SMS Ltd provides sand monitoring using best in class, field proven technology. After extensive testing of acoustic monitoring 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 wireless 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/erosion activity, areas of high-risk can be monitored continuously.

Features

Continuous monitoring
- Early identification of wall loss at high-risk areas

Wireless communication
- Industry standard wireless integration

Non-intrusive
- Mounted externally via a banding strap

Zone 1
- Intrinsically safe for use in Zone 1 applications

Up to 7 years battery life
- Ensures minimal maintenance required

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
## Specifications

### Weight and Dimensions (individual sensor)

- **Weight**: 520g (1.1lbs)
- **Width**: 114 mm
- **Height**: 190mm
- **Depth**: 100mm

### Materials

- **Waveguide**: Duplex steel
- **Sensor foot**: Duplex steel
- **Housing**: PC/PBT antistatic
- **Potting compound**: Epoxy
- **Electronics components**: ROHS compliant
- **Tip seal (optional)**: Silicone rubber
- **Sealant**: Bostik Idenden 40-297

### Environmental

- **Pipe Temperature**: Up to +150°C (high temperature version available)
- **IP Rating**: IP67

### Wireless

- **Radio**: Compliant with EN 300 328 V1.7.1
  
  IEEE 802.15.4 compliant, operating in the 2.4GHz worldwide ISM band
- **RF Power**: 8DBM (EU, China, Brazil) 17dBm (US/Canada)
- **Network Type**: Self-forming, self-managing, self-healing mesh
- **Range**:
  - Short range: Up to 50m (160ft) line of sight between devices
  - Long Range: Up to 5km (depending on terrain / line of sight)
- **Maximum Devices**: up to 100 sensors per gateway
- **Maximum Data Hops**: 8 hops from gateway to furthest sensor

### Mounting

- **Clamped**: externally mounted around the pipe, clamp material to suit application (carbon steel, stainless steel etc)

### ATEX Intrinsic Safety

- **Certificate number**: Baseefa 14ATEX0053X
- **Application standards**: EN 60079-0: 2012, EN 60079-11: 2012
- **Markings**: II 1 G, Ex ia IIC T4 Ga, Tamb = -50°C to +75°C, IP67
- **Use only with approved battery types**