



Real-Time UT Wall Thickness Monitoring

SMS provides wireless, 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

Each sensor is programmed to take thickness readings at any user-defined time interval and automatically send data to private network, cloud-based or on-premises network system + software back-end for analysis, trending and more.



Instantaneous and Proactive Corrosion and Erosion Monitoring Solution

Our range of non-intrusive corrosion and erosion sensing technology can be used to perform end-to-end erosion and corrosion inspections, allowing you to make better decisions about pipe maintenance and replacement. The system's wireless cloud connectivity enables remote monitoring and the development of a detailed real-time inspection report, eliminating inefficient and perhaps dangerous inspection procedures.

This solution includes a standard battery that can be purchased from a retailer for a reasonable price, making it more cost-effective for big installations and stock that is readily available with a short lead time.

Benefits

Monitor "Low Spots"

Post-NDE screening of pits to monitor remaining thickness - measures down to 0.040"

Reduce Costs

Reduce scaffolding and insulation removal/ refitting for internal corrosion monitoring, more accurate/reliable data improving operations

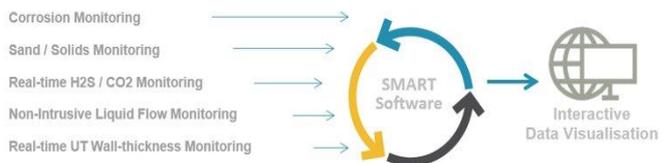
Monitor Corrosion Rate

Accurate to 0.001" (0.025mm) historically problematic locations

Easy Integration into Existing Network

Add and connect sensors onto an existing network and other software apps

Data Integration



SMS cloud-hosted visualisation suite built with unique, compelling and critical features for clients to access data from multiple sensors via an online interactive reporting system from anywhere in the world. Real-time data can now be analysed and interpreted quickly and easily, using 3D imagery of sensor locations and a graphical interface that you can control and direct with ease for maximum clarity.

Click to watch [SMS Real Time UT Wall Thickness Monitoring Video](#) or [SMS Zero Manpower Solutions Video](#).

Installation and Maintenance

Our highly trained field technicians and engineers will ensure the system installed and operates successfully, meeting the regulatory standards.

Aside from supplying the products, we can support your needs in optimising the life and reliability of your analyser under tailored maintenance program and troubleshooting. SMS provides both on site and remote support for clients globally.

Training and Rental Package

All SMS products are available for training and rental package upon request.



Sense



Understand



Perform

Real-Time UT Wall Thickness Monitoring



Features

- 15-years at 1 reading/day (2x D-Size Batteries - 3.6VDC)
- Two models: dual element (up to 275°F/135°C) and ultra-high temp (up to 932°F/500°C)
- Built-in thermocouple provides surface temperature readings for temperature-compensated thickness data
- Wireless gateway supports up to 1,000+ sensors
- Offers up to ~1 mile (1.6km) range in industrial settings
- Cellular or ethernet data back-haul through gateway
- ULCSA C1D1, ATEX / IECEx Zone 0 Hazardous-area certified

