

OCTOPUS suite LNG Carriers

ABB offers the widest portfolio of marine software and optimization systems to the maritime market. Its performance management solution consists of a modular and comprehensive decision support toolkit to optimize the workability and safety of a ship, and to minimize the overall fuel and energy costs for the whole fleet.

ABB's OCTOPUS suite

The OCTOPUS suite offers a broad variety of modular functionality that helps to increase the efficiency, safety and workability of a single vessel or entire fleet. The most recent software enables easy customization of screen lay-outs depending on customer demands. OCTOPUS based technology has been installed over more than 400 ships.



Sloshing advisory system for LNG Carriers

- Identify sloshing events and forces due to sloshing
- Identify and avoid critical conditions for sloshing
- Navigational advice to minimize risk for sloshing
- In combination with safe and economic sailing
- Maximized schedule regularity and predictability

By using ABB's sloshing prediction software the crew is informed how to stay within the set limits and avoid risk for damage due to sloshing. The sloshing advice is calculated by combining the motion measurements or forecasts with GTT model test results for determination of sloshing criteria. GTT (Gaztransport & Technigaz) specializes in designing and licensing the construction of cryogenic LNG storage tanks for the shipbuilding industry.

Motion monitoring & forecasting

The OCTOPUS software suite is the industry leader in vessel motion prediction solutions and combines wave measurements, weather forecasts, and navigation data like speed, course, RPM and the voyage plan, with ship characteristics, loading conditions, and motion sensor measurements. This facilitates continuous monitoring as well as simulation and forecasting of the ship responses and performance.

Energy Management System

This module minimizes overall energy costs. It compares and analyzes the historical and current operational data of the vessel, then provides decision support on where to focus energy efficiency efforts. The solution consists of onboard & onshore modules for energy monitoring and optimization.

Main Engine SFOC Analysis

Visualizes the real-time SFOC performance of the ship's engines. It is also possible to extend this module with cylinder pressure monitoring to have an insight in the main engine condition.

ABB Fleet portal: Easy access to vital information

- Measured and forecasted vessel motions and accelerations
- Sailed routes and location
- Fuel & performance kpi's for individual vessels and benchmarking within the fleet
- Alarms and notifications in case of sensor time outs or failures
- Transparency with regards to overall vessel performance
- The company administrator can give various stakeholders access to pre-defined data sets

Authorized users can access their own part of the protected website to retrieve the latest information. After the voyage, the recorded data is evaluated and the impact on the cargo can be analyzed. The database can be made accessible for all parties required. It can be used to tune motion calculation (specifically roll motion) and for various other purposes, such as fatigue analysis.



ABB and GTT deliver technology that prevents sloshing onboard LNG Carriers

Service and consultancy

ABB has in-house expertise covering the following fields:

- Before and After analysis
- Periodic reporting and advise
- Customer training and coaching
- Feasibility studies
- Sea-keeping and wave analysis
- Remote support, data health checks and troubleshooting.

For more information, please contact:

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