

# CASE STUDY

## SUBSEA COMPOSITE WRAP REPAIR TO 12" PIPE

✉ info@vertech.com.au

🌐 www.vertech.com.au



# VERTECH

### OVERVIEW

On late December 2025, Vertech, in collaboration with 3X Engineering, was engaged by a client to deliver a Subsea Composite Repair on a section of piping located on a CALM buoy within Australian waters. With an imminent ship transfer schedule, restoring the integrity of the pipe was critical to avoid delays and operational risk. Offshore execution commenced in the first week of January 2026.

### SCOPE OF WORK

To restore the structural integrity, the project involved remediation of a Subsea 12" carbon steel pipe using the 3X, REINFORCEKIT 4D Subsea system, specifically designed for subsea environments.

### EXECUTION STRATEGY

Quality assurance was central to the successful deployment of the engineered composite wrap system. Vertech worked closely with the local dive company, providing specialised training prior to execution.

The offshore application crew comprised:

- 👉 4 qualified divers
- 👉 1 senior Vertech composite wrap applicator

A detailed Method Statement was developed and issued to the client, clearly defining each stage of the application process for the Subsea Reinforcement 4D composite wrap system.

### REPAIR METHODOLOGY

1. Manufacture of the custom metal plate
2. Surface preparation via wet sandblasting to achieve a minimum surface profile of Rz 60 microns
3. Primer application to the defect area
4. Filler application
5. Full-surface primer application
6. Installation of Kevlar composite wrap
7. Finalisation and inspection of the repair

### RESULTS

By deploying an engineered composite wrap solution in accordance with ISO 24.817, Vertech was able to provide a 20-year lifetime warranty on the repair. The entire scope was successfully completed within one day, with zero incidents. A strong example of collaboration, planning, and precision in subsea integrity management.



Fig. 1 - Defect Area Overview



Fig. 2 - Surface Preparation Completed



Fig. 3 - Metal Plate And Filler Installed



Fig. 4 - Repair In Progress



Fig. 5 - Engineered Wrap Completed