



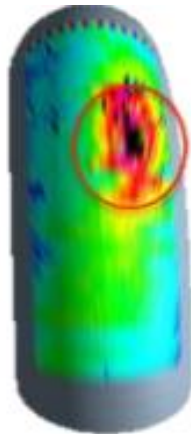
# 3D UT Wall Thickness Profiling



SMS Ltd provides sand monitoring using best in class, field proven technology. After extensive testing of various monitoring systems, we identified the instrumentation to give our clients the edge they require.

## System Overview

The scanner continuously records UT wall thickness measurements as the scanning head is moved over the inspection surface. Using these readings, we can then produce the 3D profile showing the complete wall loss of the inspected area of pipe.



## Features

### 3D image profiling

- Profile of erosion and corrosion high-risk areas

### 100% coverage of pipe

- Complete 360-degree coverage – no areas missed

### Maintenance optimisation

- Optimisation of maintenance to model component life expectancy

### Non-intrusive

- External scans can cover all pipework and vessels

### Compact & handheld unit

- Lightweight and mobile unit to aid application

## Benefits

### Increased Safety

- Higher probability of detection than conventional single point UT thickness gauging

### Reduced Costs

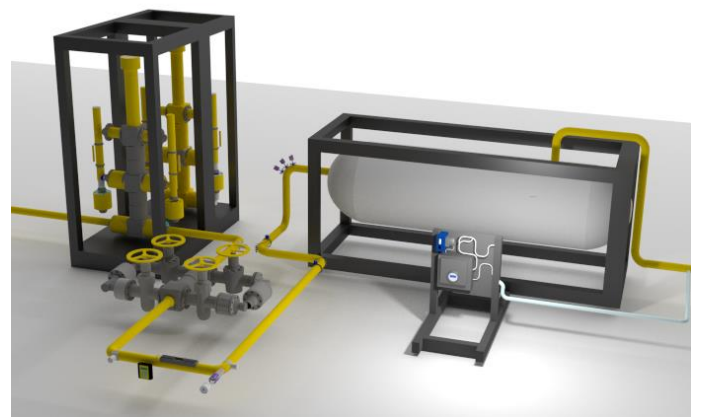
- Provides early identification of areas of concern

### Repeatable and Reliable

- Repeatable method of tracking wall loss

### Comparative results

- 3D mapping allows detailed comparative analysis over time



Sense



Understand



Perform

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# 3D UT Wall Thickness Profiling

## Scanner Unit

### For elbows and bends

Dimensions ..... Length 122mm (4.8") Width 65mm (2.5") Height 54mm (2.1")  
Transducer ..... TWP25 5 MHz dry coupled wheel probe  
Umbilical Cable ..... 2 meter (6.5 feed)

### For vessels

Dimensions ..... Length 110 mm (4.3") Width 87mm (3.4") Height 50mm (2")  
Transducer ..... TWP25 5MHz dry coupled wheel probe  
Max Scan Area..... 550mm (21.74") radius 1800 swing

## Ultrasonic Module

Pulse Voltage ..... -400V  
Pulse Shape ..... Spike  
Receiver Gain ..... 0-80 dB in 1 dB steps  
Filter ..... Wideband (0.5-2MHz)  
..... 1.5 - 3.35 MHz  
..... 3.5 – 7.00 MHz  
..... 6.5 – 12 MHz  
Sample Rates..... 50 MHz  
Waveform Length ..... 32768 samples (excl delay)  
Transducer Range..... 1.0 MHz – 15MHz  
Transducer Mode ..... Single or dual via software  
Computer Interface..... USB 2.0  
Connectors ..... Encoder – 25 way D type socket  
..... UT 2 x BNC (Tx & Rx)  
..... Data – IP68 USB “B”  
Charger ..... 1.5 Amp / Tamiya Connector  
Battery ..... 11 hours operation from fully charged  
..... 1.5 hours from flat

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