Press Release
MAN Diesel & Turbo

America's Tropical Shipping Orders Complete MAN Diesel & Turbo Packages

Copenhagen,
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Tropical Shipping, the largest provider of reliable logistics solutions to the Bahamas and Caribbean, has ordered a series of MAN propulsion packages in China to complement an expansion of its vessel fleet.

The company has ordered 4 × 1,100-teu container vessels, each equipped with an MAN B&W 6S60ME-C8.5 main engine, complete with TCA66-21 turbocharger and an SCR (Selective Catalytic Reduction) module to achieve Tier III compliance. The propulsion package also features 3 × MAN 6L23/30 Holeby GenSets with MAN TCR14 turbochargers, as well as the latest generation of CP propellers, the VBS1550-5 Mk5, which is a five-bladed design combined with the MAN Alpha rudder-bulb concept.

Tropical Shipping has also ordered 2 × 300-teu container vessels, each powered by 1 × MAN 27/38 engines, with TCR turbochargers. The new vessels are due to enter service from June 2018 on.

Bjarne Foldager, Vice President – Promotion & Sales, Two-Stroke Business – MAN Diesel & Turbo, said: "The marine market is currently very challenging but, in winning orders like this, we see some green shoots of recovery. Tropical Shipping has chosen to expand its fleet with proven technology from our portfolio and I am confident they will be served well by it."

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The ME-C engine

MAN Diesel & Turbo initially introduced electronic, fuel injection control on its large bore, ME-C engines, which are a more compact form of their ME-B counterparts. The ME-C range's electronic controls are characterised by:

- fully integrated electronic control
- low SFOC
- superior performance parameters
- appropriate fuel injection pressure and rate shaping at any load
- improved emission characteristics
- smokeless operation at any load
- lower NO_x on command.

These advantages are gained by the use of variable, electronically-controlled timing of fuel injection and exhaust valves during operation. Additionally, all software and hardware are upgradable for the lifetime of the engine.

The MAN 23/30 GenSet

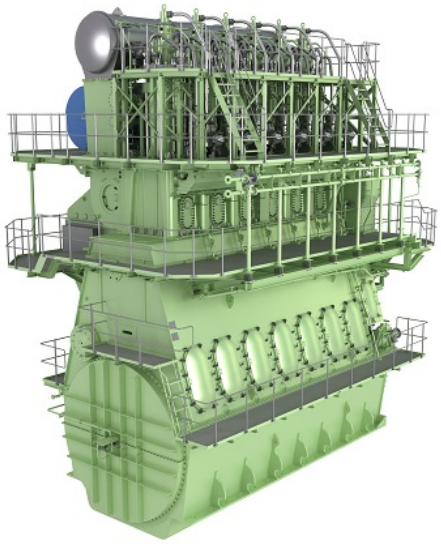
The 23/30 engine is one of MAN Diesel & Turbo's most successful workhorses, and has a half-century history of operational stability with over 12,000 sales to date. The engine is popular with shipowners for its reliability and 'forgiving' service demands.

Applications for the engine include tankers, bulk carriers and product tankers as auxiliary engines. The engine is mostly HFO-driven with gas and marine oil also used in special environmental areas.

The 23/30 engine is optimised for part-load operation, typically at 40-65%, and features an mep that is < 20 bar. As a result, the engine experiences reduced operative stress – compared to its competitors – meaning a decreased demand for spare parts and significantly reduced running costs over its lifetime.

About Tropical Shipping

Tropical Shipping has operated its freight-shipping service between Canada/South Florida and the Caribbean and the Bahamas for over a half-century. The company delivers comprehensive cargo-transportation services, including dry, refrigerated, and less than container load. Currently, with a fleet of 15 vessels, Tropical Shipping provides direct services to Florida, the Bahamas, and the Caribbean.



The MAN B&W 6G60ME-C9 ultra-long-stroke engine, a close relation to the 6S60ME-C prime mover ordered by Tropical Shipping for its 1,100-teu newbuildings.

