

EmatScan helps lower costs and raise crack-detection confidence for gas-pipeline operators

EmatScan™ CD is the in-line inspection tool that gives gas pipeline operators the same crack-detection benefits and confidence levels as their liquid-pipeline counterparts.

Eliminate costly pre-inspection preparation

EmatScan CD applies Electro Magnetic Acoustic Transducer (EMAT) technology to the unique demands of in-line inspection – detecting and measuring a full range of cracking defects in gas pipelines.

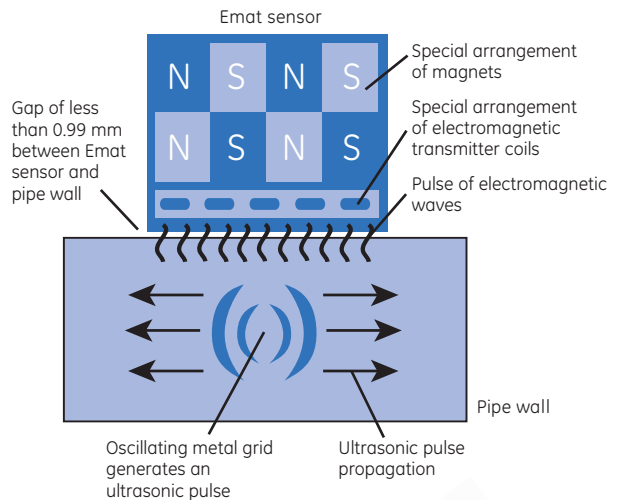
Conventional ultrasonic inspection methods require gas pipelines to be either filled with a liquid or that the tools run in a liquid batch. EmatScan CD does not require a liquid medium for its signals to reach the pipe wall. So operators no longer need to subject their gas pipelines to costly pre-inspection preparation or contamination by foreign liquids in order to obtain accurate inspection data.

Another of EmatScan CD's strengths is its ability to detect even sub-critical SCC and coating disbondment. This capability gives operators the advanced warning essential for the initiation of effective SCC management programs – without the high costs and loss of production associated with the common (yet less efficient and statistically inferior) method of hydrostatic testing.

Detection capabilities

EmatScan CD is ideally suited to the detection of:

- SCC colonies
- Sub-critical SCC
- Longitudinal fatigue cracks, toe cracks
- Hook cracks
- Cracks in or adjacent to the long seam weld
- Lack-of-fusion cracks
- Coating disbondment



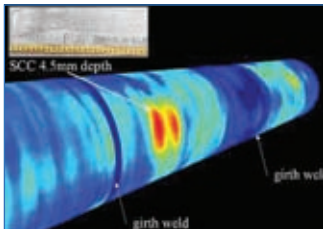
New level of data quality for gas-pipeline inspections

EmatScan CD provides gas pipeline operators with affordable, high-resolution inspection results – detecting cracks as short as 50 mm and as shallow as 2 mm.

The amount and detail of data provided will help operators enhance pipeline safety and decision-making confidence, while reducing overall costs by avoiding hydrostatic testing and eliminating unnecessary exploratory digs.

Key Features

- Specifically designed for gas pipelines
- Runs without a liquid batch
- Lower cost than liquid-batching techniques
- Reliable defect detection, location and sizing
- Coating disbondment detection
- Proven reporting techniques and software capabilities
- More efficient, economical and statistically superior alternative to hydrostatic testing
- Minimal disruption to pipeline operation
- Data accuracy enables isolation of critical defects for dig and repair activities
- Allows monitoring and growth forecasting for sub-critical defects
- Improves SCC risk management and mitigation activities



The visualization in the scan demonstrates that the SCC was clearly detected. The red area is echo from the defect.

Contact

For more information on EmatScan CD, contact your GE representative or visit geoilandgas.com/pii

Operating Parameters

Property	Specification
Range @ max. speed	170 km*
Max. speed	2.5 m/s
Max. pressure	190 bar
Temperature	0-50°C**
Min. bend radius back-to-back	1.5 D 90°
Min. ID in straight pipe	686 mm in round 652 mm in oval
Min. ID in bend	722 mm
Tool length	8.05 m
Tool weight	3,377 kg

*Longer range and **higher temperature available on request

General inspection capabilities in 30" pipe with 7-10 mm wall thickness

	Radial crack-like defects with longitudinal orientation	
	In plate material, min. length 50 mm	In longitudinal weld area, min. length 50 mm
Min. depth extension at POD* 90%	2 mm	2 mm
Depth grouping in 3 classes	2-3 mm 3-5 mm >5 mm	2-3 mm 3-5 mm >5 mm
Length sizing accuracy at 80% confidence	±7.5 mm or 7.5% of length	±7.5 mm or 7.5% of length
Length sizing accuracy at 90% confidence	±10 mm or 10% of length	±10 mm or 10% of length
Deviation from longitudinal orientation	±10°	±10°
Internal/external discrimination	yes	yes

*Probability of Detection

