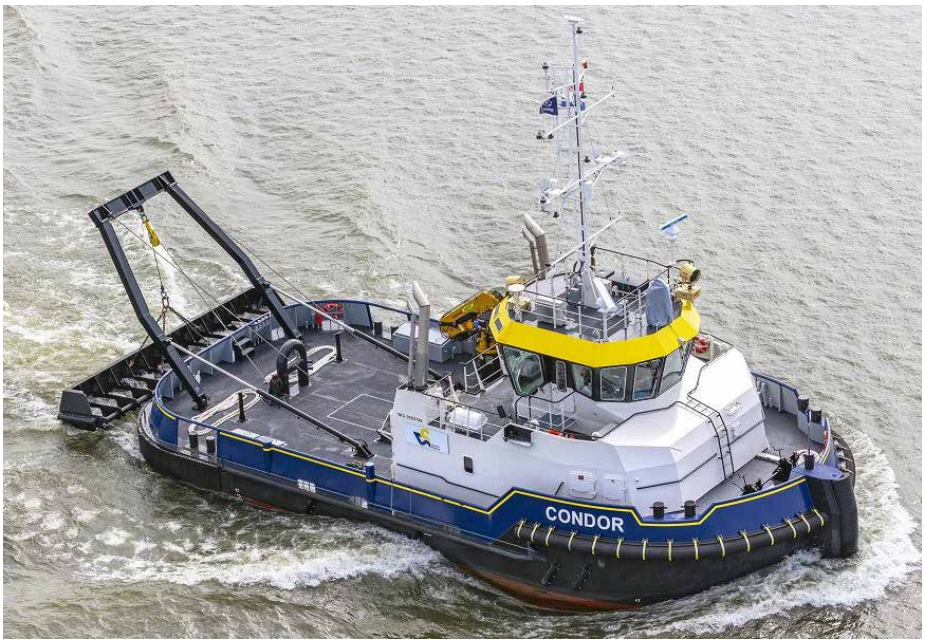
TugE Newsletter

all about tugs

CONDOR seen here in the Oude Maas has been delivered by the builders – Neptune, Aalst – to the owners Verbeke Shipping, Antwerp. Propulsion consists of two Voith's positioned in tractor configuration driven by two Caterpillar C-32 IMO Tier 3 diesels totalling 1.940 kW (2.638 bhp) resulting in a bollard pull of 27 tonnes photo: Nico Giltay

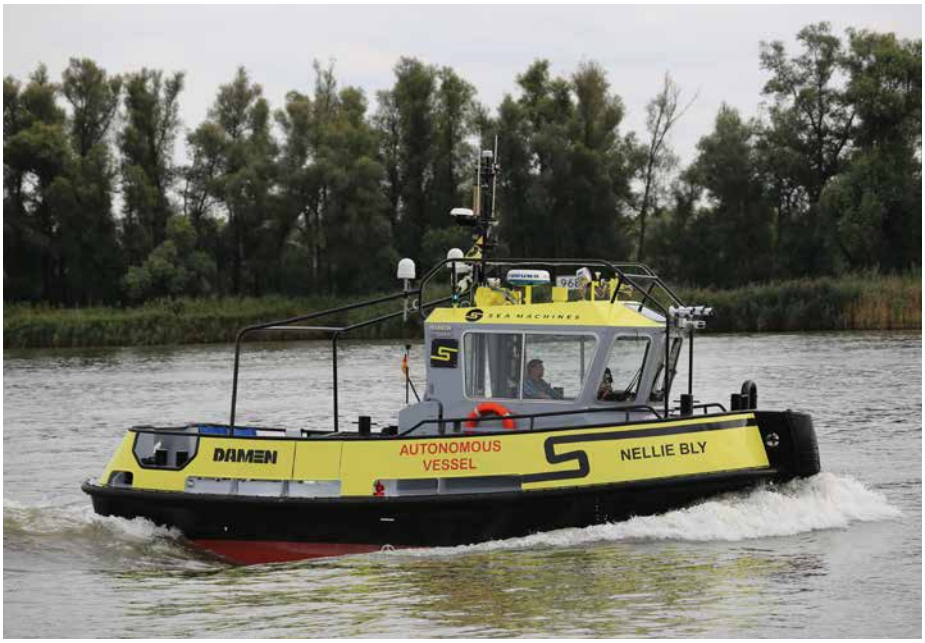


The Voith-driven EuroTractorTug CONDOR for Verbeke is a product of Neptune Marine, Aalst

