

ABB: Tests confirm up to 27% fuel savings on ships from Onboard DC Grid

Industry's first documented results from Onboard DC Grid vessel confirm considerable fuel and noise reduction

Zurich, Switzerland, June 16, 2014 – ABB, the leading power and automation technology group, today released third-party verification that its Onboard DC Grid helps vessels reduce their fuel consumption, cut noise and trim their environmental impact.

The measurements and tests, conducted by Pon Power in collaboration with ABB on Myklebusthaug Offshore's platform supply vessel "Dina Star," identified reduction of specific fuel oil consumption of up to 27 percent. These are the first documented results from a vessel outfitted with ABB's Onboard DC Grid, which allows engines to run at variable speeds for top fuel efficiency at each load level.

The tests also measured fuel consumption in dynamic positioning operations during challenging weather conditions, identifying fuel savings of 14 percent. Dynamic positioning operations, where computers automatically maintain a vessel's position and heading, account for a considerable portion of a typical offshore vessel's operational profile.

"Our Onboard DC Grid is a significant step forward for electric propulsion. We are pleased that the concept delivered results that exceed our expectations", said Veli-Matti Reinikkala, head of ABB's Process Automation division. "Onboard DC Grid is a competitive advantage to ship owners operating a wide range of ship types from offshore vessels to ferries and yachts seeking to increase fuel efficiency and reduce emissions."

In addition to fuel consumption, Pon Power and ABB measured Onboard DC Grid's effect on engine room noise levels. Tests showed 30 percent noise reduction, contributing to improved working conditions aboard the vessel.

"Noise and vibration reduction has already been a focus of ours for years with our GenFlex Design solution. The ability now to document this level of fuel efficiency alongside the noise reduction is a very important new step for us as a power solution provider, especially for our customers operating in challenging conditions", says Ole Knarberg, Commercial Director for the Marine segment in Pon Power Scandinavia. Dina Star is powered by four Caterpillar 3516 engines in combination with a C32 in a variable speed application.

"We operate in a highly competitive market where customers are increasing their focus on operational costs and environmental impact. The results from Dina Star, the first vessel to feature ABB's advanced Onboard DC Grid technology, are promising and enhance our competitive edge", says Tore Myklebusthaug, General Manager at Myklebusthaug Management. "Based on the test results, we can now confidently say that the Onboard DC Grid delivers considerable fuel savings, to the benefit of the vessel charterers."

ABB introduced the innovative Onboard DC Grid power distribution system in 2011. Platform support vessel "Dina Star," [delivered to Myklebusthaug Management by Kleven Yard in 2013](#), is the first vessel powered by the Onboard DC Grid. ABB's Onboard DC Grid power distribution system was granted "[Approval in Principle by American Bureau of Shipping](#)" in January 2014.

Press Release



About ABB's Onboard DC Grid concept

ABB's Onboard DC Grid represents a breakthrough for the maritime industry in optimized propulsion by distributing power through a single DC circuit providing significant power savings while also improving the safety and redundancy compared with traditional AC systems.

By distributing electricity in DC, the Onboard DC Grid system allows engines to be operated at different speeds. As a result, the fuel consumption and emissions are reduced significantly in comparison with traditional propulsion systems. The system also allows for improved dynamic response of the engines.

The Onboard DC Grid also facilitates use of batteries and other energy storage devices which further improve the energy efficiency and reduction of emissions.

To learn more about the Onboard DC Grid, view the introduction video on [Youtube](#)

Onboard DC Grid [technical information](#)

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 150,000 people.

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