Vessels and Barges for Sale or Charter Worldwide

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November 2021

Tug Market Report

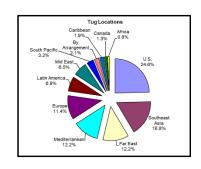


Of the 13,609 vessels and 3,718 barges that Marcon tracked as of November 2021, 5,221 are tugs with 475 officially on the market for sale worldwide, down 141 or 22.89% from one year ago, November 2020, and down 180 or 27.48% from November 2016. 94.07% of U.S. and 47.90% of foreign tugboats for sale are direct from Owners. 111 or 23.37% of the tugs worldwide, primarily foreign flagged, were built within the last 10 years, are newbuilding re-sales or currently under construction – compared to 27.11% one year ago and 34.05% five years ago. 74 (15.58%) are over 50 years of age. Nine have no age listed. The oldest tugs Marcon currently has listed are an 87'

LOA, 1,500BHP single screw tug and a 100' LOA, 1,700BHP twin screw tug, both built in 1943 and located on the U.S. West Coast. These *"old ladies"* are balanced by four newbuildings between 1,490BHP and 5,630BHP scheduled for delivery in 2021. Two newbuildings are azimuthing for delivery to the Far East and Mediterranean, with the remaining two traditional twin screw tugs for delivery to the U.S. and Southeast Asia.

Market Overview

The majority of tugs Marcon tracks for sale as of this report are in the US with 117 tugs officially on the market (vs. 126 one year ago), followed by 80 in Southeast Asia (111), 58 in both the Far East (72) and in the Mediterranean (86), 54 in Europe (60), 33 in Latin America (30), Mid-East with 31 (54), 15 in the South Pacific (24), 10 where location unstated (13), 9 in the Caribbean (21), 6 in Canada (3) and 4 in Africa (14). Where machinery is known, CAT diesels power 126 or 27% of the tugs listed for sale. This is followed by 70 vessels with EMDs, 55 Cummins, 44 Yanmar, 42 Niigata, 12 Wartsila and 11 Deutz/Deutz-MWM powered tugs. 106 tugs are powered by other machinery from Akasaka to Zibo with one Fairbanks Morse tug on the market.





where location is unknown (1.4% each).

Five years ago, 34.05% of tugs for sale worldwide, primarily foreign flag, were built within the previous 10 years compared to 23.37% today. Then 9.77% of the tugs on the market were 50+ years old compared to 15.58% today. At that time, Marcon had two tugs older than 75 years compared to five today. The average age of all tugs that Marcon has for sale worldwide today is 17 years, with 2004 average build date, compared to 25 years, 1991 average built, in November 2016. The U.S. had the largest selection of tugs listed in 2016 with 138 available (21.1%), followed by 135 in Southeast Asia (20.6%), 74 in the Mid East (11.3%), 72 in Europe (11.0%), Far East 65 (9.9%), Mediterranean 53 (8.1%), 24 each in Latin America and South Pacific (3.7% each), 21 in the Caribbean (2.9%), 16 Africa (2.4%), 15 Canada (2.3%) and 9 each in Southwest Asia and

Looking at tugs for sale worldwide, conventional twin screw tugs lead with 298 (62.7%) available, followed by 111 azimuthing (23.4%), 46 single-screw (9.7%), 15 Voith Schneider tractors (3.2%) and 5 triple screw (1.1%). This is fairly comparable to five years ago when 15.1% of the 655 tugs for sale were single screw, 60.0% twin screw, 22.4% azimuthing, 2.0% VS tractor and 0.5% triple screw tugs. Bearing in mind that we are focusing on those available for sale, it seems that for the past five years, azimuthing and conventional twin screw tugs have maintained steady positions in the market. Single screw tugs are mostly relegated to nearly zero commercial work, except in certain specific cases. Available for sale units have dropped considerably with many of those being scrapped due to age and condition. It is noted that in mid-November 2021, Sea-Web reported 2,097 tugs worldwide scuttled, broken up or to be broken up world-wide. This is up 34.6% from November 2020's 1,558. Prior reports tracked the scrapping at around 3%, so this confirms our observations that many companies did aggressively scrap excessive tonnage amidst the economic fallout of the COVID 19 pandemic in various sectors of the market.