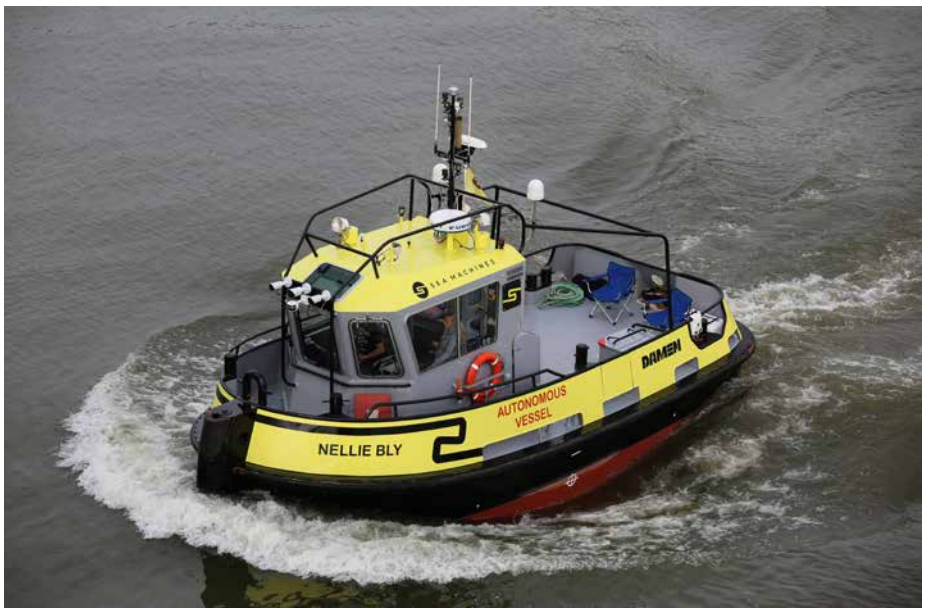
photo: Neptune Marine

The past period has seen a variety of developments in tugs and the towage industry. One of those was the development of the small shallow-draught multi-purpose harbour / dredging tug *Condor* by **Neptune Shipyard** and **Verbeke Shipping**. By itself plow-dredging by tugs is not unusual but the fact that this is executed by a tug driven by Voith cycloidal propellers is. The choice of propulsion is no doubt a result of the requirement for a versatile vessel suitable for a variety of duties besides plain towing. The vessel is based on Neptune's **EuroTractorTug** design.

Another small tug recently in the news was the Damen-built **Nellie Bly**. This Stan Tug 1004 tug was built by **Damen Shipyards** Changde, China, in 2016. She and a sister ship sailed in the Baltic operated by SD Seahorse Ltd., St. Petersburg. Both *RN Tamryuk* and *RN Taman* returned to the Netherlands and were refurbished by Damen and put up for sale. *Nellie Bly* was sold recently to **Sea Machines Robotics**, Hamburg. Sea Machines and Damen converted the tug to a fully autonomous demo vessel fitted with an SM-300 autonomous command and control system.



