



### Overview

The MEC-Combi PipeCrawler is a sophisticated self-crawling inspection system that supports the inspection and lifetime assessment of smaller diameter risers and caissons as well as piggable and non-piggable subsea pipelines.

It is based on the Magnetic Eddy Current (MEC) technique which is the next generation and a further development of the high performance fast corrosion screening SLOFEC technique. With the use of magnetic field controlled high frequency Eddy Current, the MEC technique offers enhanced inspection capabilities.

A versatile inspection tool, it enables supporting advanced inspection techniques such as Ultrasonic for wall thickness measurement, Pulsed Eddy Current, laser triangulation system, camera system, etc to be incorporated to provide comprehensive and high density inspection data within a single deployment.

The capabilities of the MEC-Combi PipeCrawler are:

- High detection sensitivity for external and internal corrosion and defects
- Ability to move along the inspection surface on its own, driven by its hydraulic motors
- Ability to remain in stable contact with the inspection surface due to its integral buoyancy and magnetic system
- Ability to inspect through surface coating, clad or paint and at various subsea depths



### MEC-Combi PipeCrawler

The MEC-Combi PipeCrawler enables the detection of localised defects and general wall loss in smaller diameter subsea pipes while scanning externally. A change out of the curvature adaptation enables the MEC-Combi PipeCrawler to be used for the inspection of different pipe diameters.

Deployed by ROV or divers from the support vessel or installation, the MEC-Combi PipeCrawler moves from the starting position along the subsea pipeline and performs the inspection at an average speed of 10m/min.

The signal data with encoded position details is transferred in real time via the umbilical to the inspection computer located at the ROV control unit on the support vessel or on the installation to provide instantaneous inspection results. The advanced colour condition mapping report provides analysis of the internal and external defects in term of size, severity of wall loss and location of defects and other occurrences.

# Subsea Pipe Inspection

## MEC-Combi PipeCrawler



### Technical Specifications

DEPLOYMENT	
External Deployment	Horizontal or vertical Deployable by ROV, diver or over board off the vessel or installation
CAPABILITIES	
Wall Thickness Range	Up to 26 mm
Coating Thickness Range	Up to 15 mm (depending on detection requirements)
Diameter Range	6" to 18"
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	5% – 10% of detected defect wall loss
Defect Separation	External from internal defects with separate external / internal mapping report
DIMENSIONS	
Depth Rating	400 metre water depth (deeper rating on request)
Weight	150 Kg in air, approx. 5 Kg in water (dependent on buoyancy setup)
Sizes (L x W x H)	1,250 mm x 600 mm x 600 mm (dependent on diameter size)
Sensors (MEC)	8 sensors in circumference with 200 mm scan width
Sensors (UT)	Selection of single sensor in stop measurement mode (8 sensors in circumference available on request)
Magnetisation Unit	Permanent magnet
Camera	2x
Umbilical	Via ROV fibre optic data; transfer length depends on ROV umbilical
Fail Safe	Yes, fully built-in
ACCESS REQUIREMENTS	
Required Clearance	Dependent on the scanner size; from 600 mm to 1,000 mm of external space is required to allow for axial scanning
Coating	Coating or clad is not required to be removed for the inspection
Marine Growth	Heavy marine growth is required to be cleaned off

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