

## ABB launches innovative power system for marine applications

### **Onboard DC electrical system will increase the energy efficiency of ships by up to 20 percent**

Zurich, Switzerland, May 23, 2011 – ABB, the leading power and automation technology group, today announced the introduction of a new DC (direct current) electrical system for marine applications. The new system is part of a revival of power solutions using DC electricity, and will provide highly efficient power distribution and electric propulsion for a wide range of vessels.

It is designed for ships with low-voltage onboard power systems, such as offshore support vessels, tug boats, ferries and yachts, and can reduce fuel consumption and emissions by up to 20 percent.

In traditional electrical propulsion vessels, multiple DC connections are made from the AC circuit to thrusters and propulsion drives, which account for more than 80 percent of electrical power consumption. ABB's onboard DC system represents a step forward in optimized propulsion by connecting all DC links and distributing the power through one main DC circuit.

"We are seeing a revival that is making DC the technology of choice for many power transmission solutions, battery storage and other energy supply applications," said Veli-Matti Reinikkala, head of ABB's Process Automation division. "With an onboard DC solution, we can vary generator speed to optimize fuel consumption and improve a ship's operational efficiency by up to 20 percent compared with traditional AC powered systems. This forward-thinking solution will help maximize the energy efficiency and power reliability of our customers' vessels, and prepare them for future operating challenges like more stringent environmental regulations, higher fuel prices and the availability of new fuel sources."

ABB's onboard DC system incorporates proven products already operating on today's ships, such as AC generators, inverter modules, AC motors, etc, but eliminates the main AC switchgear and transformers.

The advantage of a DC power system is the ship's engines no longer have to run at a fixed speed. That means the engine's speed can be adjusted to optimize fuel consumption. It also reduces the footprint of the electrical equipment used by up to 30 percent by eliminating the need for bulky transformers and main switchboards. That leaves more space on the vessels for passengers or cargo, and also provides greater flexibility in the positioning of system components in the vessel.

In addition, ABB's onboard DC system enables supplementary DC energy sources such as solar panels, fuel cells, or batteries to be plugged directly into the ship's DC electrical system, for further fuel savings.

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 124,000 people.

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