NELLIE BLY - an autonomous tug on a 1.000 nm trip *photo: Arie Boer*



NELLIE BLY is named after Elizabeth Jane Cochran (1864-1922) - a young American newspaper writer and journalist that published under the 'pen name' Nellie Bly. In 1889 she sailed – under contract from her paper -from New York to circumvent the globe in 72 days of travelling. Later, when married, she also received patents for the invention of a novel type of milk can and for a stacking garbage can. To name Seatech's experimental vessel after her seems a logical choice for what may later will be remembered as a break-through for future shipping and navigation *photo: Arie Boer*

On 30 September the tug left Hamburg for a 1.020 nm remote-controlled voyage. The initial idea of sailing around Denmark was dropped shortly before the start of voyage due to the weather forecasts for west coast of Denmark. These were such that program delays were foreseen. The trip now took *Nellie Bly* along the east coast. This route included additional stops in Aalborg; Fredericia; Laboe (Germany) and the transiting of the Kiel Canal arriving at its final destination in Hamburg on 15 October. The entire voyage was made under **autonomous and remote controlled** command from a control centre in the U.S. although a crew of two was on board all the time. The purpose of the trip was to demonstrate the technology. In total a distance of 1.027 nm was covered 96,89% of the time autonomous. The system was engaged in 31 collision avoidance manoeuvres.

In early October another **remote-control trial** involved *Multratug 32*. In this case **Multraship** Towage & Salvage (the tug owner), Novatug (designer of the tug), **Voith**, MacGregor, MediaMobil, Fraunhofer and the University of Rostock combined to remotely control the 2018-built Carrousel RAVE design tug. The 77 tbp tug is fitted with ABC 12V-DZC main engines driving Voith cycloidal propellers mounted in line forward and aft. The towing winch runs on a rail allowing it to travel around the superstructure.

Tested were, amongst others, remotely control of the tug from a shore station during active handling of an assisted vessel and DP trials with the Voith's.

Construction of the **Port of Antwerp**'s first **hydrogen-powered** tug has started. The tug is scheduled to enter operations in the third quarter of 2022. As earlier reported, **CMB Tech** and **A.B.C.** are the other partners in this project. CMB Tech provides the technology with A.B.C. providing the dual-fuel engines. Total main engine output is 4.000 kW (5.440 bhp) for an estimated 65 tbp. The intention is to have a dedicated refuelling station in the port that can refuel the tug in an hour's time. The tug will have a 400-kg compressed-hydrogen storage.

Trieste-based **Marine Engineering Services** jointly with Engys and the University of Trieste have completed the design of **TUGA**, a 26 x 14 m 60 tbp liquefied-gas-driven escort tug. The project was approximately 2/3 funded by the European Regional Development Fund. Incorporated in the design is a 80 m3 LNG tank. Design draught of the tug is 4,00 m.

Elizabeth Jane Cochran a.k.a. Nellie Bly - aged approx 26 photo: H. J. Myers, photographer, Public domain, via Wikimedia Commons

Marine Engineering Services is not unfamiliar to tugs. One of the tugs built to their design is the 40-tbp *Cap de Fer* built by Cantiere Navale Victoria for account of Skikda Harbour Authority. Likewise gas is not an unfamiliar subject having designed 7.500 m3 LNG bunkering vessels built by Keppel Nantong for account of Avenir LNG in which Stolt-Nielsen is a majority shareholder.

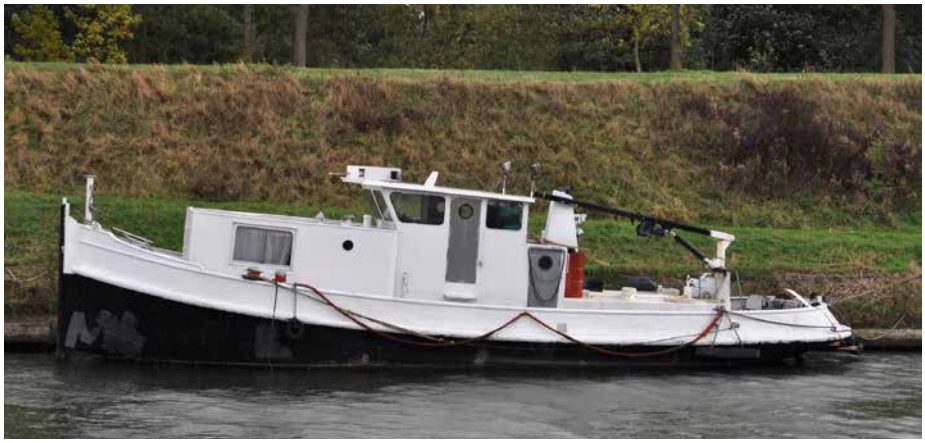
In Japan **Nihon Tugboat**'s *Ishin* on 1 September received its first load of carbon-neutral LNG. Carbon neutral in this case means that all greenhouse gases generated in the well-to-propeller process are offset by 'carbon credits'. These credits can be traded through the introduction of renewable energy, energy-efficient equipment, or things like forest management. The LNG used to drive the Yanmar main engines reduces the tug's CO_2 emissions by approximately 25%.

