



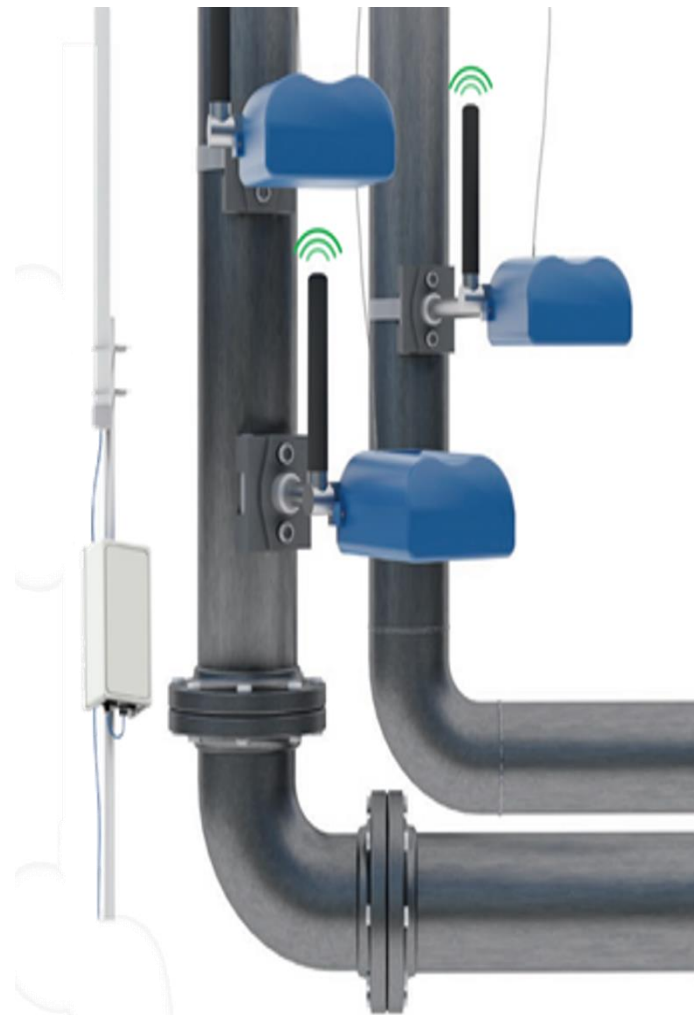
Real-Time UT Wall Thickness Monitoring



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.



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

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.



Sense



Understand

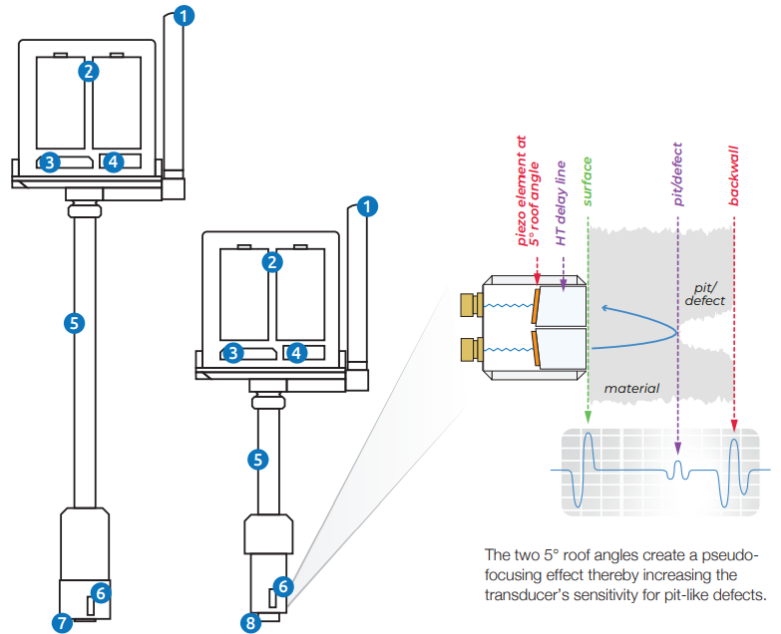


Perform

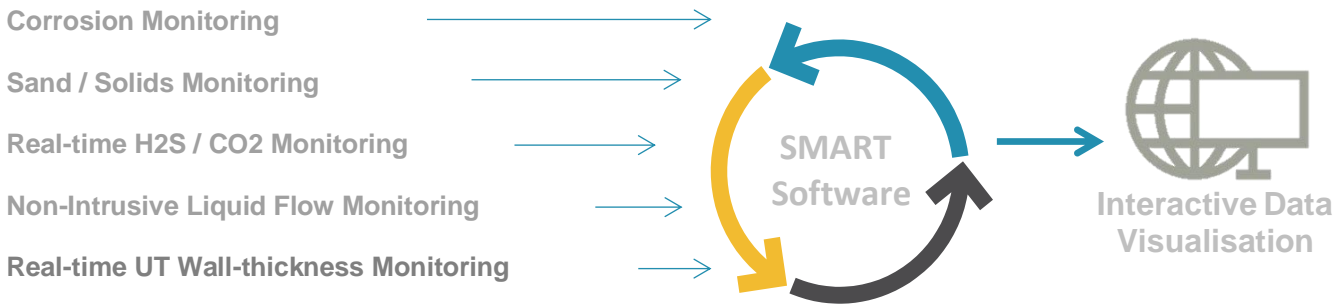
Real-Time UT Wall Thickness Monitoring

Tech Exposed

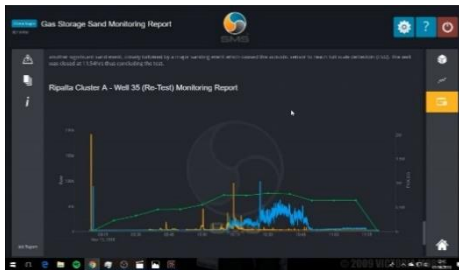
- 1 **High-Gain Antenna**
- 2 **Two D-Cell batteries**
provide 15 years of wireless operation.
Commercially available (non-proprietary)
- 3 **Radio**
- 4 **Ultrasonic Testing PCB**
- 5 **Stainless Steel Heat Stand-Off**
- 6 **Temperature Sensor**
- 7 **Single-Element Ultra-High-Temp Transducer**
capable 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)



Data Management



3D Data Visualisation and reporting delivers insight allowing decisions to be made based on real time contextual knowledge and data analysis



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

UAE Office
2nd Floor
Madinat Zayed Tower
Muroor Road
Abu Dhabi, United Arab Emirates
Tel: +971 (0) 527 345 148
Email: info@smsintegrity.com

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

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

UAE Office
 2nd Floor
 Madinat Zayed Tower
 Muroor Road
 Abu Dhabi, United Arab Emirates
 Tel: +971 (0) 527 345 148
 Email: info@smsintegrity.com