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Tug Boat Market Report - November 2021

Marcon's database shows 180 fewer tugs officially for sale than five years ago in November 2016 with largest shifts in the lower horsepower categories. There are 70 fewer tugs are today listed in the 2-3,000HP range with average age increasing from 27 to 33 years. The 3-4,000HP range lost 40 tugs while their average age increased from 23 to 26 years. 28 fewer tugs are listed in the 1-2,000HP range, with average age increasing from 28 to 31 years old. The under 1,000HP tugs category decreased by 19 with a three year increase in age to 38 years. The 4-5,000HP range decreased by 17 tugs with average age rising from 18 to 20 years. There are nine fewer 5-6,000HP tugs with average age increasing from 14 to 19 years now. There were minor changes in the higher horsepower ranges as far as number available for sale and average age. In summary, we saw a 27.48% drop in listings, all in the under 6,000HP ranges and average age overall increased by eight years.

Marcon has closed ten sales and one charter in 2021 after ending 2020 with 22 sales and charters completed. Many of the 2020 deals were well in the works before the Covid-19 situation developed and oil prices crashed. Throughout most of 2020 and early 2021, the market was extremely slow both domestically and world-wide. We continue to see a pickup in inquiries and inspections and have multiple sales pending at this time as business rebounds. We are hopeful, with the current pace of business, to return to pre-Covid sales levels in 2022. There remains uncertainty in the market, but prices have been moving up for various classes of vessels and barges. This is likely the result of both increased demand, as well as increased replacement cost due to inflation. In 2021, Marcon recorded the sale of six U.S.-flagged tugs, ages 10, 11, 23, 24 and two at 45 years old, and three foreign-flagged tugs, ages 22, 40 and 51 years old. In 2020, we sold a total of seven tugs with average age of 47 years, all U.S.-flagged tugs. As Covid-19 slowly subsides and economies turn around with higher oil prices, fiscal stimulus and delayed projects coming online, Marcon sees 2022 in a positive light.

Recent Marcon Tug Sales & Charters

Marcon has sold nine tugs totaling 45,690BHP to date in 2021, after selling or fixing tows for eight tugs totaling 32,250BHP in 2020. In 2019, we sold or chartered 13 tugs totaling 58,060HP. Since our first sale in 1983, Marcon sold or chartered 378 tugs totaling 1,236,687BHP out of 1,527 sales and charters total.

Marcon is pleased to announce the sale of a 3,000BHP twin screw tug between private interests. The tug will remain based in the Caribbean. Marcon acted as the sole broker in the transaction.



In a private transaction, a late 1990s built U.S. flag Articulated Tug Barge unit was sold outside of the U.S. Marcon was the sole broker involved in the transaction.

Private U.S. parties were involved in the sale of a late 1990s built, U.S. flagged 4,400BHP tugboat. Marcon was the sole broker for the transaction.



Featured Tugs Available for Sale



File: TG57009 Tug - Twin Screw: 136.2' loa x 36.5' beam x 17.00' loaded draft. Built in 1978 by McDermott Shipyard; Amelia, LA. U.S. flag. GRT: 199. ABS +A1, Towing Unrestricted Service, +AMS. SS due Mar 2024. DD due Mar 2022. FO: 218,000g. FW: 15,800g. Winch: Markey TDSD-36 double drum. Wire: 2,200' x 2.25" & 2,800' x 2.125". Main Engines: 2 x EMD 16-645E7A total 5,750BHP. 120" x 80-90" 5-blade props. Tier 2 ME's. Speed about 15kn free. Gensets: 2-99kW / John Deere 4.5L 2841F Tier 2 120/208vAC 3ph 60Hz. Quarters: 8. AirCon.

Galley. Triple rudders. M/Es have an MDEC electronic upgrade to Tier 2. Gensets installed with fairly low hours (9,458 hrs. on fwd and 1,819 hrs. on aft in 2020). ITC: 563G / 168N. SOLAS Exempt. **U.S. Northwest.**

