
Developement of a Platform for the experimental validation of the Energy Ship Concept

Mohd Najib Abdul Ghani Yolhamid*^{1,2}, Elise Brouillette³, Simon Delvoye¹, Matthieu Weber¹, Arnaud Merrien¹, Salvy Bourguet⁴, and Aurelien Babarit¹

¹École Centrale de Nantes – LHEEA – France

²National Defence University of Malaysia [Kuala Lumpur] – Malaysia

³Université McGill – Canada

⁴Institut de Recherche sur l'Énergie Electrique de Nantes-Atlantique (IREENA) EA 4642 – Université de Nantes – France

Abstract

The energy ship concept is to use a sailboat equipped with a water turbine to harvest wind energy and convert it into electricity. The electricity is then converted into chemical energy (hydrogen, methanol) using a power-to-gas/liquid plant. In this study, the aim is to validate that significant level of energy can be produced with this concept and to investigate the effect of power absorption on the behaviour of the ship. In this aspect, an experimental platform has been developed. It is based on a small sport sailing catamaran. It has been equipped with a hydro-generator and sensors in order to determine the relationship between the wind conditions and power performance. Experiments are now being carried out. The test platform and results will be presented at the seminar.

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*Speaker