



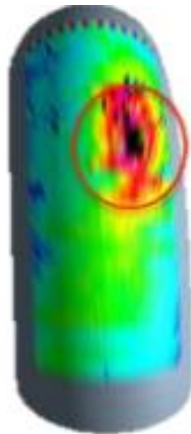
3D UT Wall Thickness Profiling



SMS provides sand monitoring using best in class, field proven technology. After extensive testing of the profiling 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 lift 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

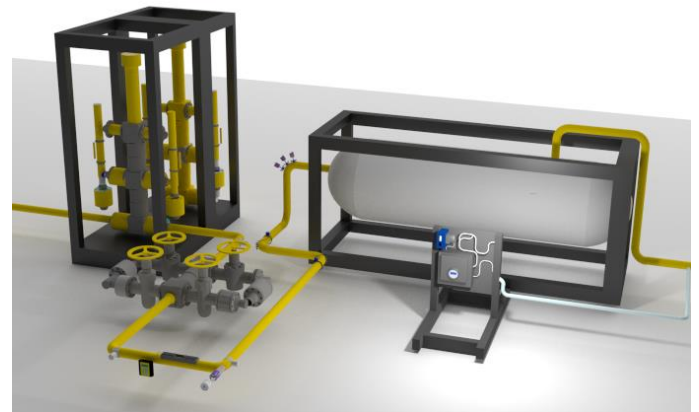
- Provides early identification of areas of concern

Repeatable and Reliable

- Repeatable method of tracking wall loss

Comparative Results

- 3D mapping allows detailed comparative analysis over time



Sense



Understand



Perform

3D UT Wall Thickness Profiling

Scanner Unit

For elbows and bends

DimensionsLength 122mm (4.8") Width 65mm (2.5") Height 54mm (2.1")
TransducerTWP25 5 MHz dry coupled wheel probe
Umbilical Cable.....2 meter (6.5 feed)

For vessels

DimensionsLength 110 mm (4.3") Width 87mm (3.4") Height 50mm (2")
TransducerTWP25 5MHz dry coupled wheel probe
Max Scan Area550mm (21.74") radius 1800 swing

Ultrasonic Module

Pulse Voltage-400V
Pulse ShapeSpike
Receiver Gain0-80 dB in 1 dB steps
FilterWideband (0.5-2MHz)
.....1.5 - 3.35 MHz
.....3.5 – 7.00 MHz
.....6.5 – 12 MHz
Sample Rates.....50 MHz
Waveform Length32768 samples (excl delay)
Transducer Range1.0 MHz – 15MHz
Transducer Mode.....Single or dual via software
Computer InterfaceUSB 2.0
ConnectorsEncoder – 25 way D type socket
.....UT 2 x BNC (Tx & Rx)
.....Data – IP68 USB “B”
Charger1.5 Amp / Tamiya Connector
Battery.....11 hours operation from fully charged
.....1.5 hours from flat

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