Ishin entered service in February, 2019, having been built by Kanagawa Dockyard to a Mitsui O.S.K. Lines design. Dimensions are 43,6 (oa) / 38,75 (bp) x 9,2 (mld) x 3,99 m. Draught 3,15 m (design). Speed 16,4 knots. Main engines 2x Yanmar 6EY-26-DF with a total output of 3.236 kW / 4.400 bhp.

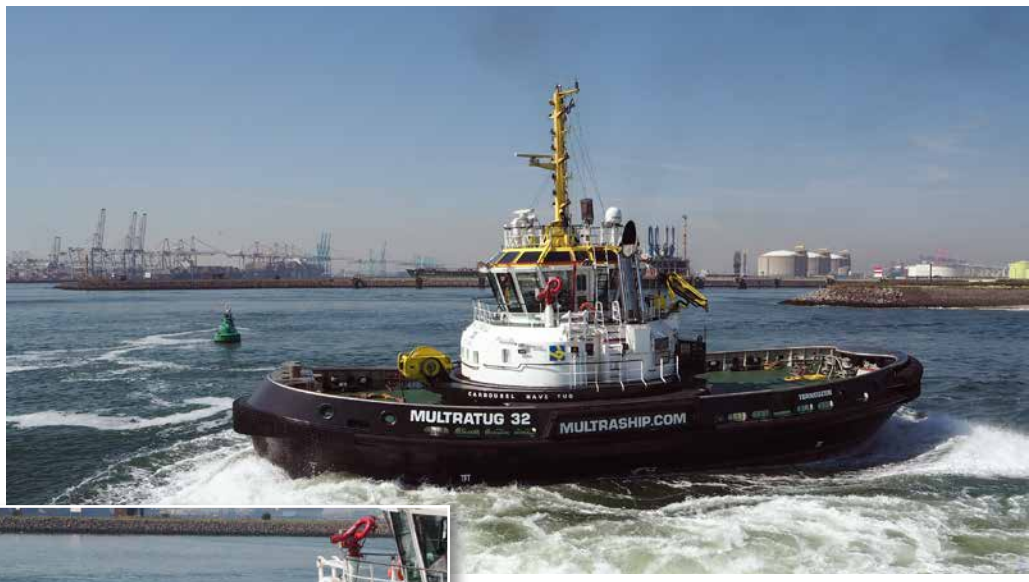
Mitsui OSK Lines has also tested the use of renewable biodiesel fuel made from a mixture of algae and used cooking oil developed by the Japanes biotech company Euglena. The tests were carried out at the port of Nagoya by MOL subsidiary Green Kaiji Kaisha's tug *Tamashio* (*13*).

NihonTugboat is a subsidiary of MOL (**Mitsui O.S.K. Lines**). MOL has an extensive towage portfolio in addition to its deepsea tanker, bulk carrier, ferry, passenger and container services and terminal operations. Towage companies owned by or joint-venture operations with MOL are Green Kaiji Kaisha, Green Shipping, Kitanihon Tugboat Co., Kobe Towing Co., Minami Kyushu Marine Service Co., Nihon Tugboat Co., South China Towing Co., Tan Cang - Cai Mep Towage Services Co., Tan Cang - Northern Maritime JSC, Tokai Tug-boat Co. and Ube Port Service Co.

