

RoCorr MFL-C Service

Metal Loss and Narrow Axial Feature Analysis

Undetected and untreated corrosion within your pipeline assets will lead to performance loss and containment failure. Making in-line inspection services a part of your integrated pipeline threat management strategy will help you manage this risk. Our RoCorr service suite is designed to detect, evaluate and locate metal loss due to corrosion and associated threats. This allows you to take remedial action before your pipeline integrity suffers.

Drawing on the largest ILI tool fleet in the world, our RoCorr features multiple and flexible options to suit your inspection needs while minimizing impact on pipeline operations. This includes a wide range of sensors that incorporate leading technologies to address your pipeline threats. The data gathering is supported by our unique data analysis and reporting tools, delivered by a dedicated team of experts. RoCorr reduces your corrosion and metal loss threat risk.



Detect and treat pipeline corrosion before it impacts on performance



Multiple sensor technologies to identify all metal loss threats



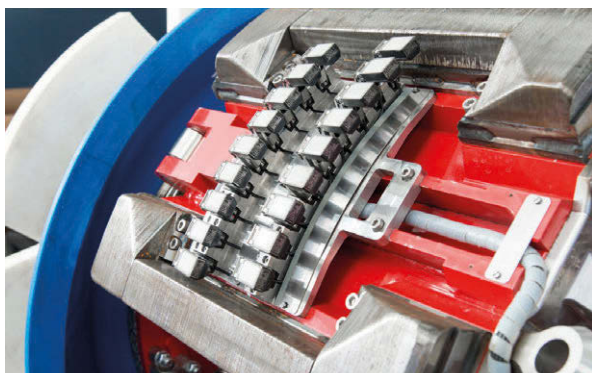
Assess the integrity of your surface and subsea pipeline assets

Fundamental to pipeline integrity management is an understanding of axially oriented anomalies such as channeling, top-of-line corrosion (TOLC), gouging, narrow axial corrosion and selective/preferential seam weld corrosion (SSWC). Our MFL-C technology has proved highly reliable and effective for managing such integrity concerns in your pipelines. This is particularly suitable to assess the integrity status of long seams, especially for pre-1970 electric resistance welded (ERW) pipes.

- Suited to characterization of challenging metal loss features in liquid, multiphase and gas pipelines
- Wide range of proven tool configurations available
- Option to deploy Ultra resolution to further improve reliability of SSWC assessments

Benefits of Narrow Axial Feature Analysis

- Reliable assessment of SSWC in ERW pipe
- Precise evaluation of axially oriented corrosion anomalies, such as channeling, top-of-line corrosion (TOLC), gouging
- Full magnetic saturation technology delivers precise characterization of long seams
- Through-wall magnetization and well-proven tools deliver consistent data quality with a high first run success rate
- Speed control unit and combined diagnostic solutions minimize impact of inspections on daily operations



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Technical Specifications

Standard Operating Specifications

Tool sizes available	6" - 56"
Pipeline product	Gas or liquids
Product temperature range	0 °C - 65 °C (14 °F - 149 °F)
Maximum operating pressure	15 MPa (2,175 psi) 25 MPa (3,625 psi) optional
Operating speed range	Up to 5.0 m/s (11.2 mph)
Product flow range*	Up to 11 m/s (24.6 mph)
Minimum pipeline bend radius	1.5D
Wall thickness range	4 - 25 mm (0.15" - 1.0")
Maximum operating time	400 hours
Maximum inspection length	800 km (500 miles)

* Fitted with optional speed control system

Note: Please contact ROSEN for conditions outside of these specifications.

Location and Orientation Capabilities

Axial position accuracy from reference marker 1 m on 1000 m (1 ft on 1000 ft) marker distance	1:1000
Axial position from closest weld	±0.1 m (±4")
Circumferential position accuracy	±5°

The axial positioning accuracy specified is given at 90 % certainty and is based on following conditions:

1. Distance between upstream (u/s) and downstream (d/s) marker/reference point < 2,000 m (6,500 ft.).
2. Actual aboveground distance to both u/s and d/s marker/reference points have been measured and correlated.
3. Marker points are placed correctly according to respective ROSEN marker specification.

Performance Specifications

	General	Pitting	Axial Grooving	Axial Slotting*
Depth at POD = 90 %	0.15 t	0.15 t	0.10 t	0.20 t
Depth sizing accuracy at 80 % certainty	±0.15 t	±0.19 t	±0.15 t	±0.15 t
Width sizing accuracy at 80 % certainty	±15 mm (0.59")	±12 mm (0.47")	±15 mm (0.59")	±15 mm (0.59")
Length sizing accuracy at 80 % certainty	±15 mm (0.59")	±15 mm (0.59")	±15 mm (0.59")	±8 mm (0.31")

* Valid for axial slotting feature width > 1 mm (0.039")

Abbreviations: POD = Probability of Detection; t = wall thickness

Remarks and Features

- API 1163 compliant services
- CE and ATEX certification available
- Tailored solutions with different specifications upon request: multiple tool sizes or multi-diameter tools, higher pressure rating
- Contact ROSEN for more detailed information about the presented service
- Specifications are subject to change, depending on specific requirements or tool configurations