

Reference report: Expeditionship

The expeditionship Opal is a unique ship from the „North Sailing“ fleet. The electric propellor drive can be used as a traction drive or as a generator.

The project

The sailing ship was built in 1951 in a shipyard in Damgarten in Germany. 2013 purchased North Sailing in Iceland. In order to function as an expedition ship the drive system was renovated and electrified. The quiet electric drive means that the whales are not disturbed in their natural habitat.

Opel is the first ship in the world where the plug-in hybrid can be used to charge the batteries during sailing. The ship's propellor then functions as a slow turning turbine and recuperates energy into the system. This concept is unique and has aroused much interest world wide.

The drive system

The electric drive is used in harbour and for manoeuvring. Out to sea the sails are used. The VECTOPOWER inverter drives a 144kW electric motor powers the ship's screw. For additional security there is also a diesel generator on board that in case of need can charge the battery or the electric motor. The ship's batteries can also be charged while the ship is in harbour.



Energy management

ARADEx is responsible that the main drive functions and for energy supply into the DC link. Electromagnetic compatibility (EMC) was of utmost importance here. This means that there is not interference between the components. This would be fatal for the sensitive board electronics on a ship. The ARADEx inverters with extremely low harmonics are immensely suitable for this kind of application.

Awards

- + Silver medal in the category „Best Innovation for Carbon Reduction“ in the prize „World Responsible Tourism Award 2015“ in London
- + Iceland's annual conference for tourism awarded North Sailing the „2015 Environmental Award“
- + The company was also honoured as „Company of the Year“ for the innovative concept by „Visit North Iceland“

Highlights

- + The first drive system in the world where the propeller functions simultaneously as a generator and generates power while sailing
- + No CO² emissions
- + Environmentally friendly and quiet
- + Excellent electromagnetic compatibility (EMC)
- + Minimum commissioning time

„The plug-in hybrid drive can be used to charge the batteries during sailing.“



Prime Minister Sigmundur Davíð Gunnlaugsson tells the guests about the „Opal“.

Interested? Give us a call:

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