Press Release
MAN Diesel & Turbo

MAN Diesel & Turbo Propulsion Package to Power Seismic Vessel

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MAN Diesel & Turbo recently signed a contract for the supply of 8L32/44CR B.2 engines as part of a complete propulsion package to power a seismic vessel ordered by GC Rieber Shipping of Norway. The contract contains an option for an extra vessel. Four of the engines, along with 2 × 2-speed Flender Twin-In/Single-Out reduction gears and MAN Alpha Twin Screw CP propellers in AHT nozzles, will power the vessel. The seismic vessel is graded as Ice Class 1A*, which provides a good basis for operating in Arctic areas.

The vessel design is an ST 324 XT from Skipsteknisk of Aalesund, Norway whose hull will be constructed in Poland with outfitting subsequently carried out at the Myklebust shipyard north of Aalesund. The propulsion plant is scheduled for delivery by May 2014 with vessel delivery following in March 2015.

Expertise in ice has long been a GC Rieber Shipping trademark with an emphasis on delivering customer solutions for demanding operations in sensitive environments where quality, safety and environmental concerns are crucial. These tough requirements also apply to the propulsion plant and the shipyard's previous, positive experience with MAN Diesel & Turbo engines was decisive in finalising the propulsion package.

Propulsion package

The four-stroke 8L32/44CR B.2 common-rail engines with a high-powered 600 kW/cylinder will be constructed and tested in Augsburg, Germany – headquarters of MAN Diesel & Turbo. The common-rail B.2 engine is one of the most advanced in the company's product portfolio, has a second-to-none SFOC, and has gained a solid foothold in the offshore business.

The reduction gears from Siemens-Flender are specially designed such that – at constant engine speed (750 rpm) – two different propeller speeds can be selected (155 rpm or 120 rpm), allowing the propellers to have a much wider silent-operation window. The TI/SO gears are also provided with 2 × 2,600 kW_e PTOs each.

The MAN Alpha VBS1100 Mk5 CP propellers utilise, courtesy of up to six operating modes, the flexible propeller-output speed to operate at the optimum efficiency in all modes. Suppressing cavitation on the propellers is an important design criterion since, especially on the pressure side, the noise deriving from cavitation can disturb seismic sonar readings.

The ø4200 CP propellers operate in Alpha High Thrust (AHT) nozzles, which further help to increase propeller performance by offering higher thrust at low vessel speed, and reduce cavitation noise through selection of the optimum nozzle L/D ratio.

The Alphatronic 2000 remote-control system facilitates the most favourable propulsion-plant control in all operating modes. A special feature of the new seismic vessel is an 'ice operation mode' since the DNV Ice 1A* only applies when one engine is engaged to each propeller shaft. The complete propulsion plant at 100% MCR is classed as fully MCR certified by DNV for operation in areas with no ice.

Finally, as part of the overall deal, MAN Diesel & Turbo will provide two years of online service and PrimeServLab (stringent quality control for engine operating fluids) on board in order to obtain valuable performance data for seismic high-load operation.

Graphical rendering of the new seismic vessel (courtesy Skipsteknisk)

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 m³/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 turnkey power plants. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand. 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. MAN Diesel & Turbo is a company in the Power Engineering business area of MAN SE.

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