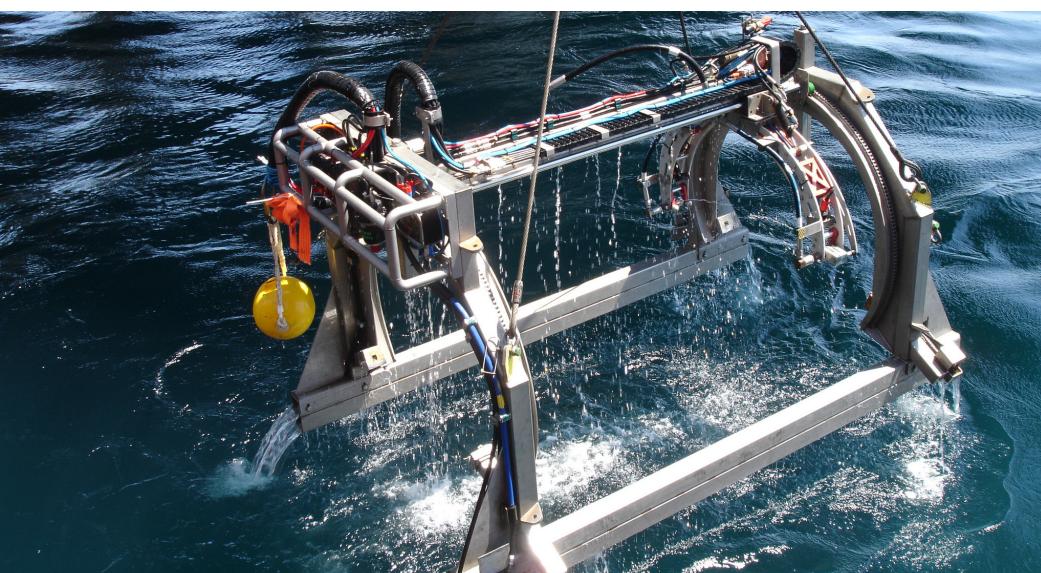


Mechanical Solutions

Location: Europe & Africa (North Sea)

Case study: Coating removal to enable riser upgrades



Overview

With a platform in the Caspian Sea soon to be upgraded with three new risers, McDermott contracted Ashtead Technology to efficiently remove the coating from the horizontal and vertical jacket members so that an SA2.5-quality surface finish could be achieved.

Solution

Ashtead Technology's Mechanical Solutions teams are adept at ensuring clients reap maximum productivity from their subsea assets – with our market-leading coating removal solutions rapidly and effectively preparing the work surface.

Due to variances in the size of subsea members to be cleaned, ranging from 700 - 1500mm in diameter and 1200 - 9000mm in length, the operating system had to be versatile enough to be rapidly reconfigured as required.

Ashtead Technology designed in-house and engineered three bespoke Coating Removal Tools (CRT), as well as the necessary Control Cabin and Supervisory Control and Data Acquisition (SCADA) Control Operating System required to utilise the equipment, in only 10 weeks.

With an innovative dual-nozzle design halving the debris removal time, the CRT is controlled by technicians topside using a bespoke SCADA control system. This enables the operators to see a graphical representation of the location on the pipe; an essential performance enhancement in poor underwater visibility situations.

The CRT removes all types of protective coatings including concrete weight coat, epoxy, bitumen and FBE on subsea pipelines and platform jacket members. The system utilises high-pressure water, with the capacity to clean structures with diameters of 152mm to 1500mm.

Benefits and value

Prioritising user-friendliness, Ashtead Technology created an operating system which could be partially or fully-automated depending on the client's immediate requirements.

Following a comprehensive series of yard-based trials, operations in the Caspian Sea completed successfully – further underlining the value of the CRT concept in real-world, harsh marine environments.

With underwater cameras and related technologies giving real-time positioning information in graphical format, the CRT's two opposing high-pressure water jets sweep and clean the product. Linear, rotational, nozzle standoff and sweep speeds are controlled topside by specialist Ashtead Technology technicians.

The CRT is also able to clean a workspace of 1.5 metres in a linear pass before needing to be repositioned, outperforming comparable technologies. Any size or shape of area within this 1.5 metre area, including the full 360-degree circumference of a tubular, can be cleaned.

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Our client has benefited from our development of a bespoke solution for a specific requirement, in turn enabling Ashtead Technology to make a truly innovative CRT and accompanying operating system available to the market.

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Fraser Collis, General Manager