Tug Boat Market Report – November 2021

File: TG52132 Tug - ATB - Twin Screw: 133.7' loa x 45.6' beam x 23.4' depth x 17.10' loaded draft. Built in 1974 by Oy Wartsila Ab; Helsinki, Finland. Rebuilt: 1993. Canada flag. GRT: 768. LR + 100A1, Ice Class FS 1A, LMC exp. 2018. Dwt: 186mt. FO: 216m3. FW: 77.3m3. BW: 115.8m3. Winch: Seebeck 50MP tow hook. Main Engines: 4 x Wartsila 824TS total 5,245BHP. 2 - Lips 260RPM FP new 06/91 props. Diesel electric. 4 - 925kW 500vDC gensets & 2 - 2,378HP elect. Motors. Bowthruster 576HP. Speed about 14kn free. Pumps: BW: 40m3/h, Fire: 300m3/h & 50m3/h. Gensets: 1 - 90kW / Valmet; 3 - 131kW / Saab 390vAC 50Hz. Firefighting: Fixed CO2 in engine & control rooms. EXTREMELY MOTIVATED OWNERS. Ice Class 1A Super, articulated pusher tug with raised pilothouse. 31.82m total fixed height from keel. Taisei Engineering articouple linkage system. 430kW bow thruster on barge. Six person rescue boat with davit. Suitable for Finnish coastal & Baltic Sea service including Skagerrak & Kattegat and previously classed as Ice Breaker, Baltic Service. Available with barge HB42678. Drawings, deadweight scale, photographs, class status and price ideas for tug and barge available on request. Canada East Coast.





File: TG51013 Tug - Twin Screw: 128.0' loa x 36.0' beam x 19.9' depth x 14.70' light draft x 17.00' loaded draft. Built in 1994 by VT Halter Marine, Moss Pt., MS. Rebuilt: 2004. U.S. flag. ABS Loadline. Expires Oct 2022. FO: 80,000g. FW: 7,200g. Crane: 1 - 15,000 lb. hydraulic. Winch: 2 - Almon Johnson Model 333 Single Drums. Wire: 2 - 2,500' x 2.5". Main Engines: 2 x EMD 12-645F7B total 5,100BHP. 2 - FP 132" dia. 4-blade props. Range - 5,000nmi. @ 13 knots. Bowthruster 350HP. Bollard Pull: 58T. Pumps: FiFi. Gensets: 2 - 300kW / CAT 3408; 1 - 75kW / CAT 3304. Firefighting: 3 - FiFi Monitors: water/foam. Quarters: 24 persons. AirCon. Galley. One of six units in the "Major General Nathaniel Greene Class" of tug boats originally built for the US Army. Raised foc'stle. Refitted in 2004 with lowering of pilot house (02 deck completely removed), new bilge keels installed, etc., in

order to improve the stability of the vessel. 2 - Speed reduction gears with low = 4.667:1 and high = 5.444:1 ratio. Additional modifications were also undertaken to improve the vessel's range and performance characteristics at that time. Height of eye - 38'. Fitted with shaft brakes. M/Es have only 4,476 hrs. since new. Very low hours on all machinery. Schottel bow thruster is powered by CAT 3306. Originally built to ABS+A1, E, AMS, ACC but now only certified with an ABS Loadline. Reportedly in excellent condition and has been extremely well maintained. Call for price guidance, further details and to make inspection arrangements. **U.S. East Coast.**

File: TG48137 Tug - Twin Screw: 136.6' loa x 40.0' beam x 20.2' depth. Built in 1982 by Main Iron Works Inc.; LA. U.S. flag. GRT: 161. ABS + A1, Towing Service + AMS, Unrestricted Service exp. Feb 2022. FO: 173,250g. FW: 25,000g. BW: 83,060g. Crane: Nautilus 5T hyd. Winch: Markey TDS-36 double drum. Line Pull: 125T. Wire: 2,200' x 2.25". Main Engines: 2 x Alco 12-251E total 4,860BHP. 126" x 122" 4-blade props on stainless shafts. Kort nozzles. Gensets: 2 - 150kW / GM8V71. Quarters: 13 bunks. AirCon. Galley. Raised foc'stle bow & upper pilothouse with 56' eye level. Secondary Almon Johnson tow winch with capacity for 1,800' 2.25" wire. Rescue boat. ITC Tonnage: 815G / 244N. U.S. Gulf Coast.





