# CASE STUDY

## SUBSEA CORROSION MAPPING THROUGH THICK THERMAL INSULATION USING DRS

USBrazilProjectEnquiries@sonomatic.com
www.sonomatic.com

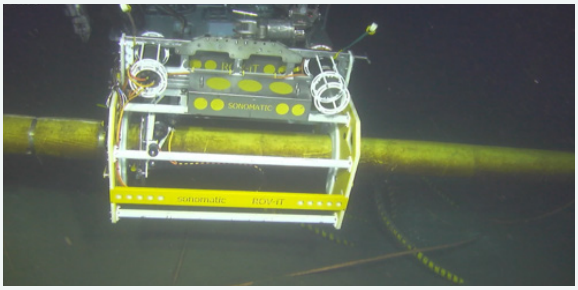
SONOMATIC

## INTRODUCTION

Sonomatic was contracted to carry out a repeat inspection campaign on subsea jumpers and flowlines in the Gulf of America at water depths of up to 3,100 feet (945 metres). The objective was to assess remaining wall thickness, identify potential internal corrosion, and compare the results with previous inspections. A key challenge was obtaining reliable measurements through approximately 2 inches (50 mm) of GSPU thermal insulation without removing or damaging the coating system, while also working around restricted access and complex geometries.

## PROCESS

Sonomatic deployed its proprietary Dynamic Response Spectroscopy (DRS) technology using the automated ROV-iT 18 subsea scanner. The system enabled wall thickness measurements and corrosion assessment through thick thermal insulation, providing a non-intrusive inspection solution for deepwater subsea assets where conventional ultrasonic methods would be difficult to apply.

## OUTCOME

The inspection successfully obtained steel wall thickness measurements through the 50 mm thermal insulation and identified localised areas of wall loss. Most measurements remained within applicable manufacturing tolerances, while comparison with historical inspection data provided valuable insight into asset condition over time. An expanded inspection area was also used to characterise a localised corrosion feature and establish a baseline for future monitoring, supporting ongoing integrity management of the subsea infrastructure.