



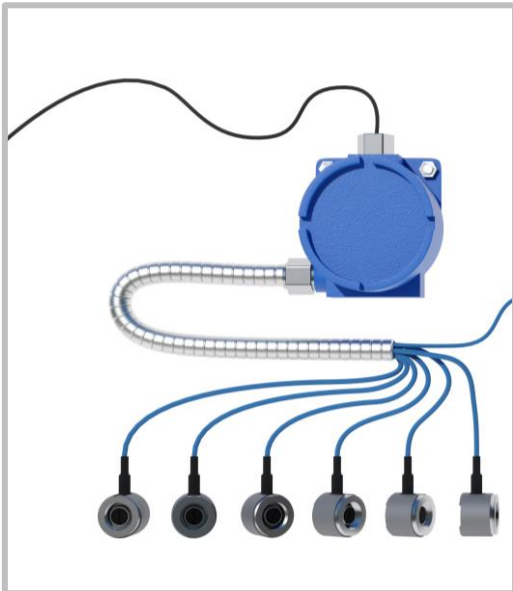
Real Time UT Wall Thickness Monitoring



SMS provides non-intrusive corrosion and erosion monitoring using best-in-class, field-proven technology. After extensive testing of the systems, we identified the instrumentation to give our clients the edge they require.

System Overview

The Real -Time UT Wall Thickness Monitoring System is a series of installed UT wall thickness sensors, which form a monitoring array. The system measures absolute wall thickness with no averaging or extrapolation, this allows early identification of corrosion and erosion activity where areas of high-risk can be monitored continuously.



Features

Continuous Monitoring

- Early identification of wall loss at high-risk areas

Flexible Array

- Up to 16 sensors per location allows greatest coverage of high-risk areas

Data Alarming Integration

- Realtime data and alarming integration to end user acquisition or database

Non-Intrusive

- Mounted externally via a banding strap

Zone 2

- For use in Zone 2 applications

Benefits

Increased Safety

- No need for personnel to inspect high-risk areas

Reduced Costs

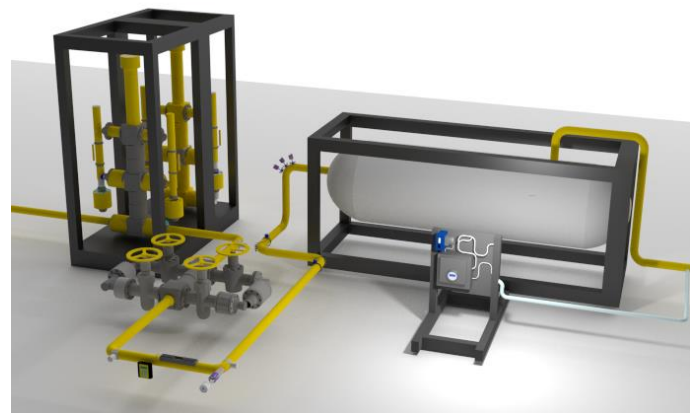
- No requirement for offshore manual operations

Real-Time Erosion / Corrosion Measurement

- Informs real-time decision making, risk assessment allowing increased reliability and safe operations

Remote Monitoring

- Save on manpower and offshore bed space



Sense



Understand



Perform

Specifications

Transmitter

Model no	-PIMS 100 Modbus
Protocol	Modbus
Communication	RS-485, 2-wire, max. 1000'
Power	10-20 VDC
Ultrasonic System;	
channels.....	16 ultrasonic, 1 temperature
pulser voltage.....	±5V bipolar square wave
receiver	1–10 MHz (-3dB)
gain	-10dB to +70dB
digitizer frequency	40 Msps
certification	Class 1, Div. 1, ATEX Zone 2

Enclosure

type	instrumentation housing
material	aluminium
rating	Class 1, Div. 1, Group BCD, NEMA 4X, IP66
dimensions/weight	5" × 5¼" × 4¼" / 4 lbs.

Tablet Datalogger

Performance

processor	Intel i5-4200U 1.6GHz w/ 3MB L3 cache dual-core)
memory	8 GB RAM
storage	M2-SATA SSD, 64 GB
operating system	Windows 10
connections	network power, data via RS-485-to-USB adapter physical
drop/shock resistance	MIL-STD-810G
environmental	IP65, 14–131°F (-10 to +55 °C)
dimensions/weight	11.4" × 7.48" × 0.78" / 2.73 lbs

Transducer Cable

Type	armoured, ¾" dia.
Maximum length to transducer	standard 10' (3.0m), custom to 25' (7.6m)

Transducers

	single-element contact	delay-line contact	dual-element	angle-beam or shear-wave
model	XD-101	XD-201	XD-301	custom
application	general purpose	ultra-high temp	severe pitting	cracking
frequency	5 MHz	7 MHz	5 MHz	2.25–10 MHz
active area (dia.)	0.25"/6.35mm	0.375"/10mm	0.375"/10mm	custom
overall (dia. x h)	1.0 × 1.0" 25.4 × 25.4 mm	0.8 × 2.25" 20.3 × 57.2 mm	0.75 × 0.75" 19 × 19 mm	custom
no. transducers	1–16	1–16	1–8	2–8 (TT), 1–16 (PE)
resolution	0.001"/0.025mm	0.001"/0.025mm	0.001"/0.025mm	custom
thickness range	application-dependent	0.125–1.0" 3.0–25.0mm	0.040–6.0" 1.0–150.0mm	custom
temp range	application-dependent	-5 to +932 °F -20 to +500 °C	-5 to +300 °F -20 to +150 °C	custom
attachment	magnet/adhesive	mechanical clamp	magnet/adhesive	custom

TT = through-transmission, PE = pulse-echo