



OCTOPUS-Onboard

ABB's motion-monitoring, response-prediction and heavy-weather decision-support system

LEON ADEGEEST – Today, industries such as offshore oil and gas are deploying larger and heavier floating production units to their fields, requiring heavy lifting capacity. Consequently, oversized cargo weighing thousands of tons is often transported via heavy-lift vessels over vast distances, demanding state-of-the-art motion monitoring,

response prediction, heavy-weather decision support and weather window evaluation systems to protect their valuable cargo. ABB's monitoring and forecasting system, OCTOPUS-Onboard, has been installed on the largest and most advanced heavy-lift vessel built to date – the Dockwise Vanguard.

1 The Dockwise Vanguard has the ability to deliver outsize cargo such as drilling rigs or offshore platforms.



With a carrying capacity of 117,000 metric tons, a length of 275 m and a beam of 70 m, the Dockwise Vanguard's ability to safely deliver outsize, very heavy cargo such as drilling rigs or offshore platforms, is unique in the specialized field of heavy marine transport → 1. Vessels such

Vanguard. ABB's three-sensor motion measurement system has also been installed, so critical areas like cargo can be displayed on and monitored from the bridge of the vessel. OCTOPUS systems improve the safety and efficiency of ships, significantly reducing costs for customers. They are part of ABB's Vessel Information and Control (VICO) systems suite, which provides a full range of automation and advisory solutions specifically for marine applications, based on ABB's field-proven process automation technologies.

The modular OCTOPUS-Onboard system provides motion monitoring, response prediction and heavy-weather decision support.

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as this one enable transport of complete, assembled structures, reducing commissioning time, and also provide dry-dock capability for other large vessels such as drillships at sea.

The modular OCTOPUS-Onboard system developed by Amarcon, a member of the ABB Group, provides motion monitoring, response prediction and heavy-weather decision support aboard the Dockwise

Installed on about 200 vessels, OCTOPUS systems deliver practical information for making decisions at sea by continually monitoring, measuring and providing recommendations

about a vessel's motion, status and location, fuel use and performance, ship hydrodynamics and positioning.

The system makes use of crucial weather information and forecasts, maximizing efficient ship operations and helping the ship's crew make the best possible decisions as they deliver and deploy their cargo. OCTOPUS is part of ABB's Smart Marine initiative, which provides a range of solutions for the industry based on its expertise in marine propulsion and electrical, automation and advisory systems.

Title picture

The Dockwise Vanguard, installed with ABB's OCTOPUS-Onboard monitoring and forecasting system

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