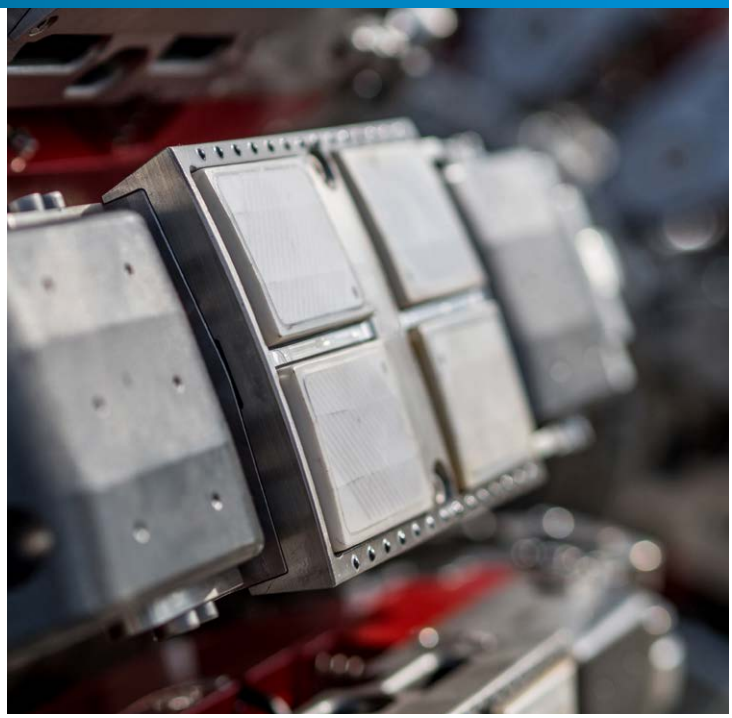
RoCD EMAT-C Service

In-line High-Resolution Detection and Sizing of Axial Cracks

Accurate crack detection, sizing and characterization

Global availability and largest tool fleet in the world

Technologies suitable for both liquid and gas pipelines



External factors such as corrosion, stresses, pipeline movements and fatigue cycling may lead to the formation of axial and circumferential cracks in pipelines. Safe pipeline operation and avoiding performance and eventual containment loss demands a complete understanding of cracks and crack progression.
Our RoCD suite of technologies offers comprehensive detection, characterization and analysis of axial and circumferential cracks in your pipeline. RoCD technologies provide superior sensitivity and resolution backed by tailored probe production and industry-leading carrier systems. Our understanding and experience of crack analysis and detection is supported by an in-house crack database that enhances identification and characterization accuracy.

Stress corrosion cracking and other forms of axial cracking must be considered to ensure safe pipeline operation. Our certified RoCD EMAT-C Service yields reliable and accurate data in axial crack detection and sizing, providing a solid foundation in effective pipeline integrity management.

- Offers continuous sizing of critical crack anomalies
- Full wall thickness crack depth sizing
- Reliably detects coating disbondment in pipelines
- Works in pipelines transporting all product types, e.g. natural gas, NGL, Ethylene, gasoline, oil

Benefits

- Our innovative EMAT ultrasonic inspection technology eliminates the need for a liquid medium
- EMAT technology facilitates accurate crack sizing for any crack depth
- Wide range and availability of tool configurations according to individual pipeline requirements

Remarks and Features

- Other tool sizes are available on request
- Higher pressure rating available on request
- Tailored solutions with different specifications available
- API 1163 certified services
- CE and ATEX certification available
- Contact ROSEN for more detailed information about the presented service
- Specifications are subject to change, depending on specific requirements or tool configurations

ROSEN
empowered by technology

Technical Specifications

Standard Operating Specifications

Tool sizes available	10"–48"
Pipeline product	Gas or liquids
Product temperature range	0 °C–65 °C (32 °F–149 °F)
Maximum operating pressure	15 MPa (2175 psi)
Operating speed range	Up to 2.5 m/s (5.59 mph)
Product flow range*	Up to 8 m/s (17.9 mph)
Minimum pipeline bend radius	1.5D
Maximum operating time	50 hours
Maximum inspection length	330 km (205 miles)

* Fitted with optional speed control system (gas lines only)
Note: Contact ROSEN for more detailed information.

Location and Orientation Capabilities

Axial position accuracy from reference marker 1 m on 1000 m (3.3 ft on 3000 ft) marker distance	1:1000
Axial position from closest weld	±0.1 m (±4")
Circumferential position accuracy	±10°

Detection and Sizing Accuracy for Isolated Cracks and Crack-Colonies

	Isolated radial cracks with axial orientation		**Colonies (e.g. SCC colonies)**
	In pipe body	**In longitudinal weld area**	**In pipe body**
Minimum length	40 mm (1.57")		
Minimum depth at POD 90 %	1 mm (0.04") or 0.20t [1]	2 mm (0.08") or 0.30t[1]	1 mm (0.04") or 0.20t[1]
Depth sizing at 80 % certainty	for t < 10 mm (t < 0.39"): ±0.15t for t ≥ 10 mm (t ≥0.39"): ±0.20t		
Length sizing accuracy at 80 % certainty	±20 mm (±0.79")		
Width sizing accuracy at 80 % certainty	n/a	n/a	±30 mm (±1.18")
Orientation to pipe axis	±10°		
Inclination to pipe surface	40 – 90°		

1 Whichever value is greater (mm or percentage of wall thickness (t))

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