

DAMEN INTRODUCES 10 NEW TUGS: THE STANDARD SERIES

Coen Boudestein, Damen Product Director Tugs,
Damen, Gorinchem, Netherlands

The tugs of the Damen Standard Tug Series have been proven as top quality, high performance ship handling tugs, designed for working under the flare of container vessels. They are characterised by ergonomic layouts, towline-friendly designed, stainless steel towing bitts and fairleads, well-shaped funnels and superstructures and heavy fendering. Our tugs have to be both user friendly and maintenance friendly.

Quite often tugs from competitors require modifications after delivery.

For example, other yards use bottom coolers for the main engines (resulting in higher fuel consumption) or inter cooling, which is less reliable. The Damen Standard closed cooling system allows box coolers to be fully integrated in order to guarantee a flush hull and an optimal water flow.

It is remarkable to see the efficiency, handling speed, compactness of the Damen ASDs/RSDs. In harbours, normally two tugs carry out the assistance during mooring and departure. But with Damen tugs, sometimes one tug is doing it; assisting at the bow or stern, pulling, pushing and escorting.

Additionally, thanks to an optimal underwater design, with flush, round bilge hulls, and with specially shaped skegs, the Damen ASD Tug Series has the lowest fuel consumption in the market.

Due to the quick reaction time of the CAT 3516 and MTU 4000 with 1600rpm main engines with twin turbos, the acceleration and the handling speed of the Damen ASD Tug Series is really phenomenal.

NEW BUILDING STRATEGY

The Damen culture is to take feedback from our customers very seriously and we recognise that their comments are the best way to improve the Standard Series. Many of these improvements will be seen in several new series Damen is launching.

All of these tugs will be built according to a new company strategy designed to make the production process more efficient. Under the new system, introduced on March 1, 2016, tugs will be constructed at only five shipyards in the group. Damen has 32 ship and repair facilities worldwide.

Concentrating tug building at five yards enables Damen to achieve 'specialised, dedicated, industrial production', with state-of-the-art facilities. The team at each yard will know that vessel type inside out, enabling the group to work on the quality of every individual component.

These new Standard Series represent an enormous effort from dedicated teams. Developing these vessels is truly a top sport.

DAMEN ICE CLASS ASD TUG SERIES - 2609/3010/3412

Damen's new Ice Class ASD Tug 2609 will be built in Damen Shipyards Changde and the new ASD Tug 3010 ICE and ASD Tug 3412 ICE will be built in Damen Shipyards Galati.

The new generation is a real step forward

in terms of performance, with the tugs (ASD 2609 ICE, 40 tonnes BP, ASD 3010 ICE, 60 tonnes BP and ASD 3412 ICE, 75 tonnes BP) all having up to 40% higher ice-breaking capabilities. Damen's R&D Department has worked intensively on a new bow design and the angle of the bow has changed significantly, reduced from 56 degrees to just 45 degrees to achieve this improved performance.

The series has very good insulation, with particular attention paid to the engine/rudder propeller room and accommodation areas, and around doors and windows. The proven Damen Standard keel cooling system is also possible because the hull is large enough to accommodate the flush bottom cooling channels. The hulls are designed for RMRS Arc 4 and FS 1AS Ice Class.

DAMEN MULTIPURPOSE ASD TUG SERIES - 2811/2812/2913

With the growth in container vessel and cruise ship sizes and the increasing speed of work, tug operations in ports are becoming





more demanding. The new generation, multipurpose Damen ASD Tugs 2812 and 2913 have been developed in light of this ongoing trend. Operators need extremely powerful ship handling tugs but at the same time, they have to be compact to operate in busy harbours.

The Damen ASD Tug 2812 has a total power of 4,480 and the ASD Tug 2913 has a total power of 5,050 kW but they are just 28 metres and 29 metres in length, respectively. And even though they have 70 and 80 tonnes BP, the tugs are still very compact.

The new tug type has large tank capacities for fuel and water, as well as for recovered oil and a double drum winch - one for operations and one on standby. Able to reach speeds of 13.5 knots, the tugs have quite a large freeboard in combination with a beam of 12 metres and 13 metres, which enables them to keep a dry working deck and they are very stable with GM values above 2 metres.

A Series of 10 ASD Tugs 2913 is currently being built for stock at Damen Shipyards Galati in Romania. The new ASD Tug 2812 will be introduced at the end of 2017.

Additionally, the new ASD Tug 2811 will be introduced in the second half of 2017. The 65-tonne BP vessel has Caterpillar main

engines, (type 3516C TA HD/C), each with 2000kW providing 1600 rpm, as well as Rolls Royce US 205 thrusters with 2500mm propellers. The design is already prepared for the future Tier 3 requirements. The new ASD 2811 has modern and spacious accommodation for eight crew, and low noise levels in line with BV Comfort Class. The Damen ASD Tug 2811 series is being built at DSCS Vietnam.

Damen's Tug Department has designed the 'configurator' for the ASD 2811 together with an app, which allows clients to customise the vessel.

DAMEN CONVENTIONAL STAN TUGS SERIES - 2309/3011

Another Series being built under the new industrial production methods are the Stan Tugs 2309/3011. The Stan Tug 3011 was successfully introduced in 2015 and the Stan Tug 2309, a conventional twin-screw tug, is set to launch in 2017. The Stu 3011, with 70 tonnes BP, is being built in Damen Song Cam Shipyards and the STu 2309, with 40 tonnes BP, will be built exclusively in Damen Shipyards Changde. The Stan Tug 2309 has 40 cm more beam, more depth and extra bow height, as well as a transverse construction system for extra strength.

DAMEN RSD® TUG SERIES - 2513/2814

And the fourth tug Series to benefit from the new working methods is the Reversed Stern Drive (RSD®) Tugs 2513 and 2814. The new RSD Tug Series are designed to be both ultra-powerful and ultra-responsive. With impressive static bollard pulls of 70 tonnes for the RSD 2513 and 85 tonnes for the RSD 2814, the vessels have excellent dynamic escorting performance capabilities.

A Damen patented, twin-fin skeg design gives the operator optimal towing performance, both at the stern and the bow. The RSD Tug Series is the only compact tug designed to always work bow first. This makes it extremely efficient in confined harbours and estuaries and means that it always has a dry deck. To be built in Galati, the RSD 2513 will be introduced in 2017 and the RSD 2814 in 2018.

As readers can see, we at Damen love tugs. But we believe we can make improvements and go for perfection. And that's what we do at Damen. The new production method, with these dedicated yards, enables Damen to improve quality and efficiency at every level of a tug's construction.

ABOUT THE AUTHOR

Coen celebrates his 40th anniversary at Damen Shipyards at the end of the year. In 1976, Coen started at the company's drawing office as group manager. The first design he worked on was the Pushy Cat 1300. Coen has now been the Product Director Tugs for more than 25 years.

ABOUT THE ORGANISATION

Damen Shipyards Group operates 32 shipbuilding and repair yards, employing 9,000 people worldwide. Damen has delivered more than 5,000 vessels in more than 100 countries. Damen's focus on standardisation, modular construction and keeping vessels in stock leads to short delivery times, low 'total cost of ownership', high resale values and reliable performance.

ENQUIRIES

<http://www.damen.com/>