Two-stroke
dual-fuel retrofit
solutions

Client Story:
A.P. Moller – Maersk

Maersk Halifax: Dual-Fuel conversion reduces CO_2 emissions by up to 90%

Client's Challenge

A.P. Moller – Maersk has set an industry-leading goal of reaching net zero across its operations by 2040, a decade ahead of IMO mandates. This makes engine retrofitting of Maersk's existing fleet a critical business strategy. Leading the way, Maersk decided to make maritime history by performing the world's first large containership methanol conversion of the 15,000-TEU and 350-meter-long vessel, Maersk Halifax. Operating on conventional fuel with 15 years of lifetime remaining, Maersk Halifax required an innovative two-stroke retrofit to cut emissions while maintaining full operational capacity and minimizing downtime.

How was the challenge overcome?

Everllence PrimeServ proposed a full retrofit of the Maersk Halifax's Everllence B&W two-stroke 8G95ME-C9.5 engine to a dual-fuel Everllence B&W 8G95ME-LGIM engine, allowing the ship to run on methanol and significantly cut emissions. At the Asia Pacific Dockyard in Zhoushan, China, the Maersk Halifax was retrofitted for dual-fuel on schedule in 88 days. The vessel was further elongated during the process to accommodate methanol tanks and create additional space for containers. Everllence PrimeServ managed the full workscope of the engine - from R&D and engineering to sea trials, including planning, dual-fuel installation, methanol system integration, and final testing.

Business impact

Up to 90% CO_2 Saving: Maersk Halifax now runs with the same engine load responses as before with CO_2 savings up to 90%, securing key IMO regulatory compliance. Maersk achieves approx. 50,000 tons of CO_2 savings per year.

Affordable Dual-Fuel Tonnage: Retrofitting offers dual-fuel tonnage at just 10–20% of the cost of a new dual-fuel vessel.

Fuel Flexibility: The retrofitted engine allows seamless switching between conventional fuels and methanol, providing future adaptability in a changing fuel landscape.

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