TCA66 on the MAN Turbocharger assembly line

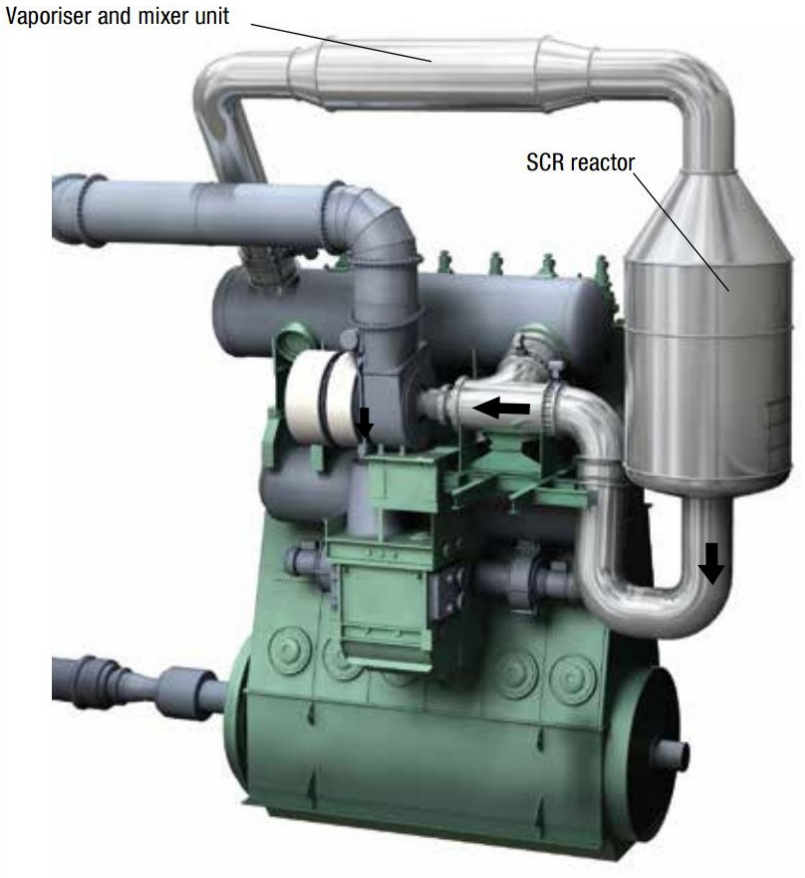
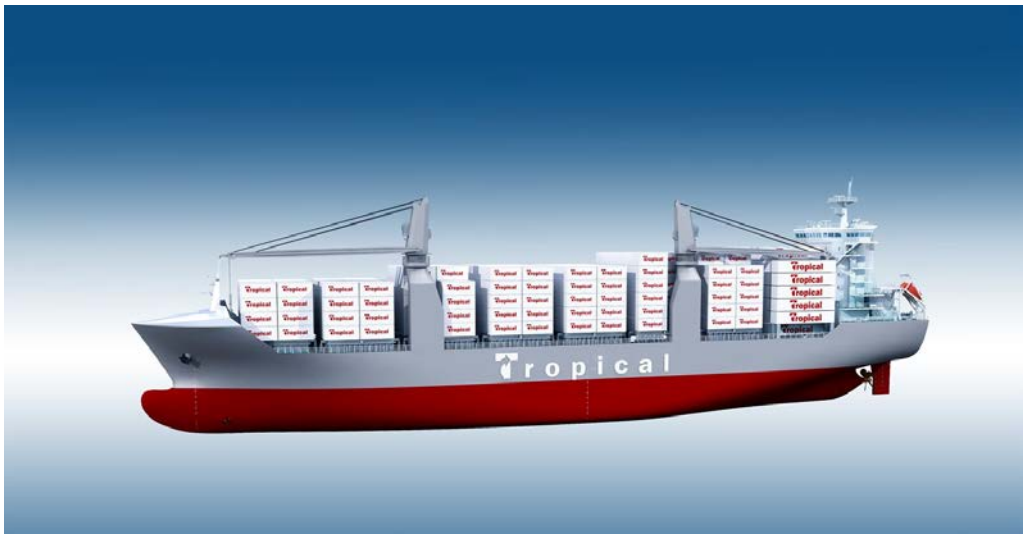


Illustration of an MAN B&W two-stroke SCR system.

Due to the high-energy efficiency of MAN B&W two-stroke diesel engines, exhaust-gas temperatures after the turbocharger are typically low.

In order to achieve the highest possible fuel flexibility, and to ensure that the engine produces an exhaust gas with the right temperature for the SCR system, the SCR is placed on the high-pressure side of the turbine. This makes it possible to obtain exhaust-gas temperatures some 50°C to 175°C higher.

Accordingly, when NO_x reduction is needed, the exhaust gas is guided to the SCR. And, when not, the exhaust gas is passed directly to the turbine in the turbocharger (T/C) and the SCR is sealed by two valves



Respective graphical representations of the 300- and 1100-teu newbuildings ordered by Tropical Shipping

About MAN Diesel & Turbo
MAN Diesel & Turbo SE, based in Augsburg, Germany, is the world's leading provider of large-bore diesel and gas engines and turbomachinery. The company employs around 15,000 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.

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