



Hercules-2 Officially Launched

MAN Diesel & Turbo, Wärtsilä and Winterthur Gas & Diesel to collaborate on major, EU-funded project

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A major cross-industry initiative led by MAN Diesel & Turbo, Wärtsilä, and Winterthur Gas & Diesel, to develop basic technologies for use in 2- and 4-stroke marine engines has been officially launched. The Hercules-2 project is aimed at fostering environmentally sustainable and more efficient shipping. It is in line with general European Union policy and is partly funded by the EU.

Altogether, 32 marine industry partners from 11 different companies, 16 universities, and five research organisations are cooperating in this project, with NTU Athens as coordinator. The R&D efforts focus on four main areas. These are; the application of alternative fuels and the optimisation of fuel flexibility to facilitate seamless switching between different fuels; the development of new materials to support high-temperature component applications; the development of adaptive control methodologies to significantly improve an engine's performance throughout its life span; and to achieve near-zero emissions via combined, integrated, after-treatment of exhaust gases.

"Hercules-2 is a strong platform that will create a basis for the development of technologies applicable to ship engines in four to five years' time. We have, therefore, positive expectations and look forward to collaborating with so many cross-industry partners," says Søren H. Jensen, Vice President and Head of R&D at MAN Diesel & Turbo.

"The greatest of the many benefits stemming from Hercules-2 will be the development of new technologies that have a positive impact on our customers' profitability. Another is the significant contribution this project will make to more environmentally sustainable shipping," says Ilari Kallio, Vice President, R&D, Engines, speaking on behalf of Wärtsilä

Winterthur Gas & Diesel's Vice President R&D, Rien Hoogerbrugge, sees Hercules-2 as an important opportunity: "This project enables the partners to combine know-how by bringing together scientists from

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various fields and institutions to investigate concepts, and to develop robust technologies for application on different types of engines. We are pleased to be part of the Hercules consortium, and we are looking forward to jointly developing environmentally friendly products for a sustainable future of merchant shipping”.

The Hercules-2 project is scheduled to run for three years. It represents the follow-up phase of the Hercules R&D programme for large engine technologies, which was originally conceived in 2004 by MAN Diesel & Turbo and Wärtsilä. The Hercules-2 technologies will eventually be employed aboard large ships.



Caption: The official Hercules-2 logo

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Press Release

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About MAN Diesel & Turbo

MAN Diesel & Turbo SE, based in Augsburg, Germany, is the world's leading provider of large-bore diesel engines and turbomachinery. The company employs around 14,500 staff at more than 100 international sites, primarily in Germany, Denmark, France, Switzerland, the Czech Republic, India and China. The company's product portfolio includes two-stroke and four-stroke engines for marine and stationary applications, turbochargers and propellers as well as gas and steam turbines, compressors and chemical reactors. The range of services and supplies is rounded off by complete solutions like ship propulsion systems, engine-based power plants and turbomachinery trains for the oil & gas as well as the process industries. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand.

www.mandieselturbo.com

About Wärtsilä

Wärtsilä is a global leader in complete lifecycle power solutions for the marine and energy markets. By emphasising technological innovation and total efficiency, Wärtsilä maximizes the environmental and economic performance of the vessels and power plants of its customers.

In 2014, Wärtsilä's net sales totalled EUR 4.8 billion with approximately 17,700 employees. The company has operations in more than 200 locations in nearly 70 countries around the world. Wärtsilä is listed on the NASDAQ OMX Helsinki, Finland.

www.wartsila.com

About Winterthur Gas & Diesel Ltd.

Winterthur Gas & Diesel Ltd. (WinGD) is a leading developer of two-stroke low-speed gas and diesel engines used for propulsion power in merchant shipping. WinGD's target is to set the industry standard for reliability, efficiency and environmental friendliness. WinGD provides designs, licences and technical support to manufacturers, shipbuilders and ship operators worldwide. The engines are sold under the Wärtsilä brand name and are manufactured under licence in four shipbuilding countries. WinGD has its headquarters in Winterthur, Switzerland, where it started the development of large diesel engines under the name "Sulzer" already in 1898.

www.wingd.com

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