

CASE STUDY

INTEGRATED SUBSEA CORROSION MAPPING AND FLEX JOINT ASSESSMENT

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SONOMATIC

INTRODUCTION

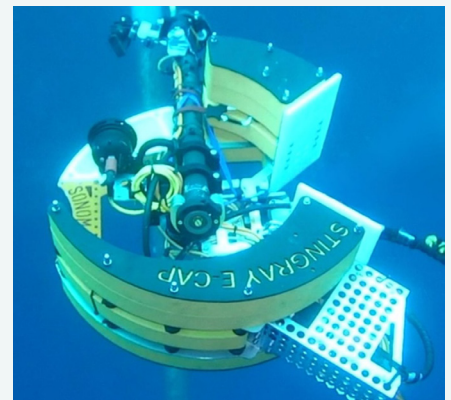
Sonomatic recently completed a multi-scope subsea inspection campaign in the Gulf of America supporting the integrity assessment of several unpiggable pipelines and critical riser flex joints. The primary objectives were to assess pipeline wall thickness, identify potential corrosion-related degradation, and evaluate the visible condition of flex joints to support ongoing asset integrity management.

PROCESS

Sonomatic deployed a combination of ROV-operated inspection technologies tailored to each scope. For the pipelines, the ROV-iT automated scanning system was used alongside proprietary Dynamic Response Spectroscopy (DRS) technology to perform wall thickness measurements and corrosion mapping through external coatings without requiring their removal. For the flex joints, the team used the E-CAP tool to remove marine growth and conduct detailed visual inspections of accessible elastomer surfaces.

OUTCOME

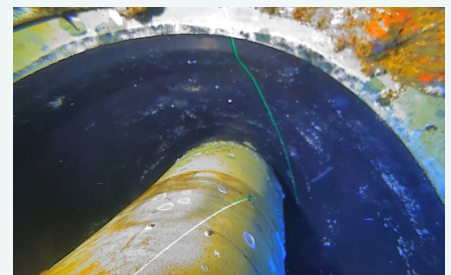
The campaign successfully completed DRS corrosion mapping across multiple unpiggable pipelines, providing quantitative wall thickness data and identifying a localised area for ongoing monitoring. Flex joint cleaning and visual inspections were also completed, allowing the condition of the exposed surfaces to be documented. By combining advanced ultrasonic inspection techniques with specialist ROV tooling, Sonomatic delivered valuable integrity data to support asset management, future inspection planning, and maintenance decision-making.



Stingray E-CAP Tool



Before cleaning



After cleaning