

Nr. 8 Green Water Taxi

Background:

The fuel consumption per unit of load and/or passenger is particularly high on small waterborne vehicles, and „economy of scale“ has an unfavourable effect. A global view shows that small-scale shipping on the coasts and between islands is an important pillar of economic and social development. While in the leisure sector many different sail propulsion systems are combined with other propulsion systems, e.g. as motor sailers, this development has not yet been introduced in small commercial shipping. The requirements of environmental protection demand new concepts.

Content:

The Green Water Taxi has been developed to transport passengers and small cargoes flexibly between the mainland and islands. The Green Water Taxi is designed to combine the advantages of sailing ships, namely an emission-free and also inexpensive wind propulsion system, with the reliability of an electric propulsion system. The design ensures high efficiency by using a double hull with low resistance. The lightweight construction is inexpensive and easy to produce. With a speed of 12 knots, the water taxi lies within a range, which is associated with high water resistance. The Parametric Fast Hull shape, which is used for the water taxi, is especially optimized for higher speed and can significantly reduce fuel consumption compared to conventional designs in this size. The prototype will initially be equipped with a free-standing carbon rig with a performance sail and a Flettner-rotor. The Flettner-rotor is a high-tech option that combines full electric propulsion with range extension by an automated high performance sail system. The Green Water Taxi is a future-directed concept for silent and emission free water transport and taxi services at low cost, e.g. in sensitive sea areas like the Wadden Sea. It meets the demands of eco-tourism at coasts, rivers and lakes.



Leadpartner:



Co-partner:

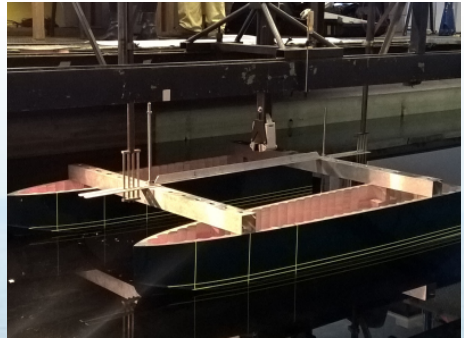


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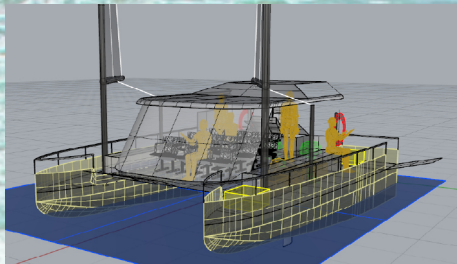
Results:

The developed water taxi has following specifications*:

- Battery and generator operation
- Wind auxiliary drive (carbon rig with wing-sail or Flettner-rotor)
- Small draft for shallow waters
- 1 person crew
- Innovative hull shape „PFH“ to ensure low resistance
- Light construction through the use of sandwich panels



*all details with reservation



Advantages:

- Emission-free and silent operation
- High efficiency
- Simple and flexible design concept
- Low production costs

Partners:



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