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H2MARINE Project: Marine Industry sets sail into the future with Advanced PEM Fuel Cells

Thessaloniki, February 1-2

The first kick-off meeting of the European project H2MARINE, took place on February 1-2 at the CERTH headquarters, in Thessaloniki. The project which is a part of the Call: HORIZON-JTI-CLEANH2-2023-1, is a 42-month-long project that officially began on January 2024, and received a total grant of 7.499.171,50 euros from the European Commission within Horizon Europe under the Clean Hydrogen Partnership and it is co-funded by the European Union and the Swiss State Secretariat for Education Research Innovation (SERI). Embracing a strategic approach, the project is committed to innovation in hydrogen technologies, with a particular emphasis on the development and thorough testing of two PEM fuel cell stacks. This entails the comprehensive process of designing, constructing, testing, and distributing two Proton Exchange Membrane (PEM) cells, engineered to generate 250-300 kW of electrical power, addressing the specific needs and challenges of maritime applications. The project represents a significant step forward in the pursuit of sustainable and efficient energy solutions for the maritime sector.

Stakeholder Coordination Meeting for Project Planning

The H2MARINE consortium is coordinated by CERTH and consists of 13 partners from Greece, Germany, Sweden, Finland, and Switzerland, including key R&D institutes like VTT, EPFL, ZSW, University of Freiburg, and 8 companies such as PowerCell Sweden AB, EH Group Engineering (EHG), thyssenkrupp Marine Systems, Greenerity GmbH, DANA REINZ-DICHTUNGS-GmbH, Beyond Gravity, CluBE and CLEOS. This collaboration brings together a comprehensive mix of industrial partners, R&D institutes, shipyards, and shipping companies, all committed to the development and validation of innovative fuel cell systems for marine environments.

The primary goal of the kick-off meeting was to bring together the consortium and initiate the discussion on the scope, objectives, and desired outcomes of the project, setting a consolidated timeline for the planned activities. The objectives of the project meeting were discussed per working package and each partner presented the milestones that need to be reached and the challenges that need to be considered throughout the project's duration. Emphasis was placed on the risks that might emerge throughout the project and the potential mitigation actions that could be adopted to overcome and/or limit them.

H2MARINE project highlights the significance of hydrogen utilization as an alternative energy source in the maritime sector, demonstrating how it could contribute to achieving the project's objectives. The project strategically adopts a top-down approach, aligning seamlessly with the methodology cultivated within the European Union and Switzerland, not only seeking technological application in PEM cells but also aiming to evaluate the economic and technological practicability of the solution. It is expected that H2MARINE will create new opportunities in the market and contribute to the future sustainability of the maritime industry.

For further information:

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