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e1 Marine to build S130 hydrogen generator for Current AG to support carbon capture system

e1 Marine and Current AG will test the S Series S130 methanol to hydrogen generator to understand how it can capture heat and CO2 from the exhaust stream, boosting efficiency and reducing carbon emissions.



The e1 Marine S Series S130 Hydrogen Generator

Oregon, 4 April 2023 – Global renewable energy company, [e1 Marine](#), has been commissioned to build an S Series 130 methanol to hydrogen generator by Current AG for the development and evaluation of techniques to capture waste heat and CO2 from the exhaust stream created during the reforming process.

If the lab-based tests are successful, the additional heat and reduced CO2 emissions will improve the overall economy and environmental footprint of the methanol to hydrogen

reforming process. This knowledge will then be incorporated into existing plans to construct commercial vessels with methanol to hydrogen reformers so that hydrogen can be used to power fuel cells for generating electricity on e-vessels or hybrid vessels.

The S Series S130 Hydrogen Generator is a modular system designed for ease of use on board vessels as part of a quiet, low vibration, low emission power solution for luxury boats, or as a range extender supporting battery-centric power solutions on workboats. The technology can integrate with proton-exchange membrane fuel cells (PEMFCs) as part of an efficient and highly reliable renewable power solution.

Robert Schluter, Managing Director at e1 Marine, said, “Our methanol to hydrogen generators are already providing an accessible, safe and commercially viable low emission power solution for use in ports and on a range of vessels. The technology is already proving to be effective to slash total emissions, including the full removal of particulate matter, SOx and NOx. Although our generators already enable vessel owners to meet the incoming carbon reduction regulations, we are delighted that companies like Current AG are working to explore how we can help customers get closer to zero carbon emissions.”

Current AG is supporting the shipping industry with solutions to accelerate shipping decarbonisation. Methanol-based hydrogen used for electric propulsion is an alternative to using methanol direct in internal combustion engines. It reduces emissions and boosts efficiency. Current AG will partner with Institutt for Energiteknikk (IFE), a leading scientific institution, for the testing which will take place in a secured laboratory environment. After an educational stay at Element 1 with two engineers from IFE, the methanol to hydrogen reformer will be sent to IFE for further testing and development.

Per Sandven, Managing Director at Current AG, commented, “We recognise the potential of e1 Marine’s ground-breaking technology to chart a clear pathway to decarbonising the shipping industry. The technology dramatically cut the carbon intensity of marine power for ships in our inland waterways, at sea, or at berth. We look forward to working with e1 Marine to drive further efficiency and emissions reductions with its technology.”