Cory Group this year reached its 125th year on the Thames. Established in 1896 the Cory business has shifted over the years from moving coal via oil and aggregate to waste.



Identification required - unknown tug now probably recreational spotted 22 October, 2021, in Belgium on the banks of the Dessel-Schoten Canal *photo: Ruud Zegwaard*



The caroussel RAVE tug MULTRATUG 32

photo: Job van Eijk

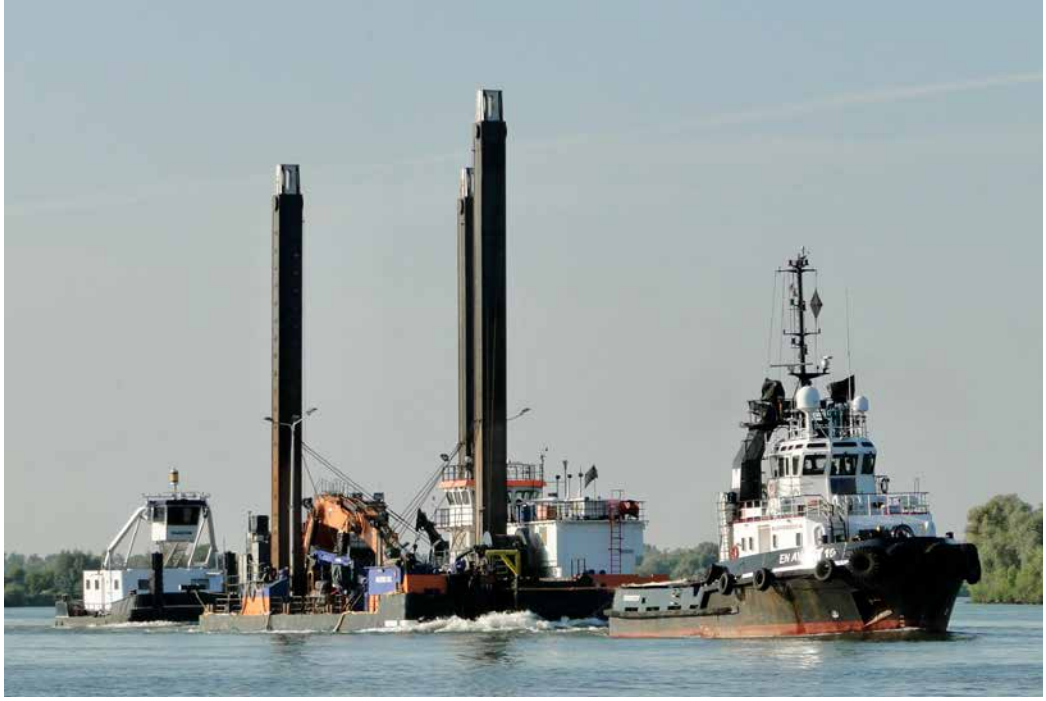
The travelling winch of MULTRATUG 32

photo: Job van Eijk

In July this year Cory announced it will switch to biofuel for its tugs as part of a net zero drive. Trials have been carried out that resulted in a reduction of net carbon dioxide emissions by 90%. The biofuel used is hydrotreated vegetable oil (HVO) that also reduces NOx by 19% and PM by 21%. HVO is produced from waste materials such as used cooking oil and waste fats, which do not release any new carbon dioxide into the atmosphere.

Cory's use of the river to transport waste saves some 100.000 truck movements annually, helping to keep roads safer, cleaner, and less congested. As Dougie Sutherland, CEO of Cory mentioned: "An added benefit of using HVO as fuel in our tugs is that it is fundamentally a waste product – and this fits perfectly with our wider approach of ensuring that no waste is wasted."

