

A cutaway view of the PipeMonit Swarm S1 sensor installed inside a pipe. The sensor is a cylindrical device with a grey outer shell and a yellow and white internal component. It is connected to a cable that exits the pipe. The background is a dark blue, textured surface representing the pipe's interior.

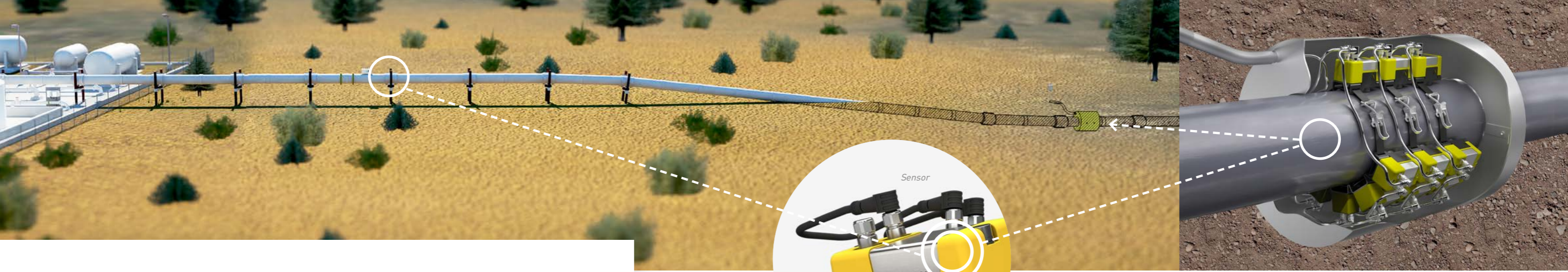
PipeMonit® Swarm S1

Real-time erosion and corrosion monitoring for low temperatures and wired or GSM data communication.

We provide the industry's most accurate wall thickness measurements.

PipeMonit® Swarm S1 is a high resolution ultrasonic erosion and corrosion monitoring tool which provides quick response to wall thickness changes in pipelines and vessels. It is non-invasive, and installed and operated without interfering with production.

- Non-intrusive.
- Highly accurate wall thickness measurements.
- Accurate wall loss history.
- Fast, simple and maintenance free installation.
- Retrofittable, easily relocated.



The Swarm® S1 consists of multiple daisy chained S1 sensors organized in a customized matrix to cover a bend, straight pipe, a weld, a T-piece or a vessel or a tank. The Sensor measures wall thickness as a function of time, providing market leading resolution on wall thickness loss.

Swarm® is the market leading non-intrusive corrosion and erosion monitoring system, providing wall loss resolution better than 0,1 mills or 2,5µm.

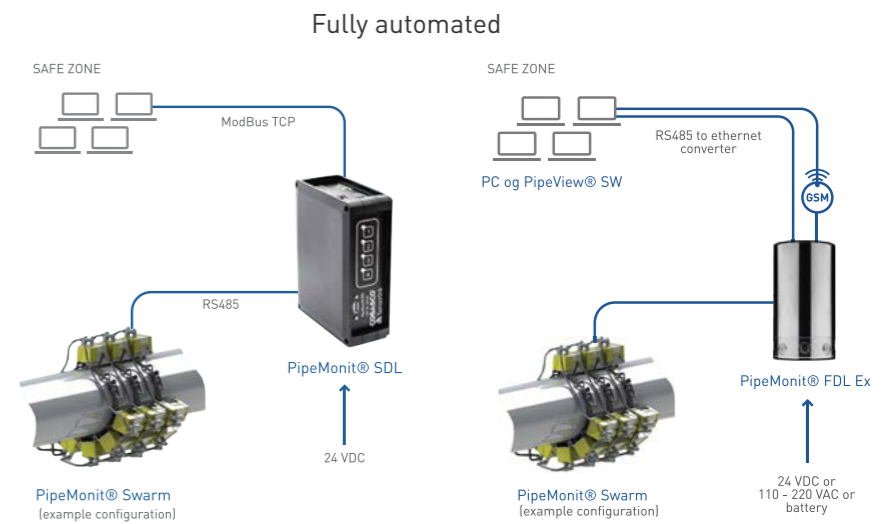
The high resolution gives swift detection of corrosion and erosion rate changes.

A world class corrosion monitoring system is an investment in improved economy, prolonged asset life and safer operations.



Data Collection

There are several ways of gathering data from the PipeMonit® Swarm systems. It can be wired into a DCS/CCS, it can send data wireless through GSM/cellular network or you can use a PDL(Portable Data Logger) to retrieve data.



Installation and Maintenance



Swarm® offers simpler, faster and safer installation than any competing systems:

- Clean the pipe surface. No need to remove solid coatings.
- Position the Swarm® and engage the locking mechanism, no gluing or welding required.
- Connect the Swarm® to a data logger or junction box.
- Connect the Portable Data Logger and verify successful installation.
- Fit a Swarm® protection cover.

Single sensors are replaceable. The entire Swarm® unit can be adjusted or relocated by the operator. Install Swarm®, monitor your pipeline and improve your asset integrity management.

Applications

Wall loss monitoring is important for verification of the integrity of pipeline assets, and as a provider of meaningful decision support data.

Swarm® S1's unique design allows for installation on critical areas such as top of welds, heated weld zones, elbows and T-pieces to monitor and detect:

- Selective weld corrosion.
- Heat-affected zone (HAZ) corrosion.
- Erosion and corrosion on elbows and T-joints.



Erosion

Erosion monitoring of critical infrastructure on offshore oil & gas infrastructure.



Corrosion

Real time corrosion monitoring with Swarm® S1 (r).



Sensorlink.no/topside

Some key advantages of the Swarm® S1 monitoring tool:

- Stand alone system or online and wireless option is available.
- Accurate erosion/corrosion feedback increases the service life of pipelines.
- Real-time feedback on the effectiveness of corrosion inhibitors makes a significant OPEX saving.
- Accurate wall loss history enables reduced inspection and intelligent pigging activity.
- Accurate and direct sand erosion monitoring.
- Monitoring of selective weld corrosion and heat-affected zone (HAZ) corrosion.
- Fast and maintenance free installation.
- Being retrofittable, the Swarm® can be relocated without expert support.
- Approved for EX Zone 1 operation.



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