Mechanical Solutions
Pre-lay of FPSO mooring lines

Location: South America

Challenge

Offshore Guyana, in water depths of up to 1,730m. an FPSO required the installation of suction anchors and the pre-lay of 19 mooring lines to securely hold it in position. The complex mooring system setup comprised of four separate groups of mooring lines, with each line consisting of multiple components including a suction pile, chain, subsea connector and polyester rope section.

Solution

The comprehensive range of specialised equipment available from Ashtead Technology helped streamline operations and ensured the heavy-lift and deployment demands of the project were met. Combined with our proven capability and expertise to safely handle the significant loads, we supplied a fully integrated back-deck equipment spread onboard the vessel, supporting both the installation of the suction piles and pre-lay of mooring lines.

With careful consideration of the deck configuration, product dimensions and load requirements, we engineered a customised equipment spread comprising:

- 200Te Twin Wheel Hydraulic Gypsy Winch package for the deployment of chains for the mooring line

- A-frame and Active Heave Compensated Fast Winch for subsea basket deployment and recovery

- 225Te Reel Drive System (RDS) to transpool polyester mooring lines to our 500Te RDS

- 500Te RDS for the deployment of the polyester ropes overboard under tension

- 325Te Abandonment and Recovery winch package for lowering the combined chain, polyester rope, mooring line connectors, rigging and clump weight to the seabed

- Supporting ancillary equipment including HPU's, Running Line Monitors, Overboarding Sheaves and Roller Box Fairleads

Results and Impact

- Ashtead Technology successfully met all agreed project deliverables

- Optimised deck space and streamlined operations with a fully integrated back-deck equipment package

- Our in-house engineering and manufacturing capabilities delivered custom equipment to meet exact project requirements

- We maintained safe operations throughout the project, collaborating closely with the client and all crew members.

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Ashtead Technology