In the U.S. **Crosby Tugs** has extended its services to the offshore energy market by entering the offshore wind industry with SEA.O.G Offshore. The latter is an established integrated service provider to the offshore energy industry. The aim is to provide low-cost and innovative solutions regarding installation support and maintenance services for the US offshore wind industry.
Crosby and SEA.O.G Offshore are working on a feeder barge concept – a semi-autonomous delivery and installation platform for wind turbine



Muller Dordrecht's EN AVANT 10 on 22 September, 2021, towing Van Oord's dipper dredger RAZENDE BOL. The transport came from Aberdeen destination Moerdijk. Steering assistance provided by SHADOW *photo: Nico Giltay*

components that will allow installation vessels to remain on-site instead of taking away time for transportation of the various components.

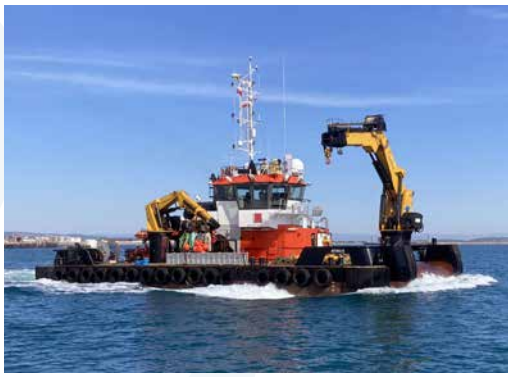
Crosby Tugs LLC was founded in 1977 when Vinton and Kurt Crosby acquired their first vessel: the *Paddy Crosby*. The new combined fleet has 130 inland and offshore towboats and a fleet of more than 400 barges.

Damen Shipyards recently delivered the tug *Bio Guerra* to **Port Autonome de Cotonou** in Benin. The ASD 2813 design tug was built by Damen Song Cam in Vietnam. With dimensions of 28 x 13 m and a draught of 6 m the tug is fitted with two Caterpillar 3516C-TA HD/D main engines. Total output is 5.050 kW / 6.772 bhp. Propulsion is by two Rolls-Royce US-255 fixed-pitch azimuthing thrusters in the stern. Bollard pull is 85 tonnes ahead and 80 tonnes running astern.

Damen will also be constructing a series of five ASD 3010 Ice Arc4 design tugs for account of **Atomflot**, Russia. Dimensions are 29,84 x 10.43 m with a draught of 4,9 m. Main engines will be Caterpillar while propulsion is by Kongsberg US- 255 azimuthing thrusters. The final tug in the series will be delivered in 2023.

Svitzer's recent activities included – on 1 October - the start of their contract with the Australian Navy. **Svitzer Australia** was the winner of the Defence Marine Support Services Package 3 tender. Svitzer will provide towage services, manage Navy towage assets and will be responsible for the development of naval personnel training. As Svitzer is already active in some twenty Australian ports they will be able to deliver extensive support to Navy vessels around the country.

The **Suez Canal** Authority has increased its contract with **Svitzer** to four tugs. The two 70-tbp newbuilds are under construction with **Cheoy Lee** for delivery end of 2021. Svitzer has been providing towage services in the Suez Canal since late 2019 with *Svitzer Port Said 1* and *Svitzer Port Said 2* operating out of Port Said.



AITANA B operating at Port La Nouvelle in October, 2021. She had been purchased by Van Wijngaarden and was to be renamed WAALSTROOM *photo: capt. Rolf Theunissen*

TugeNewsletter
is published at minimum every odd month in digital format only.

Editor
Job van Eijk
Co-editor
Cock Peterse

Advertising
Frank van Gils

DTP
Dtpplus - Spijkenisse

Branding & Webdesign
Studio DBLY - Rotterdam

Publisher
TugDoc International

ISSN 2667-2456

Editorial address
editor@tugezine.com
Website
https://www.tugezine.com

Contacts
TugDoc International
De Houtmanstraat 92
3151 TE Hoek van Holland
The Netherlands
Email: info@tugdoc.nl

Frank van Gils
Van Gils Promotions
Tel: +31 (0) 653 888 26
Email: frank.van.gils@planet.nl

Subscriptions
TugeZine as well as its associate TugeNewsletter is distributed free of charge. Copies will be emailed to subscribers in PDF format. Subscribers also have access to service pages and archives on the website.
To subscribe visit tugezine.com and register.