

GE
Sensing & Inspection Technologies

Rightrax System

The Smart Way to Monitor Wall Thickness

NEW
improved DL2
Data Logger,
including digital
flaw detector
capabilities



Corrosion and erosion monitoring using permanently installed sensor technology for continuous wall thickness monitoring of your asset



GE imagination at work



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The GE Rightrax Wall Thickness Monitoring System Consists of the Following Components:



RIGHTRAX M2 Sensor

- ATEX certified
- Operating range -40°C to 120°C (-40°F to 250°F) (surface skin temperature)
- Thickness range up to 100 mm (4") (minimum thickness dependent on application)
- Suitable for pipe diameters 150 mm (6") and above
- Wall thickness measurement repeatability to 0.2 mm (0.008")
- Flexible sensor strip 240 mm x 60 mm (9.5" X 2.5")
- 14 Ultrasonic transducers in each strip
- Will support extension cables up to 70 m (230 ft) long
- Auto calibration
- Built in identification chip
- Built in temperature sensor
- Operation via a single high temperature coaxial cable

New Portable RIGHTRAX DL2 Data Logger

It is now possible to use a single instrument to carry out corrosion/erosion monitoring, wall thickness measurement and standard flaw detection on weldments - saving time and money.



DL2 in Data Logging Mode

- Makes direct thickness reading (mm or inches) using the M2 sensor.
- Interrogates up to 10 sensors at one connection via a multiplexer.
- Simple operation eliminates the need for utilizing a NDT specialist.
- Stores thickness data and associated A-scan waveforms from up to 100 M2 sensors.
- Download data to a PC for further analysis using WINHOSTP and CMDA software.

DL2 in Flaw Detector Mode

- DL2 operates as a fully functional portable flaw detector for use in conventional wall thickness and angle beam inspection utilizing standard GE ultrasonic transducers.
- The high contrast color display facility enhances clarity when using angle beam probes in weld inspection, as the color of the signal changes with every reflection of the sound beam from the workpiece surface.
- Amplitude for each gate, sound path or sound path difference can be displayed prominently in the corner of the A-scan.
- Incorporates new powerful DAC/DGS evaluation with direct digital ERS readout for greater accuracy.
- Colour display is used to highlight messages and alarms and the color can be changed to suit personal preference or ambient light conditions.
- Transfer stored data to PC via software and RS-232 communication port.

