



Nature powers car carrier of the future

Wallenius Wilhelmsen, has demonstrated its commitment to environmentally-friendly shipping by designing a concept car and RoRo carrier with a "zero emissions" capability and no ballast water onboard. Wallenius Wilhelmsen brought together a multidisciplinary team of naval architects, environmental experts and industrial designers under the guidance of naval architect, Per Brinchmann, to work on a visionary design for a car carrier of the future, the E/S Orcelle*.

A scale model of the ship that demonstrates some of the exciting technical ideas produced by the design team, has now been constructed and will take centre stage in the Nordic Pavilion at the forthcoming World Expo 2005, Aichi, Japan.

Intended to provide a vision of what an environmentally-friendly car and RoRo carrier might look like in 2025, the E/S Orcelle concept vessel has been designed so that it will produce no emissions into either the air or sea. It can use renewable energy sources, including the sun, wind and waves, as well as fuel cell technology, to meet all propulsion and onboard power requirements.

Solar energy is harnessed through photovoltaic panels in the vessel's three sails, which also help propel the vessel using wind power. These sails are manufactured using special lightweight composite materials.

Wave power is utilised through a series of 12 fins, which will be able to transform wave energy into hydrogen, electricity or mechanical energy. The fins double as propulsion units, driven either by wave energy or other renewable energy sources onboard, while the vessel's propulsive power will also be provided by two variable-speed electric propulsion systems known as "pods".

Around half the energy on the E/S Orcelle will be produced by fuel cells, a rapidly developing new technology. These cells will combine hydrogen and oxygen to generate the electricity which will be used in the pod propulsion systems and the fins, while also producing electricity for other uses onboard. The only by-products from this process are water vapour and heat, Wallenius Wilhelmsen points out.

According to Lena Blomqvist, Vice President, Environment, Wallenius Wilhelmsen, "By taking advantage of the natural energy sources available at sea, in combination with the hydrogen-powered fuel cells, this car carrier of the future will produce no emissions. In our view, renewable energy sources have the potential to provide an abundant supply of energy with minimal environmental impact and at relatively low cost."

Cargo carrying capacity has also been optimised, so that this visionary design could carry approximately 10,000 cars - around 50 per cent more than today's car carriers - while having a similar weight in tonnage terms. This increased level of efficiency has been achieved through the use of lightweight materials, including aluminium and thermoplastic composites, and also by eliminating the need for ballast water tanks.

According to the International Maritime Organisation (IMO), ballast water is one of the main environmental threats to the world's oceans. Wallenius Wilhelmsen proposes to completely eliminate the need to take on, and release, ballast water, by using an innovative pentamaran hull - featuring a long and slender main hull and four supporting sponsons - as well as by a pod-type electric propulsion system that dispenses with the traditional stern propeller and rudder arrangement.

Wallenius Wilhelmsen views the E/S Orcelle project as the start of a longer term programme, which it hopes will be matched by other leading shipping companies.

Nils P Dyvik, CEO, Wallenius Wilhelmsen says, "We believe that the shipping industry as a whole must put more effort into developing sustainable deep sea transportation solutions. Wallenius Wilhelmsen is determined to be at the forefront of these efforts as our three year sponsorship of WWF-International to help protect and preserve marine life on the High Seas demonstrates."

The company has no immediate plans to build a prototype of the E/S Orcelle. However, the company will continue to work with others to develop the technologies embodied within the concept design, so that they do become practical options for car carrier newbuildings within the next 20 years.

Wallenius Wilhelmsen is a global specialist in ocean, inland and outbound supply chain solutions. It is jointly owned by Wallenius Lines of Sweden and Wilh. Wilhelmsen of Norway. The company has around 60 modern vessels, carries 1.7 million vehicles by sea and 1.5 million by road.

Notes To Editors *E/S stands for Environmentally sound Ship. The ship is named after the Irrawaddy dolphin which is also known as in French as the Orcelle dolphin. WWF, the global conservation organisation, includes the Orcelle dolphin among the world's critically endangered species.

For further information:

Picture of E/S Orcelle Pictures of the E/S Orcelle is available in a jpeg format are available via email from Robert Minton-Taylor " contact details below.

Facts Sheets on E/S Orcelle A comprehensive press kit on the E/S Orcelle is available via email in a pdf format from Robert Minton-Taylor " contact details below.

Wallenius Wilhelmsen Go to <http://www.2wglobal.com> to find out more about the company's environmental policy and objectives. Click on the WWF Panda logo on the bottom right hand side of the home page to download a fact sheet on environmental initiatives and a pdf file of the 2003 report "Environmental Care Shaping our Business".

2005 World Exposition Website <http://www-1.expo2005.or.jp/en/>

Oasis North Website For the Nordic Pavilion at Aichi Expo 2005 <http://www.nordicatexpo2005.org/>

WWF: <http://www.panda.org/marine>

Wallenius Wilhelmsen Contacts

Lena Blomqvist Vice President Environment Tel: +46 8 772 0805 Mobile: +46 73 682 0805 Per Brinchmann Naval Architect Tel +47 67 58 44 27 Mobile: +47 415 64 073

Robert Minton-Taylor Public Relations Consultant Tel: +44 1535 634 634 Mobile +44 7947 818 816
Email: robert@minton-taylor.com Page updated: May 16, 20

© 2007 Wallenius Wilhelmsen Logistics [[Legal](#)]