

Case Study – Offshore Oil & Gas

Technical Situation

A floating production storage and offloading (FPSO) unit is a vessel used for the production, processing and storage of oil and gas.

A Blue-Chip oil & gas company incurred several defects and cracks in a critical attachment member of an FPSO's hull – these defects required repair to allow continued operation.

As FPSOs are cyclically loaded and unloaded and experience rough conditions at sea, this type of hull defect tends to worsen as time passes.

FPSOs are often conversions from old tanker ships which do not have double hull structures.

To ensure continued safe operation and remain in compliance with regulatory requirements, this type of defect must be permanently repaired.

Business Situation

There is no industry accepted solution to fix a FPSO defect of this type.

The client was contemplating to disconnect the vessel from the location (250+ miles offshore) – this is extremely expensive, and could require the client to abandon the well and/or lose rights to the location entirely.

The Subsea Global Solution

Subsea's underwater wet welding technology allows the vessel to continue to produce oil while being permanently repaired.

Brazilian local content regulations require the use of local divers – Subsea provides technology licensing, training, supervision and project management .

While offshore oil & gas clients were initially skeptical to the Subsea approach, the Company has achieved recognition of this permanent repair process which is generating more inquiries for long-term repair projects utilizing its superior technology.

The Company's current contract for this case study project was signed in 2016 and expires in 2021 – its success is well documented in the space.

Financial Significance of the Acceptance of this Repair Technique in the Oil & Gas Market

	Shipping	Upstream Oil and Gas
Type	Short term permanent repair technique	Multi-year permanent repair solution
Average Repair Interval	2 to 4 days	Subsea on-site continuously for several months