Tech Exposed

1 High-Gain Antenna

2 Two D-Cell batteries provide 15 years of wireless operation. Commercially available (non-proprietary)

3 Radio

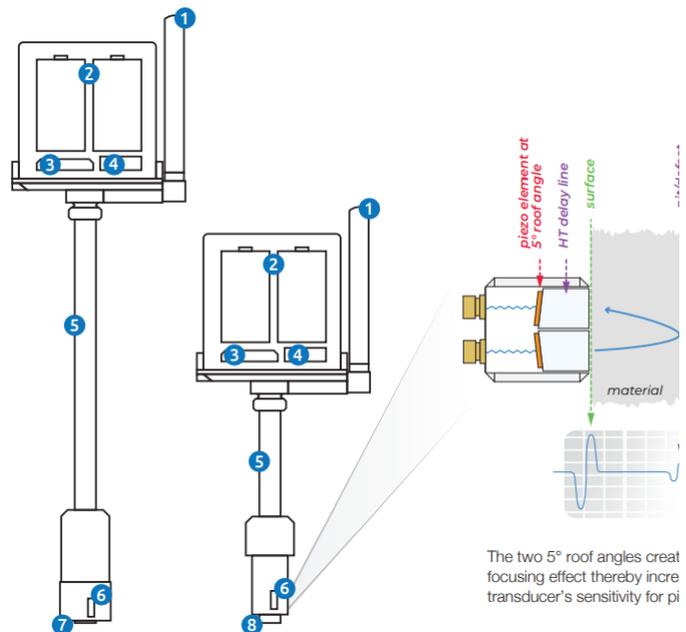
4 Ultrasonic Testing PCB

5 Stainless Steel Heat Stand-Off

6 Temperature Sensor

7 Single-Element Ultra-High-Temp Transducer capable of being installed on pipes up to 932°F (500°C)

8 Spring-Loaded, Dual-Element Ultrasonic Transducer enhances accuracy and can measure pits down to 0.040" (1 mm) remaining wall thickness on pipes / tubes as small as 1 in. Ø (24.5mm)



The two 5° roof angles create a focusing effect thereby increasing the transducer's sensitivity for pits.

Real-Time UT Wall Thickness Monitoring

Specifications

	Dual Element	Ultra-High-Temp
Elements	dual	single (delay line)
Frequency	5 MHz	7 MHz
Element diameter	0.375 in. (10mm)	0.375 in. (10mm)
Measurement range	0.040-4" (1-100mm)	0.125-1" (3-25mm)
Sensor surface temperature	-40°F (-40°C) up to 275°F (135°C)	-40°F (-40°C) up to 932°F (500°C)
Weight	20.5 oz. (580g)	31.0 oz. (880g)
Size (height x housing dia.)	9½x2.8"(241x70mm)	15½x2.8"(394x70mm)

Ingress Protection Rating	IP-67
Resolution	0.001" (0.025mm)
Battery life (typical)	15 yr. @ 1 reading/day 68°F (20°C)
Construction	303 stainless steels
Mounting	Magnetic base; band clamp
Data	Digital thickness, RF waveform, temperature, time/date stamp
Gateway	Outdoor; cast alum.; Approx. 12x6x4" (305x152x102mm); 6.0lb (2.7kg)
Battery powered	2 Cells, 7.2V, 0.94W
Programming port	Um = 5V

† Typical Values. Results may vary site to site

* Without antennas.



UK CA 2503 CE 2276 Ex II 1 G Ex ia IIC T4 Ga, Ta = -40°C to +70°C
CML 21ATEX2356X | CML 21UKEX2357X | IECEx CML 21.0044X

MET NRTL LISTED US
Ex ia IIC T4 Ga | Class I, Div 1, Gp A-D T4 Ex ia
Class | Zone 0, AExia IIC T4 Ga | Class I, Div 1 Gp A-D T4
Ta = -40°C to +70°C
E114158 - Hazardous Location

WARNING: USE ONLY TADIRAN TL-5930, SL -2780 OR XENO XL-205F BATTERIES
WARNING: SPECIAL CONDITIONS FOR SAFE USE, SEE INSTRUCTIONS

IP 67
BATTERY POWERED: 2 Cells, 7.2V, 0.94W
PROGRAMMING PORT: Um = 5V



Contains:
IC: 23069-CW24012
FCC: 2ANDP-CW24-012
Made in the USA

UK Head Office
Energy Development Centre
Aberdeen Science & Energy Park
Claymore Drive, Bridge of Don
Aberdeen, Scotland AB23 8GD

Tel: +44 (0) 1224 853 525
Fax: +44 (0) 1224 707 999
Email: info@smsintegrity.com

Malaysia Office
SMS Sand Management SDN BHD
26th Floor, Menara Maxis
Kuala Lumpur City Centre
50088 Kuala Lumpur, Malaysia

Tel: +60 (0) 3 2615 2606
Fax: +60 (0) 3 2615 2699
Email: info@smsintegrity.com