Solvang's H-class vessels gain up to 25% fuel savings

MAN PrimeServ

Great Carbon Intensity Indicator improvement!

The CII rating advanced from D to A - due to efficient retrofit and upgrade of CP propeller, aft ship, and propulsion plant.

All in all, for Norwegian shipowner Solvang ASA, a tailored mix of optimization solutions for their four Clipper H-class vessels turned out perfect in terms of performance, efficiency, and reduced CO_2 emissions.

Achieving up to 25% fuel savings speaks volumes

After retrofitting and upgrading the first vessel with optimized propeller blades and EcoBulb rudder bulb integration from MAN PrimeServ, Solvang ASA has significantly improved fuel efficiency and reduced emissions, reinforcing their commitment to sustainability and operational excellence.

Propulsion retrofit

At MAN Energy Solutions, we are committed to designing and supplying propulsion retrofit solutions that significantly enhance vessel performance and efficiency.

Our advanced technologies, hydrodynamic tools, and expertise in optimized propeller and propulsion systems enable us to achieve remarkable improvements in fuel consumption and emission reduction, supporting our customers in reaching their sustainability goals.

Our retrofit and upgrade capabilities are designed to future-proof vessels, making them more efficient and environmentally friendly.

Tailored solutions for enhanced efficiency

In our recent collaboration with Solvang ASA, MAN PrimeServ provided a comprehensive propulsion optimization solution for four Clipper H-class gas tankers. In a combined solution – with main engine power reduction and part-load optimization, and installation of a Mewis duct – this project included the introduction of optimized MAN Alpha propeller blades, a propeller hub fairing cone, and EcoBulb rudder-bulb integration.

Developed in close cooperation with Becker Marine Systems and Solvang ASA's hydrodynamic experts, these upgrades were designed to enhance propulsive efficiency and reduce fuel consumption.

Solvang: A strong heritage and clear route ahead

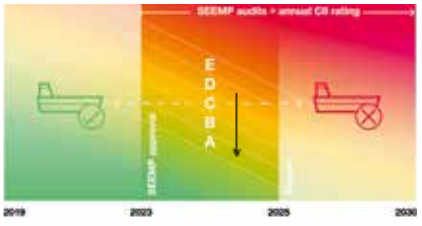
Solvang ASA, established in 1936, is a leading transporter of LPG and petrochemical gases. Headquartered in Stavanger, Norway, with offices in Oslo and the Philippines, Solvang operates a modern fleet built to the highest standards. Known for its strong focus on sustainability, reduced emissions, and operational excellence, Solvang continuously seeks innovative solutions to enhance vessel performance. Our collaboration with Solvang ASA underscores their commitment to sustainability and operational efficiency.

Visualization: The MAN Alpha propeller and aft ship solution involves upgrading of the existing blade geometry and integrating the EcoBulb rudder-bulb and propeller hub fairing cone, which streamlines water flow and reduces drag, resulting in improved overall performance.

An impressive result

"Fuel savings combined reached 25%, and as a result, the vessel's CII rating improved from D to A", says Tor Øyvind Ask, Fleet Director at Solvang ASA. Very pleased, he continues, "It is an almost unbelievable result. We believe that this significant, eco-friendly investment will not only have a positive environmental impact but also significantly extend the efficiency, lifespan, and commercial value of the vessels. This investment will enhance the gas tankers' operational efficiency while minimizing emissions in line with our best business practices."

Fleet Director Tor Øyvind Ask, Solvang



CII rating improved to highest A-level

M/T Clipper Hermod

Saved fuel and emission reduction

Operational data shows that the vessels are now capable of achieving speeds of 15.5 knots at a fuel consumption rate approx. 5 tons less per day than before the retrofit. This translates to a 25% direct fuel saving, significantly enhancing operational efficiency and reducing emissions.

Great Solvang ASA cooperation

Michael Muff Jensen, Senior Sales Manager at MAN Energy Solutions, added, "We are delighted to be part of this exciting propulsion optimization project. Once again, a successful long-term customer relationship has been crucial in executing such a complex project. From a propulsion perspective, the solution is perfect in terms of performance, efficiency, and reduced CO_2 emissions".

Fuel savings

Approx. 5 tons per day

We are committed to supporting our customers with tailored solutions that meet their operational and environmental goals.

Principial ship particulars

Including power and optimized speed data - before and after the retrofit and upgrade - for the four H-class Semi-ref/Ethylene carriers:

SHIP examples	CLIPPER HERMOD and CLIPPER HERMES
IMO numbers	9378163 / 9378151
Vessel type	LPG carrier
Flag	Norway
Gross tonnage	13,893 tons
DWT	18,967 tons
Length	154.95 m
Breadth	22.7 m
Max draught	10.6 m
Original engine MCR	9,720 kW
Reduced engine MCR	7,000 kW
EEXI engine rating	4,500 kW
MAN Alpha CPP	VBS 1460 Mk3
Propeller diameter	5,400 mm
Original opt. speed	17.0 knots
New opt. speed	14.5 knots
Year of build	2008
Builder / shipyard	Meyer Werft - Papenburg, Germany
Classification society	DNV GL
Home port	Stavanger, Norway
Owner and manager	Solvang ASA - Stavanger, Norway

Large Retrofit & Upgrade portfolio

At MAN PrimeServ, we offer a comprehensive range of solutions for propulsion, propeller and aft ship systems, two-stroke and four-stroke engines. Our solutions are designed to deliver powerful returns on investment through significant fuel oil savings, operational improvements, decarbonization, safety, and reliability.

Learn more about how our solutions can benefit your fleet. Contact us via RetrofitDK@man-es.com for a vessel-specific consultation.

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