

Case study

Limited access UT inspection

**BHGE Inspection Technologies provided
custom solution in less than three weeks.**

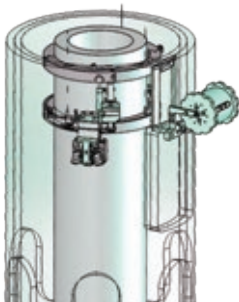


Technology Highlights

- Custom UT inspection solution development
- Project urgency to fit customer requirements
- Multi-modal custom service offering top of the line equipment

Outcomes

- Data to confidently return oilfield to service
- Custom automated scanning system to utilize on other platforms



Challenge

Due to concerns from earlier borescope inspections, Shell executed a project in April 2017 to cut access portals in the outer pipe of the Conger riser pipelines. These portals enabled Shell to be able to remove a plastic wrap that had become disbonded from the top 3.5 feet of each inner pipe. The disbonded areas had caused extensive corrosion on the exterior of the inner hydrocarbon bearing pipe that was severe enough to require a full wall thickness scan before the pipes could be safely used again. Shell was unable to gather this data itself with normal UT wall thickness measurement devices due to the severely limiting access restrictions. There is only a 3" gap between the pipes and measurements were required as far as 24" below the access windows. Consequently, Shell approached Waygate Technologies about designing a custom UT probe that would be able to measure the entire inner pipe surface (1" x 1/2" grids) despite the access restrictions.

Waygate Technologies as part of the solution

Waygate Technologies' Advanced Inspection Services teamed up with the Applications Engineering Lab group to provide a solution for Shell's unique challenge. As critical path for the oilfield to return to production, the team delivered under pressure without compromising safety or data integrity. The team delivered a custom UT inspection probe and automated scanning system to provide a concise thickness map of entire the pipe augmented by a complete remote visual inspection utilizing the Mentor Visual iQ video borescope. Waygate Technologies' multi-modal service offerings enable customers to make confident decisions, in this case safely returning the oilfield to full production.

Caleb Wells, Shell Subsea Surveillance Engineer, said of the Waygate Technologies team, "The team more than delivered by frequently working long into the night and through several weekends straight. They not only developed creative technical solutions in the probe design, but also were quite creative in overcoming logistics challenges."