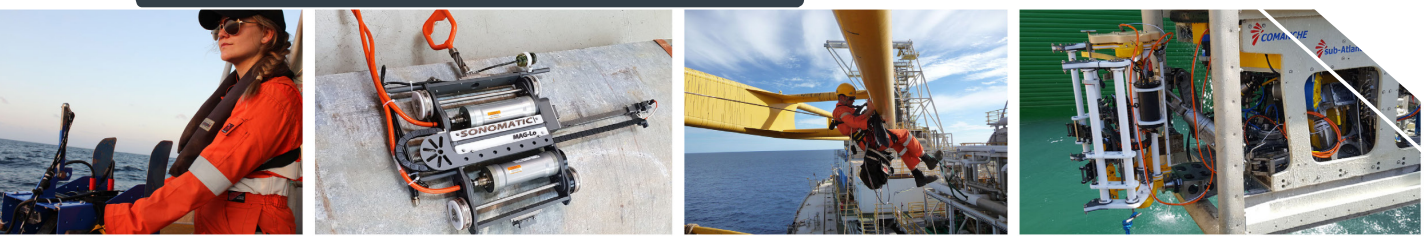
DATA SHEET

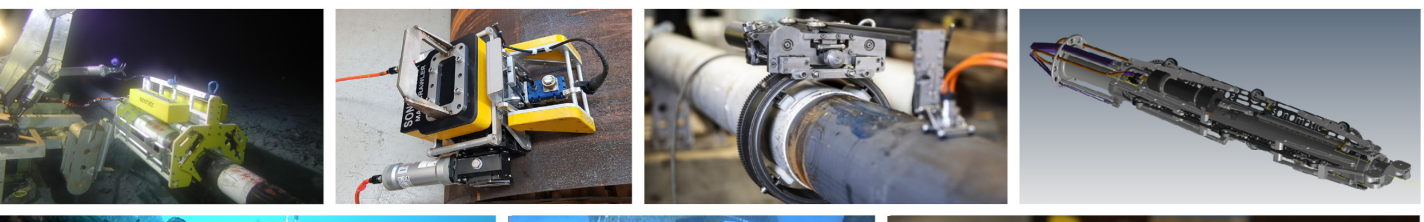
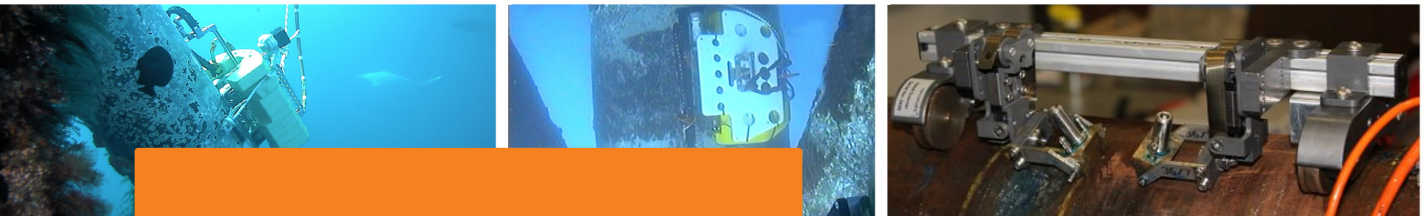
INSULATED FLEXIBLE RISER INSPECTION HFEC SCANNER

SONOMATIC

THE PURPOSE

This document is composed to assist our clients and the supply chain with a high-level understanding of the benefits and services associated with our Insulated Flexible Riser Inspection capabilities using the HFEC Scanner.

INSULATED FLEXIBLE RISER INSPECTION HFEC SCANNER

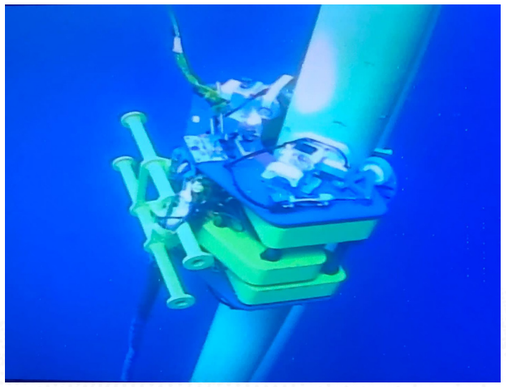
The HFEC Scanner has been developed to investigate the main failure modes of armored wires of flexible risers with thick outer sheath up to 65mm. HFEC stands for "High Field Eddy Current".

The HFEC Scanner is based on special sensors capable of operating at a high lift-off. The sensors are sensitive to the detection of features on the top tensile layer of a flexible riser regardless of the annulus condition. The sensor is sensitive to the detection of features on the surface of the top tensile layer.

The HFEC Scanner can either be deployed off the installation or by ROV. The HFEC Scanner is self-driven and propelled by hydraulically operated wheel sets. The same scan frame can be used to mount cleaning elements to perform marine growth cleaning in advance of an inspection.

The HFEC Scanner has the following capabilities:

- Identify indications for wire disorganisation through thick outer sheaths (up to 65mm thickness).
- Detect breakage with wire gaps in the outer layer of a flexible riser through thich outer sheath.
- Find areas of corrosion on wires in the outer layer of a flexible riser through thick outer sheaths.



TECHNICAL SPECIFICATIONS

DEPLOYMENT	
External Deployment	Vertical or horizontal Deployable by ROV or overboard from the installation
CAPABILITIES	
Detection Capabilities	Snapped top layer wires - with a min. gap of 6 mm Top layer wire disorganization Areas of corrosion on the top layer
Coating Thickness Range	Up to 65mm
Outer Diameter Range	208mm-378mm (other diameters on request)
Scanning Capability	Axial scanning of flexible risers/pipes to address all possible lay angle configurations.
DIMENSIONS	
Depth Rating	2,000 metre water depth
Weight	65kg in air
Sizes (H x Ø)	600mm high x 850mm in diamter neutrally buoyant in sea water
Sensors	16 sensors in circumference Tool designed to scan the full circumference with one pass
Camera	2x camera and light
Umbilical	Option A: Deployment from installation – Umbilical length up to 600 m Option B: Deployment from ROV – Umbilical length dependent on ROV
Fail Safe	Fail safe hydraulics built in to allow release of tool from flexible in the event of power loss.
ACCESS REQUIREMENTS	
Required Clearance	700mm 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 Sonomatic either with separate or integrated advanced cleaning system.
REPORTING	
Reporting deliverables	Inspection report in pdf format including high resolution scan images.

QA AND HS&E

Sonomatic operate under an integrated QHSE management system and are committed to the highest quality and safety of service provision | ISO 9001: 2015: 00007140 | ISO 14001:2015:00037371 | ISO 45001:2018:00037372 | ISO 17020: 2012: 4276 | Achilles FPAL Verified: 076712 | SEQual 1988 | British Safety Council Member: S0388440 |

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