

VERTICAL GROUP

FIRST EVER PULL-IN OF RIGID RISER VIA KEEL HAULING IN FPSO SPREAD MOORING



SUCCESS CASE 50577



PROJECT OVERVIEW

Vertical Group is proud to have supported the execution of the first-ever Pull-in of a Rigid Riser via Keel Hauling in an FPSO Spread Mooring system worldwide. This groundbreaking operation, carried out on the fifth FPSO of the definitive development system for the Búzios field, located 180 km off the coast of Rio de Janeiro in the Santos Basin pre-salt, represents a significant milestone in the oil and gas industry.

The Pull-in of Rigid Risers via Keel Hauling is an innovative method for installing rigid pipes on offshore production units. Compared to traditional flexible risers, this approach enhances safety, efficiency, and operational speed, optimizing the overall installation process.



APPLIED SOLUTIONS

The execution of this pioneering project demanded a highly specialized approach, given the technical complexity and the need for customized equipment and engineering solutions. Vertical Group played a fundamental role in ensuring the success of this operation, applying the following key solutions:

1) Advanced Engineering Planning:

- Detailed feasibility analysis and engineering studies to validate the viability of keel hauling in an FPSO spread mooring system.
- Development of an optimized pull-in methodology tailored to the specific challenges of the operation.

2) Specialized Equipment and Rigging Solutions:

- Deployment of high-capacity winches and external pulleys to handle the controlled pull-in of the rigid riser.
- Use of customized rigging configurations to ensure the stability and precision of the operation.

3) Highly Skilled and Experienced Team:

- Mobilization of a specialized offshore crew with expertise in deepwater riser installation.
- Implementation of real-time monitoring and contingency protocols to mitigate operational risks.

The complexity of the operation lay in the need for precise alignment, controlled tensioning, and seamless integration of the rigid riser within the FPSO's keel hauling infrastructure. Vertical Group's expertise in offshore installation and technical innovation played a crucial role in overcoming these challenges.



RESULTS ACHIEVED

The successful execution of this operation sets a new benchmark in the oil and gas industry and solidifies Vertical Group's position as a leader in pioneering offshore solutions. The main achievements include:

- World-first execution of a rigid riser pull-in via keel hauling in an FPSO spread mooring system.
- Enhanced safety and efficiency, reducing exposure to high-risk environments and improving installation speed.
- Technical innovation, introducing a new alternative to traditional flexible riser installation methods.
- Optimized resource utilization, minimizing vessel and operational downtime.
- Successful project delivery, reinforcing Vertical Group's reputation for excellence in offshore operations.

By supporting this milestone project, Vertical Group continues to drive engineering excellence, operational efficiency, and cutting-edge innovation in the offshore oil and gas sector.