



Retrofit propeller solution gives significant fuel savings

MAN Diesel Retrofit Increases Scandlines Propeller Efficiency by 12%

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An optimised propeller from MAN Diesel has helped the Scandlines passenger ferry, the M/V Sassnitz, achieve increased efficiency of 12% on its daily sail between Trelleborg, Sweden and Sassnitz, Germany.

Scandlines is one of Europe's largest ferry companies, a result of the fusion between the largest, national ferry lines in Denmark and Germany. Business is based on the swift and reliable transport of both passengers and cargo on international routes within Danish, German and Swedish waters, as well as further afield to the Baltic states and Finland.

Scandlines operates 17 ferries on 8 routes between 11 harbours in the Baltic Sea. Last year, the shipping company transported more than 17.3 million passengers, 4 million cars, 1 million lorries, 84,000 goods wagons, and 68,000 busses.

Rasmus Nielsen, Scandlines' project engineer says: "We started to look at propeller retrofit solutions as a direct consequence of high fuel prices. Aboard the M/V Sassnitz, we have replaced the propeller blades with a modern, optimised design. Our tests document that this has realised an increased efficiency of no less than 12%. Originally, MAN Diesel had 8-10% as a target, so therefore it's very pleasing that our measurements show an even better result."

He adds: "The ship reverses a lot in-harbour and therefore it's vital for us to attain the optimal propeller blade design. As such, the propeller set-up has been optimised to best fit this particular operating profile without compromising overall efficiency."

In order to optimise the process, the Sassnitz's operating profile was thoroughly analysed by MAN Diesel's propeller design department. MAN Diesel PrimeServ participated in the installation of the new propeller blades on the Sassnitz, which is powered by four MAN L40/54 engines.

"MAN Diesel and Scandlines have cooperated with each other for over 20 years on controllable pitch propellers," says Brian Grusgaard, Manager of Upgrading and

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Retrofit Support at MAN Diesel Propulsion After-Sales. “Scandlines is a front runner within retrofit propeller optimisation and the M/V Sassnitz’s fuel consumption has now been reduced, which is also an environmentally friendly solution. We expect many such retrofits in the future, and are currently in contact with a good number of other ship owners who are very interested in propeller optimisation.”

M/V Sassnitz Principal Data	
Route	Sassnitz – Trelleborg
Type	Ro-Pax
Construction year	1989 / 1994
Gross tonnage	21,154
Shipbuilder	Danyard A/S, Frederikshavn, Denmark
Port of registry	Sassnitz
Flag	German
Engines	2 x MAN 8L40/54 2 x MAN 6L40/54
Output (kW)	18,200
Length, oa	171.5 m
Breadth incl. fender	24.1 m
Service speed	19 kn
Train capacity	5 tracks, 711.5 m
Lane metres, lorries	1,235 m
Car capacity	314
Passenger capacity	875



PrimeServ engineers fitting the M/V Sassnitz's new propeller blades



M/V Sassnitz



Rasmus Nielsen, Scandlines project engineer, and Brian Grusgaard, Manager of Upgrading and Retrofit Support at MAN Diesel Propulsion After-Sales

About MAN Diesel

MAN Diesel is the world's leading provider of large bore diesel engines for marine and power plant applications. The company designs two-stroke and four-stroke engines, generating sets, turbochargers, CP propellers and complete propulsion packages that are manufactured both by MAN Diesel and its licensees. The engines have power outputs ranging from 450 to 97,300 kW. MAN Diesel employs approx. 8,000 staff, primarily in Germany, Denmark, France, the Czech Republic, India and China. The global after-sales organisation, MAN Diesel PrimeServ, comprises a network of the company's own service centres, supported by authorised partners. MAN Diesel is a company of MAN SE, which is listed on the DAX share index of the 30 leading companies in Germany.

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