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.
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)
**Specifications**

<table>
<thead>
<tr>
<th>Elements</th>
<th>Dual Element</th>
<th>Ultra-High-Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td>5 MHz</td>
<td>7 MHz</td>
</tr>
<tr>
<td><strong>Element diameter</strong></td>
<td>0.375 in. (10mm)</td>
<td>0.375 in. (10mm)</td>
</tr>
<tr>
<td><strong>Measurement range</strong></td>
<td>0.040-4” (1-100mm)</td>
<td>0.125-1” (3-25mm)</td>
</tr>
<tr>
<td><strong>Sensor surface</strong></td>
<td>-40°F (-40°C) up to 275°F (135°C)</td>
<td>-40°F (-40°C) up to 932°F (500°C)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>20.5 oz. (580g)</td>
<td>31.0 oz. (880g)</td>
</tr>
<tr>
<td><strong>Size (height x housing dia.)</strong></td>
<td>9½×2.8”(241×70mm)</td>
<td>15½×2.8”(394×70mm)</td>
</tr>
</tbody>
</table>

| Ingress Protection     | 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. 12×6×4” (305×152×102mm); 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.

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