

Dockwise creates the worlds largest semi-submersible heavy transport vessel with Emerson control equipment

RESULTS

- Easy and reliable operation of ballast and tank level gauging system
- Improved operator efficiency
- The Integrated Control and Monitoring System maximises inherent safety



APPLICATION

Dockwise Ltd, a global leader in the transport and offshore installation of extremely large and heavy structures, has selected Emerson Process Management, to supply the control systems that help maintain stability and structural integrity for Dockwise's semi-submersible heavy transport vessel, the largest of its kind in the world.

CHALLENGE

Dockwise Vanguard is designed for heavy marine transport and offshore dry docking, enabling oil and gas operators to design and build larger and heavier offshore structures such as Floating Production Storage and Offloading (FPSO) vessels.

Because of the Vanguard's loading capacity of up to 110,000 metric tons and its bowless design, it is now possible to fabricate these megastructures and load and transport them intact to remote offshore wells or production sites. To submerge and rise with stability and integrity the design of Dockwise Vanguard demands a highly reliable and accurate level measurements system for load calculation as well as high level and overfills alarm.

SOLUTION

Emerson supplied a comprehensive ballast control system with more than three hundred Damcos single and double acting actuators, ranging from the smallest to the biggest size. Reliable and accurate level measurements of the tanks are attained with the more than two hundred MAS 2600 sensors and to control the 4 casings the Emerson's Smart Wireless technology was chosen that was tied into the Aperio system.

Aperio integrated control and monitoring system enables fast access to information from anywhere on the ship. The demand for easy operation was solved by touch friendly menus with a single-point overview of level measuring points and the ballast system.

"Emerson's reliable and highly sophisticated ballast control technologies are an important factor in allowing us to provide this first-of-its-kind carrying capacity, as well as provide a dry dock capability at offshore production sites for repair and retrofit, which saves significant time and money," says Eugène van Dodeweerd, Manager, Fleet Supervision of Dockwise"



Dockwise Vanguard is designed for heavy marine transport and offshore dry docking. The length are 275 meter, draft submerged 31,5 meter and max water height above deck is 16 meter. Max lifting capacity 115.000 metric tons.