



PROJECT OVERVIEW

To manage inspection and integrity management across twelve flowlines and three choke points, traditional manual ultrasonic testing (UT) campaigns were costly and disruptive, especially during high production periods when measurement frequency increased.

These campaigns required specialist access solutions such as scaffolding and rope access, further driving up costs.

Our client required a safe, reliable and cost-effective solution to monitor wall thickness without the recurring expenses and operational disruptions of manual UT.

Client	Major North Sea Operator
Project	UT Wall Thickness Monitoring System
Location	UKCS Platform

THE CHALLENGE

A North Sea operator was faced with the complex task of managing a high volume of manual UT measurements distributed across twelve flowlines and three choke points.

During periods of high production, the frequency of required measurements increased significantly, placing additional strain on resources and budgets. Each manual UT campaign demanded extensive surface preparation, which was both time-consuming and costly. Accessing many of the measurement points required scaffolding or rope access teams, further escalating operational expenses.

While wireless fixed UT probes were considered, their high cost made them impractical. Compounding the issue, the manual UT data lacked the repeatability required to accurately trend internal wall loss rates, limiting its value for long-term integrity management.

THE SOLUTION

To address these challenges, Altrad collaborated with the platform’s stakeholders to identify a cost-effective and practical solution.

Our team deployed more than 100 WAND sensors across the flowlines and chokes, replacing the traditional single-point manual UT approach. These permanently installed sensors eliminated the need for repeated surface preparation.

To further enhance accessibility, REACH400 extension cables were used to connect sensors in hard-to-reach areas, removing the need for scaffolding or rope access at these locations. Data collection was streamlined using a WAND handheld device, allowing onsite personnel to gather accurate thickness measurements monthly without specialist intervention. Each sensor was also equipped with Radio-frequency identification (RFID) tagging, enabling quick identification and efficient data management.

This integrated solution not only improved safety and data quality but also delivered substantial cost savings and operational efficiencies.



The 'WAND', is a single point ultrasonic corrosion and erosion monitoring solution

CASE STUDY

THE BENEFITS

Significant Cost Savings:

- Eliminated recurring surface preparation costs
- Reduced need for scaffolding and rope access
- Reduction in man-hours required compared to manual UT measurement campaigns

Improved Data Accuracy:

- Reliable, repeatable measurements enabled accurate corrosion rate trending, improving long-term integrity management

Reduced Personnel on Board (PoB):

- Platform personnel could safely collect data without external specialists

Access to Previously Hard to Reach Areas:

- Enabled comprehensive monitoring coverage

Efficient Data Management:

- RFID tagging streamlined sensor tracking and reporting

THE CONCLUSION

By implementing WAND sensors and REACH400 technology, the platform achieved a **step-change in corrosion monitoring efficiency**, reducing costs, improving safety, and enabling better asset integrity management.

SPEAK TO OUR EXPERTS

Email AIS.Inductosense@altrad.com to discuss your upcoming project requirements with our experts.