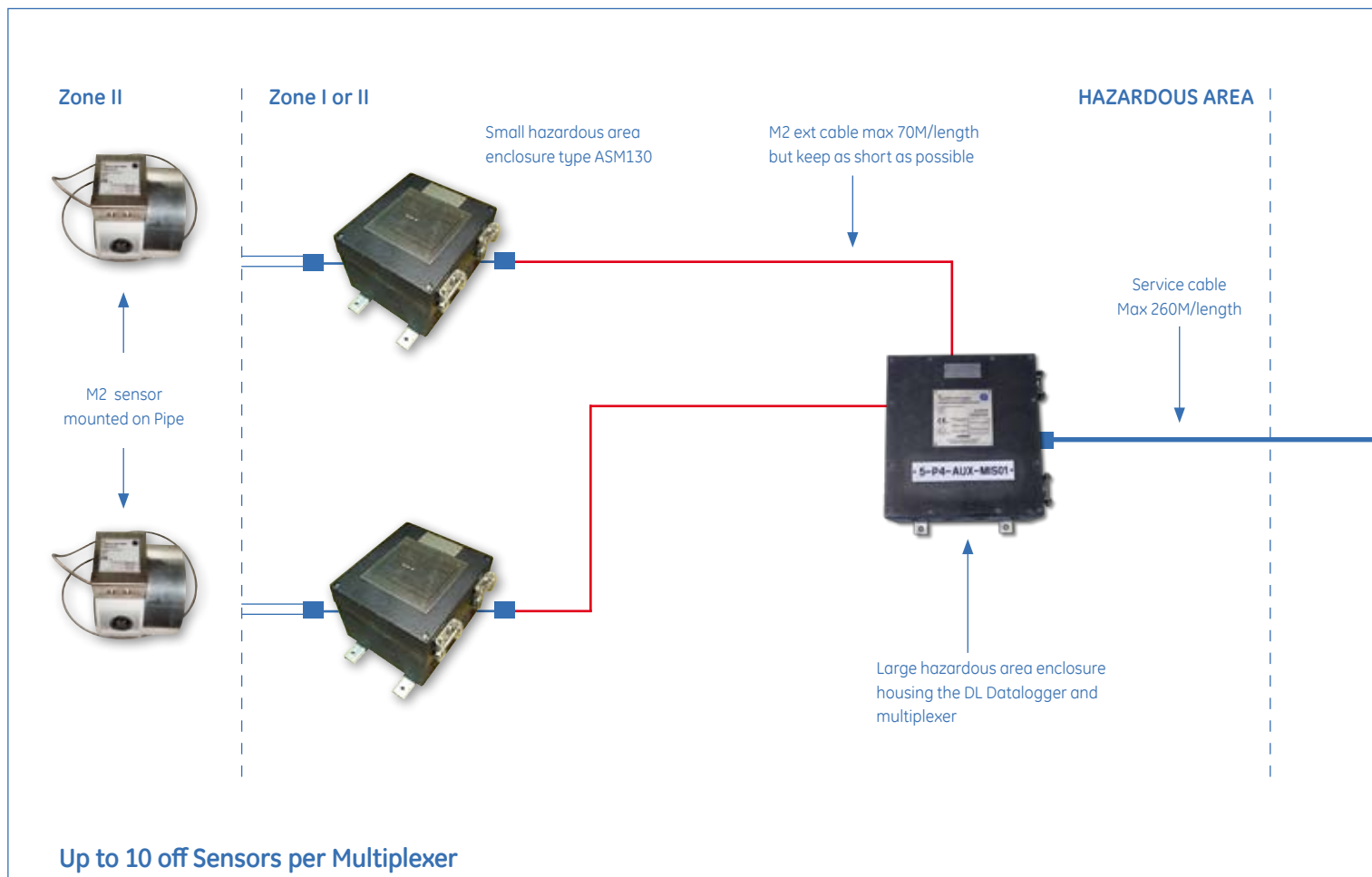


ATMS (Automated Thickness Monitoring System)

The automated version of the Rightrax corrosion/erosion-monitoring system is certified for operation in ATEX zone 2 locations. Designed for permanent installation on pipelines and process plant to provide accurate and repeatable, on-demand wall thickness measurements. In addition, its remote connectivity enables asset owners and service providers to reduce the safety risk to personnel when operating in hostile locations.

Data analysis can be carried out utilizing bespoke software with data viewable via the users corporate WAN/LAN system to any location. ATMS detailed specification sheets available on request.

Typical arrangement for an automated Rightrax Corrosion / Erosion Monitoring data collection system showing the key components and how they fit relative to each other.





Global Support

The GE Rightrax wall thickness monitoring system enjoys the global support of GE Sensing & Inspection Technologies.

GE Sensing & Inspection Technologies is a leading innovator in technology-driven inspection solutions that deliver productivity, quality and safety. The company designs, manufactures and services radiographic, ultrasonic, remote visual inspection and eddy current equipment to inspect, monitor and test materials and equipment without disassembling, deforming or damaging them. These products are used in a wide range of industries, including aerospace, power generation, oil & gas and automotive. GE Sensing & Inspection Technologies has 11 application centers around the globe and offers a range of services including repair, on-site RVI inspection services, calibration, training and upgrades.



The GE Rightrax System

Corrosion and erosion are a leading cause of pipeline failure, causing a quarter of all reported spills in the last six years. It has been estimated that 60% of all maintenance costs are corrosion or erosion related.

Multiphase Piping systems often experience localised flow - enhanced corrosion / erosion effects and it is necessary to monitor these rates at critical locations e.g. water drop out zones, slugging areas, bends and other positions that cause turbulence within the pipe.

The GE Rightrax solution has been designed to aid the user in detecting these metal losses by offering a non-intrusive monitoring system that gives a direct measurement of localized material loss.



The selection of the appropriate location, and orientation of the monitoring sensor is critical to the success of the monitoring process. The advantage of Rightrax is that it can be installed in restricted areas or areas costly to access and then monitored remotely.

Traditionally monitoring of corrosion and erosion or any other material loss process involves manually scanning pipe work, vessels and pipelines with an ultrasonic probe by a skilled operator.

Additionally, high costs may be incurred due to the necessity of removing insulation, erecting scaffolding, shutting down plant, excavating pipelines and logistics.

The Key Benefits of this System Are:

- Non-intrusive inspection:
Sensor simply bonds to the inspection area
- Remote locations:
Offshore Platforms (manned & unmanned) - remote pipeline sites or inaccessible areas
- No scaffolding / excavation costs:
Once correctly installed no need to revisit the site (fit & forget)
- Early warning systems:
Can be utilized with bespoke software systems to give trending, warning and alarm information with data on demand
- Accuracy:
Measurement repeatability to 0.2 mm (0.008")
- Operator Safety:
Eliminates the need to send operators into hazardous environments or remote locations to carry out wall thickness monitoring
- Increased asset integrity:
The application of monitoring techniques can easily be justified when you consider **the consequences of internal wall loss**:
 - Unscheduled shutdowns i.e. loss of production and hence loss of revenue
 - Loss of capital equipment
 - Hazard to personnel
 - Pollution to the environment
 - Repair costs
 - Damage to public image
 - Optimization of maintenance schedules

