

Sonomatic Reaches New Depths in Automated Ultrasonic Subsea Inspections

Sonomatic, a world leader in the provision of automated ultrasonic inspection subsea for more than 30 years, has successfully deployed its accurate corrosion mapping approach at a depth of 1435m, setting a new benchmark for depth with this technique.

The inspection was carried out using the ROV-iT, an ROV-deployed ultrasonic inspection tool developed by the company. Sonomatic's ROV-deployed tools carry many key benefits, among them the ability to carry out inspection work without the need for divers or a dive support vessel, and at much greater depths.

The subsea inspection was completed in early 2015. A major objective of the inspection was to validate absence of low level degradation so that a case could be made for operation without the need for an in-line inspection. Since the coverage for the subsea inspection was low, meeting this objective was dependent on providing a highly sensitive inspection with very accurate wall thickness measurements on a fine scan increment.

The inspection performance achieved at a depth of 1435m, through a three layer polypropylene coating, matched that in shallow water, demonstrating Sonomatic's capability to deliver its world leading corrosion mapping accuracy even at great depth. The results of the detailed analysis of inspection performance, as achieved in the field, were central to the integrity assessment. This was based on statistical methods developed by Sonomatic for planning and evaluation of targeted inspections on unpiggable gas pipelines. The inspection achieved allowed demonstration that the probability of degradation, with potential to threatened integrity for the line as a whole, was within acceptable limits.

Sonomatic's industry leading measurement performance was central to ensuring this objective was met and that the result was a substantial cost saving to the client, as an in-line inspection was avoided. The inspection work subsea was completed safely and within the planned schedule, with Sonomatic's equipment operating reliably throughout the campaign.

Sonomatic's ROV-deployed tools, which can operate both vertically and horizontally, have been designed for inspecting pipelines, risers, caissons and structural assets using a wide range of techniques. Key techniques among these are corrosion mapping, time-of-flight diffraction (TOFD) and pulse echo.

