



## **The Power of Shipping**

### **MAN Diesel & Turbo Presents Technologies for Emissions Reduction and its New High Speed Engine at the SMM**

Inspired by the motto "The Power of Shipping", MAN Diesel & Turbo will be showcasing its products and services at the SMM international maritime trade fair in Hamburg next week. The company's motto relates both to the importance and the consistent, innovative force of the shipping industry: "No other form of transport has transformed globalization and global trade as much as commercial shipping", says Dr. Stephan Timmermann, Executive Board Member at MAN Diesel & Turbo. "This was as true in the days of Christopher Columbus as it is now, and in the future too, shipping will remain a major pacesetter for the world's economic development. That said, commercial shipping is facing considerable challenges. To live up to its responsibilities, it needs to improve its ecological footprint. We want to engage in a dialogue with our customers and show a technological pathway to this greener future at our trade fair stand."

Inspired by this pledge, the company has set itself the goal of making its new high speed MAN 175D engine the overall most efficient engine in all of its fields of application. The engine will be shown at the SMM for the first time and will be available to experience in an augmented reality as well: Using a new iPad app by MAN Diesel & Turbo, engine details and optional equipment will be visible in a three-dimensional animation.

The 12-cylinder version of the MAN 175D being presented in Hamburg is tailor made to meet the needs of commercial shipping and is ideal for propelling ferries, offshore supply vessels, tug boats and working vessels. Further specialist model versions will serve the super-yacht and navy ship markets.

"With the MAN 175D, we expand and complete the marine engine programs by MAN Diesel & Turbo and MAN Truck & Bus", says Dr. Hans-Otto Jeske, Chief Technology Officer and acting CEO at MAN Diesel & Turbo. The new engine will be offered with an output spectrum from 1,500 to 2,200 Kilowatts and will be delivered to pilot customers in 2015.

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### **Booth Exhibits Demonstrate High to Low Speed Performance Range**

The company's trade fair stand, measuring just under 450 m<sup>2</sup>, demonstrates in an impressive visual manner the high to low speed performance range covered by the marine engine portfolio: alongside the MAN 175D are the 20V28/33D engine, which is almost twice the size at around four meters in height, and the new MAN high speed D2862 LE441 engine. The D2862 LE441 marine engine offers improved output and a dry weight of 2,270 kg, delivering an excellent performance density for applications in heavy operations such as tug boats and freighters.

Strong performance and reliability are two of the characteristics of the 10,000 Kilowatts 20V28/33D STC engine which is suitable for use on ferries and mega-yachts as well as navy ships. With 60 installed units and another 30 in the order books, the 28/33D is one of the established engines on the maritime four stroke market, and has been part of MAN Diesel & Turbo's success story for many years.

### **Eco Technology Lounge Showcases Solutions for Emission Reduction**

Two spacious lounges will present the company's technological solutions for reducing emissions and improving fuel efficiency in new-build and retrofit engines. The Eco Technology Lounge will provide information about the company's dual-fuel engines and exhaust gas after-treatment technologies. "The reduction of harmful emissions is one of the most urgent challenges currently facing the commercial shipping industry," says Klaus Deleroi, Senior Vice President and Head of the Four-Stroke Marine Business Unit at MAN Diesel & Turbo. "The use of natural gas as a fuel in one of our dual-fuel engines is the most effective method of preventing the majority of CO<sub>2</sub> and nitric oxide emissions from even developing in the first place."

MAN Diesel and Turbo recognized the growing importance and environmentally protective potential of natural gas as a fuel early on. Back in 2007, the company unveiled its first dual-fuel engine which had been designed especially for the LNG tanker segment. Since then, the company has been offering dual-fuel engines for a variety of ship-sizes right through to container giants. The engines can be operated using LNG or diesel / heavy oil, depending on the fuels' availability.



Exhaust gas after-treatment technologies such as "Selective Catalytic Reduction (SCR)" and "Exhaust Gas Recirculation (EGR)" are also effective in the fight against harmful emissions. "The directives of the International Maritime Organization (IMO) are setting increasingly strict emission standards. With SCR and EGR, we offer two pioneering and very effective technologies for exhaust gas treatment. When used, every one of our engines can meet the IMO Tier III standard," says Thomas Knudsen, Senior Vice President and Head of the Two-Stroke Business at MAN Diesel & Turbo.

### **Efficiency-Boosting Retrofit Solutions at the PrimeServ Lounge**

"Our range of fuel-saving retrofit products extends from relatively simple technologies that still offer sizeable savings right through to complex solutions that combine several different technologies. These solutions of course mean that significant reductions in consumption can be achieved", explains Wayne Jones, Senior Vice President and Head of MAN PrimeServ Diesel. "Thanks to our global PrimeServ network, a premium-level service at MAN standard is available to our clients across the world at over 120 service locations."

MAN Diesel & Turbo's guests will also experience premium service in the three hospitality areas that the company has set up at the trade fair stand and outside. Tasty treats are available not just at the PrimeServ Fruit Bar on the first floor of the trade fair stand and in the spacious customer area on the upper floor, but also in the outdoor area. Just like in previous years, the PrimeServ Truck will be parked between Halls A3 and A4, and MAN service crews will be serving hot and cold refreshments in a relaxing atmosphere.

#### **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 for marine and stationary applications. It designs two-stroke and four-stroke engines that are manufactured both by the company and by its licensees. The engines have power outputs ranging from 450 kW to 87 MW. MAN Diesel & Turbo also designs and manufactures gas turbines of up to 50 MW, steam turbines of up to 150 MW and compressors with volume flows of up to 1.5 million m<sup>3</sup>/h and pressures of up to 1,000 bar. The product range is rounded off by turbochargers, propellers, gas engines and chemical reactors. MAN Diesel & Turbo's range of goods includes complete marine propulsion systems, turbomachinery units for the oil & gas as well as the process industries and complete power plant solutions. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand. 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. MAN Diesel & Turbo is a company in the Power Engineering business area of MAN SE.