



Neptune Successfully Completes First North Sea NEPSYS® Repair Project

CHALLENGE

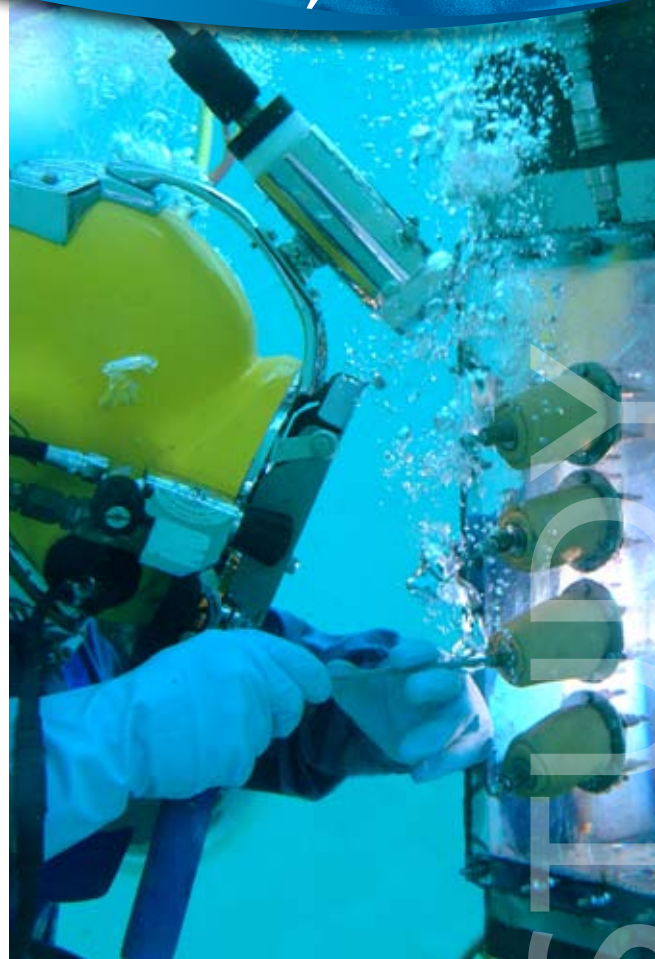
A defective weld in the structure of a floating production unit (FPU) in the North Sea was identified as needing repair. After consultation with the asset operator, Neptune recommended a timely and cost effective engineering, design, fabrication and repair solution using the American Bureau of Shipping (ABS) approved NEPSYS® dry underwater welding technology.

OVERVIEW

The full penetration crack was located in a column to sponson joint configuration at a water depth of -15 metres. The solution involved grinding out the defective weld and welding the joint externally using a NEPSYS® habitat, as well as internally via rope access. The principal challenges were access to the repair area and the complex habitat designs required.

The NEPSYS® team devised a fully engineered and integrated solution involving three of Neptune's business units and incorporating the group's expertise in subsea design, engineering, fabrication, commercial diving and welding.

Working in partnership with a major international diving services



CASE STUDY



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company, the NEPSYS® team comprised five diver/welders, two of whom worked via rope access inside the structure, one systems technician and one project manager. Facing adverse weather conditions, the internal and external welding took a total of 12 hours.

A mock-up of the joint configuration was manufactured in Perth, WA. Prior to mobilisation in the North Sea, all aspects of habitat design, fabrication and testing; welding procedure preparation; international class approval; diver/welder and rope access welder qualification and testing were carried out at the NEPSYS® training and testing facility in Perth. Mobilisation for the project was conducted from Neptune Offshore Services in Aberdeen, Scotland.

OUTCOME

The repair was completed to the client's entire satisfaction and complied with the D1.1 standard set by AWS (American Welding Society). The project, Neptune's first NEPSYS® undertaking in Europe, highlighted the NEPSYS® team's ability to meet the rigorous standards imposed on offshore operations in the North Sea.

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