



# inductosense

streamlining internal corrosion and erosion monitoring



# Introduction

Inductosense is an Ultrasonic Testing (UT) technology company that specializes in the design, development and manufacture of internal corrosion monitoring systems.

At the core of the solution are **permanently installed, battery-free, ultrasonic sensors** that can be installed easily onto structures for precision thickness monitoring.

Inductosense are committed to streamlining internal corrosion and erosion monitoring: simplifying operations, maximizing quality of data, driving efficiency, and modernizing non-destructive testing.



# Applications

The Inductosense solution can be used as an alternative to single point manual UT inspection, without the human error and access limitations.

The technology can also act as a fully provisioned monitoring solution, where fast, simple measurement acquisition enables large volumes of data.

- Allows for more effective predictive maintenance decisions through accurate, repeatable data
- Monitor high value assets economically, using low-cost solutions
- Overcome the access limitations with manual UT thanks to wireless measurement acquisition



# The Technology

Three-part solution:

1. **TMS sensor:** Thin, embeddable, battery-free ultrasonic thickness sensors, with associated RFID. ATEX/IECEX certified.



2. **WAND data collector:** Easy-to-use, handheld device, which wirelessly activates the TMS sensor, acquiring an instantaneous wall thickness measurement, with the simple press of a button

3. **IDM software:** Enables remote analysis of the data collected by the WAND. Can calculate corrosion/erosion rates, set thickness thresholds, analyse ultrasonic signals, generate reports, as well as configure the sensors and WAND device.



# How it works



The **WAND data collector** uses an electromagnetic signal to wirelessly power-up the TMS sensor when in close contact



When activated, the **TMS sensor** sends an ultrasonic pulse into the structure.

The time of the corresponding echo is measured which is then used to precisely calculate the wall thickness



Measurement data is then uploaded to the **IDM software**, which can be used to trend the change in material thickness with time

# Accessories

**ECHO:** Robust, ultrathin TMS Sensor extension coil, which allows measurement acquisition underneath insulation and difficult access areas. The ECHO comes in customizable lengths



**REACH:** WAND extension pole, which allows wireless data acquisition for hard-to-reach measurement locations. The REACH length is readily adjustable up to 4 metres



The accessories provide potential for greater coverage of thickness measurement locations, whilst helping to minimize risk.

# Features and Benefits

Battery-free	No power/maintenance requirements – fit and forget
Wireless	Fast, simple data acquisition. Sensors can be embedded underneath insulation, which does not need to be removed to acquire measurements
Accurate	Provides accurate thickness measurements as frequently as needed, enabling very reliable trending of internal corrosion rates
Simple and safe to use	Can be used by non-specialist personnel, saving significant labour costs/time, as well as mitigating risks to personnel safety through accessories
Low cost	High volumes of monitoring locations can be managed cost-effectively
Digitized data	Integrating monitoring with digitization



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