BB GREEN – a fast, air supported and battery-powered ferry with a Diab core

Partly funded by the European Commission in a project called BB GREEN, a new battery-driven commuter ferry concept with zero operational emissions is soon ready for the water. Planned launch is in the summer of 2015. The eight-partner-strong team has developed the new vessel. Demonstrations with the new vessel will take place in several cities around Europe. Diab, who is part of the project, supports the effort, and is responsible for the composite engineering and delivering its high-performance core material Divinycell.

An increasingly large part of the global population is living in cities and densely populated areas along the coasts or with waterway access. Heavy traffic congestion on roads and other land-based infrastructure, especially related to commuter traffic, is the everyday situation for millions of people. EU and other authorities are searching for solutions. Developing modern low-emission waterborne transport services has the highest priority.

The BB GREEN project

With support from EU's 7th Framework program for innovation, the eight-partner-strong BB GREEN team is responding to this challenge. BB GREEN will not only reduce emissions. The project will, with use of sustainable energy, totally eliminate operational emissions. Through combining best technical solutions the project will deliver battery electric vessels capable of more than 3 times higher speed than current electric ferries, to create a technological shift in waterborne commuter transport.

Innovative technologies for a greener transport

A 22 m x 6 m full-size concept demonstrator vessel is now under construction. Hull and superstructure are made from vacuum-infused Divinycell core material, which will make the vessel strong, light and durable. In addition, almost 80% of the vessel's weight will be supported on a "cushion of pressurized air" offering up to 40% reduction in resistance and reduced wake wash. This technique, developed and patented by Effect Ships International AS and verified by SSPA Sweden, is called Air Supported Vessel (ASV) technology. ASV and reduced operational weight will contribute to reduced energy consumption and lifetime cost.

Studio Sculli in Italy is responsible for the topside and GA-design. The vessel will use battery electric drivelines from Echandia Marine Sweden, who also provides the new superchargers. The ferry will be featuring 2 x 300 kW engines for propulsion and 1 x up to 80 kW for the lift fan system. It will have a 400 kWh battery, developed by Emrol BvBa in Belgium, giving it a range at high speed of approximately 14 NM between recharging.

Diab is part of the team

DIAB has assisted and supervised the construction yard throughout the lay-up and infusion of the first trial vessel. According to Diab's representative Bjorn Abrahamsen, the main hull infusion process went according to plan, to the great satisfaction of the yard as well as the project coordinator – Tor Livgard from Effect Ships International. Working with Diab and Diab products has been a very positive experience", said Alexander Busarov, project manager from Latitude Yachts. Latitude Yachts/BJB yard is responsible for construction and outfitting of the BB GREEN fast commuter ferries. The yard has developed their own ASV mould tools for fast and cost-efficient construction of consecutive ASVs.

Read more about the BB GREEN project; *www.bbgreen.info*.

On the project website you will also be able to find all the companies and organizations included in the project.