



Tug boat segment

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MAN Diesel Tugs Market in Right Direction

L27/38 engine key to success in specialised marine segment

MAN Diesel Spain has been very active within the tug segment recently, having played a key role in three orders that contract the company to supply 18 of MAN Diesel L27/38 engines to Boluda Corporación Marítima, Spain, the international marine group and leading shipbuilder. The engines are destined for nine newbuilding tugs; ten engines were already delivered in 2009 with the remainder due in 2010/2011.

The three orders encompass two engines for the "V.B. Bravo", owned by Boluda Corporación Marítima through its subsidiary AUXMASA; twelve engines for six tug boats owned outright by Boluda Corporación Marítima; and four engines for two tug boats owned by the Shetland Island Council. As originally stipulated, all nine tugs will be constructed at Boluda Shipyards - Unión Naval Valencia in the Port of Valencia, one of the biggest private shipyards in Spain and part of Boluda Corporación Marítima.

Boluda Corporación Marítima's core activity, as it always has been over its history, is tug operation. Its Towage and Salvage Division maintains a strong position both domestically and internationally with a fleet of over 200 tugs.

Typical tug-boat operations include ship towage, marine safety, assistance in high-seas and fire fighting. Such demanding tasks require a highly reliable and efficient main engine, a profile that MAN Diesel's L27/38 engine meets in full.

Boluda Towage and Salvage

Of the seven tugs bound for the Boluda Towage and Salvage fleet, the first, the VB Bravo, has already entered service. Two others – the "VB Titán" and the "VB Trón" – were launched at Boluda-UNV shipyard in October 2009 and will shortly enter service. Delivery of the remaining six vessels is scheduled for 2010 and 2011 as follows:

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Hull Nº	Type	Owner	Delivery Date
C-473	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	March 2010
C-474	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	April 2010
C-480	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	January 2011
C-481	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	February 2011
C-482	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	April 2011
C-483	Voith Tractor TUG 70t UNV 870 VS	Boluda Corporación Marítima	May 2011

Source: *Boluda Shipyards - Unión Naval Valencia*

The VB Bravo will assist and escort ships, and conduct oil-spill recovery, pollution-control and fire-fighting operations in Spanish waters while the VB Titán and VB Trón will form part of the Boluda Towage and Salvage fleet. These tugs are designed for unrestricted navigation and provide towing services as well as executing fire fighting, ship-assistance and escort, cleaning-up of oil spills and pollution-control activities.



PRINCIPAL DATA			
	V.B. Bravo	VB Titán/Trón	Solan/Bonxie
Bollard pull (tonnes)	100	70	70
Length (m)	35.50	32.00	37.00
Beam (m)	13.00	14.00	14.00
Moulded depth (m)	6.60	5.60	5.50
Draught	5.59	4.40	5.50
Speed (knots)	15.0	11.8	14.0
Accommodation (crew)	11	6	6
Propulsion	2 x 9L27/38	2 x 8L27/38	2 x 9L27/38
Rating (kW)	2 x 3,060	2 x 2,720	*2 x 3,285
Rpm	800	800	800
Drive type	Azimuth stern	Cycloidal	Cycloidal

**In this instance, the engines are uprated so the power rating is increased. This is only applicable with MGO/MDO*

Source: Boluda Shipyards - Unión Naval Valencia

Shetland

Two tugs, featuring four MAN 9L27/38 engines (3,285 kW at 800 rpm), are bound for two twin vessels – the “Solan” and “Bonxie”, which will be based at the Shetland Islands (UK) Sullom Voe oil terminal in the northern North Sea. The Solan was launched on 17 December 2009 and the Bonxie on 18 February 2010. The tugs will be operated by the Shetland Islands Council and their design makes them well-equipped for towage, and the general assistance and escorting of tankers and other ships.

Hull N°	Type	Shipowner	Delivery Date
C-471	Voith Tractor TUG 70t UNV 970 VS	Shetland Island Council (UK)	April 2010
C-472	Voith Tractor TUG 70t UNV 970 VS	Shetland Island Council (UK)	May 2010

Source: Boluda Shipyards-Unión Naval Valencia



Haifa

MAN Diesel has just finalised another contract with Boluda Shipyards - Unión Naval Valencia for the delivery of two 8L27/38 engines to a tug boat ordered by the Port Authority of Haifa, Israel.

The type L27/38 engine

MAN Diesel's L27/38 medium-speed engine in its eight- and nine-cylinder variants has been chosen as main engine for all nine tug boats on account of its good high-torque performance characteristics, robust and compact design, characterised by a single, front-end box that collectively houses LT/HT cooling-water pumps, thermostatic valves, and lube oil pump, cooler and automatic filter.

Furthermore, the L27/38 requires only a low overhauling height that facilitates the on-site exchange of cylinder units (including cylinder heads, liners, pistons, connecting rods and fuel-injection valves). This characteristic enables a spare cylinder unit to be swapped in aboard, dispensing with the need to break voyages to return to the workshop.

In general, the MAN L27/38 engine is characterised by:

- low fuel-oil consumption
- long time between overhauls
- low maintenance requirements
- substantially reduced noise levels through targeted insulation
- ready availability of spare-parts and maintenance contracts



The VB Bravo pictured during sea trials



The VB Titán and VB Trón pictured during construction at Boluda Shipyards – Unión Naval Valencia



The Solan pictured during construction



*The Bonxie pictured during launching at Boluda Shipyards
- Unión Naval Valencia*

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 47 to 97,300 kW. MAN Diesel employs over 7,700 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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