



YANMAR

News Release

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Yanmar Holdings Co., Ltd.

Yanmar and Amogy to Explore Ammonia-to-Hydrogen Integration for Decarbonized Marine Power

Osaka, Japan (July 11, 2024) - Yanmar Holdings Co., Ltd. (Yanmar) and Amogy, a provider of mature, scalable, and efficient ammonia-to-power solutions, have entered into a Memorandum of Understanding (MOU) to integrate Amogy's advanced ammonia-cracking technology into Yanmar's hydrogen internal combustion engine (H2ICE). This collaboration seeks to pioneer a solution for decarbonizing marine power generation.

The partnership will focus on combining Amogy's technology with Yanmar's H2ICE to provide low-cost hydrogen fuel. Amogy's ammonia-cracking technology uses state-of-the-art catalyst materials to break down ammonia into hydrogen and nitrogen at lower reaction temperatures with high durability, minimizing heating and maintenance requirements. This integration promises a comprehensive clean energy solution for decarbonizing marine power generation.

Furthermore, building on this joint research, both companies will explore the potential for collaboration in developing maritime hydrogen fuel cell systems.

"We are excited to work with Amogy on this innovative project," said Ken Kawabe, Group Leader at Yanmar Research and Development Center. "Our commitment to a sustainable future aligns perfectly with this collaboration, and we believe that integrating Amogy's ammonia-cracking technology with our H2ICE has immense potential for decarbonizing marine power."

"As pioneers in sustainable energy solutions, we are thrilled to collaborate with Yanmar in exploring the integration of our cutting-edge ammonia-cracking technology with their hydrogen internal combustion engines," said Seonghoon Woo, CEO at Amogy. "Collaboration is critical to advancing clean energy solutions and, together, we can overcome challenges and expedite sustainable progress in the marine sector."

The collaboration between Amogy and Yanmar began in 2023 when Yanmar Ventures, Yanmar's corporate venture capital arm, invested in Amogy. Since then, both companies have been exploring

opportunities to integrate their technologies.

About Yanmar

With beginnings in Osaka, Japan, in 1912, Yanmar was the first ever to succeed in making a compact diesel engine of a practical size in 1933. A pioneer in diesel engine technology, Yanmar is a global innovator in a wide range of industrial equipment, from small and large engines, agricultural machinery and facilities, construction equipment, energy systems, marine, to machine tools, and components — Yanmar's global business operations span seven domains. On land, at sea, and in the city, Yanmar provides advanced solutions to the challenges customers face, towards realizing A Sustainable Future. For more details, please visit the official website of Yanmar Holdings Co., Ltd.

<https://www.yanmar.com/global/about/>

About Amogy

Amogy provides carbon-free energy solutions to decarbonize hard-to-abate sectors such as maritime, power generation, and heavy industry. Proven in real-world applications, its patented ammonia cracking technology is mature, scalable and a highly efficient method for splitting liquid ammonia, generating electrical power in combination with hydrogen fuel cells.

Amogy is headquartered in Brooklyn, New York, with additional locations including Houston, Texas, Norway, and Singapore. Amogy is backed by investors including Amazon's Climate Pledge Fund, Temasek, SK Innovation, Aramco Ventures, Mitsubishi Corporation and AP Ventures. For more information, follow Amogy on [LinkedIn](#), [X](#), [Instagram](#), [Threads](#), [Facebook](#), and [YouTube](#), or visit www.amogy.co.

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