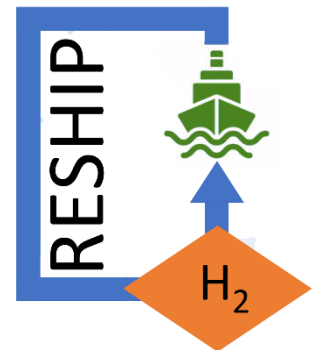

RESHIP- REDEFINE ENERGY EFFICIENCY SOLUTIONS FOR HYDROGEN POWERED SHIPS IN MARINE AND INLAND WATERWAY

SUMMARY

RESHIP is an extraordinarily ambitious project which involves complex research and development challenges and revolutionary technologies to address the target of zero emission for future shipping. The project ultimate ambition is to achieve a minimum overall 35% energy saving and to half the hydrogen storage demands on space and/or on weight comparing to the state-of-the-art hydrogen powered vessels, so that to enable a paradigm shift of hydrogen usage onboard.



Under the framework of Zero Emission Waterborne Transport (ZEWt), hydrogen as the future fuel for ships with the booming renewable energy industry offers the opportunity to formulate a self-sustainable zero-emission water energy ecosystem. With new technologies bringing drastic changes for ship design, manufacturing, operation and infrastructure, both new and existing vessels are facing challenges to accommodate the revolutionary changes.

The project will seek to analyse the operation of O.S. Energy's Fortuna Crane and design a novel tubercle assisted propulsion propeller arrangement for significant reductions in energy requirements while also allowing reduction in load fluctuations for simplified integration of hydrogen-based drive train systems.

A novel hydrogen storage solution will be used in combination with a compact power generator design to supply green hydrogen-based electricity to the ship's electrical grid for supply of on-board consumers such as positioning devices, deck equipment and other electrical loads.



Figure 1 - Target Vessel Fortuna Crane

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PROJECT PARTNERS



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