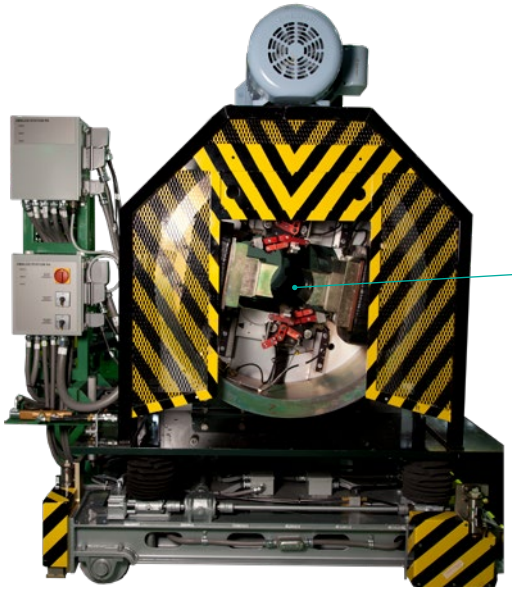
Amalog

Longitudinal Flaw Detection

System Overview

The Tuboscope™ Amalog™ is an automated, non-destructive electro-magnetic induction (EMI) inspection unit that detects, evaluates, classifies and reports longitudinal flaws in ferrous steel pipe and tubes in accordance with API, ASTM and other international industry standards.



Amalog Detection Unit

Amalog Magnetic Shoes

System Specifications

Standard Configuration for Pipe Sizes (OD):	
Small Tube	1"(25 mm) to 5½" (140 mm)
Size I	2⅜" (60 mm) to 7" (165 mm)
Size II	2⅜" (60mm) to 16" (406mm)
Size III	10¾" (273 mm) to 24" (610 mm)
(Consult with factory for other size ranges.)	
Line Speed	Size I & II up to 335 FPM (1.7 m/s) Size III up to 235 FPM (1.2 m/s)
Maximum Pipe Temperature	180°F (82°C)
Number of shoes	2
Shoe Control Mode	PLC Actuated
Shoe Up/Down Control	Electric Solenoid
Number of inspecting channels	32

Signal Process	
Automated Calibration	Yes
Manual Adjustment	Yes
System Diagnostic	Yes
Operation Diagnostic	Yes
Maintenance Diagnostic	Yes
Alarms	Audible and Visual
Output Signal Sorting	Yes
Database Architecture	MS-SQL

System Operations

The Amalog inspection Unit is equipped with a dual-shoe detection system, integrated into a rotating coil magnetizer assembly. The coils induce a high-strength circumferential magnetic field into the wall thickness of the pipe, while the detector shows, incorporating proprietary sensor coils, detect longitudinal surface-breaking flaws on both the inside and outside pipes surface. The signals generated by the sensor coils are amplified, digitized and filtered; and then transmitted to processor electronics within Tuboscope's server-based computer cabinet.

System Features

The combination of the Tuboscope's Amalog EMI Inspection Unit with the Server-Based Digital Instrumentation System offers the pipe and tube producer of processor:

- ID/OD flaw detection and discrimination
- On-board digital gain/filtration control
- Capability for data storage and traceability
- Ability for process control and final inspection, with interface to a host (mill) computer

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