File: TG43126 Tug - ATB - Twin Screw: 126.0' loa x 34.0' beam x 16.5' depth. Built in 1973 by McDermott Shipyard; Amelia, LA. U.S. flag. GRT: 198. ABS +A1 Towing Service, +AMS, Unrestricted. Docking Survey due Jan 2017. Special Surveys due Oct 2018. FO: 100,000g. FW: 4,200g. Winch: Removed & no longer available. Main Engines: 2 x EMD 12-645E5 total 4,300BHP. 2 - FP props. Open wheel. P/S Tail Shaft Surveys due Jan 2019. Bollard Pull: 43mt. Gensets: 2 - 85kW / GM6-71. AirCon. Galley. Raised pilothouse. Air draft 75'. JAK-400 linkage system. ITC Tonnage: 432G / 129 N. Laid-up. Was previously married to 80,000bbl barge. Owner is a KEEN SELLER. Inviting all serious cash offers. U.S. Gulf Coast.

Tug Boat Market Report - November 2021

File: TG41001 Tug - Twin Screw: 121.0' loa x 34.0' beam x 19.2' depth x 15.00' light draft x 18.50' loaded draft. Built in 1971 by Halter Marine; New Orleans, LA. Rebuilt: 2003. U.S. flag. GRT: 196. ABS + A1 Towing + AMS. Unrestricted. Special & Docking Surveys due Nov 2018. In Layup status. Dwt: 499T. FO: 110,400g. FW: 6,100g. BW: 20,700g. Winch: Skagit DTW double drum & capstan. Line Pull: 125T. Wire: 2,500' x 2". Stern Roller. Main Engines: 2 x Alco 12-251C total 4,100BHP. Last Overhauled: 2004. 132" x 95" 4-blade props. Range at 11kn abt. 9,200nm. P/S Tailshaft Surveys due Dec 2018. Bollard Pull: 63ST. Speed about 11-13kn free. Gensets: 2 - 150kW / GM 8V71 440vAC 60Hz. Quarters: 9 crew. AirCon.



Galley. Reportedly in excellent condition and ready to work tomorrow. Upper Pilot house with 49' height of eye. Previously towed 737' x 105' barge from Mexico to Florida at average of 8.2kn. Contact Marcon for price guidance, further details and to arrange inspection. Full package of certificates, photos, work history, details on repairs / upgrades and owner's brochures available. U.S. Gulf Coast.



Coast.

File: TG39144 Tug - Twin Screw: 140.0' loa x 34.0' beam x 17.0' depth x 12.00' light draft x 15.00' loaded draft. Built in 1971 by Halter Marine; New Orleans, LA. U.S. flag. GRT: 196. ABS Loadline exp. Jun 2021. FO: 177,790g. FW: 7,945g. DW: 21,290g. BW: 24,745g. Winch: Markey TDSD-36B 2-drum & 3rd drum. Line Pull: 40-50T. Wire: 2 - 2,600' x 2.25" & 1- 2,000' x 2". Main Engines: 2 x EMD 16-645E2 total 3,900BHP. 110" x 58" 5-blade stainless props. Bollard Pull: 57T. Speed about 12-14kn on 122-166gph. Gensets: 2 - 99kW / GM 8V71. Quarters: 16 in 6 cabins. AirCon. Gallev. Foc'stle bow. Contact Marcon for further details, price guidance. U.S. West

File: TG39139 Tug - Twin Screw: 139.0' loa x 34.0' beam x 17.2' depth x 10.60' light draft x 14.90' loaded draft. Built in 1976 by Burton Shipyard; Port Arthur, TX. Rebuilt: 2000. U.S. flag. GRT: 198. ABS +A1 Towing Service exp. May 2025. USCG COI exp. Sept 2024. Dwt: 636lt. FO: 129,600g. FW: 21,300g. BW: 122,400g. Winch: Intercon Double drum. Line Pull: 100T. Wire: 2 - 2,500' x 2". Main Engines: 2 x EMD 16-645E6 total 3,900BHP. 2 - FP 115" x 90" 4-blade props. Jan 2020: 7,500 hrs. on M/Es since major overhaul. Bollard Pull: 50T. Speed about 10kn on 165gph. Gensets: 2 - 100kW. Quarters: 14 in 6 rooms. AirCon. Aluminum upper pilothouse. 51' min/54.9' max height above water. 6' x 2' stern roller.



Tow pins. Open wheels. JAK system pins still installed and could be made operational. Contact Marcon for further details and price guidance. May be developed for charter or sale, subject to prior commitments. Central America.



File: TG39133 Tug - Twin Screw: 127.0' loa x 31.0' beam x 12.8' depth. Built in 1970 by New Iberia Shipbldg.; New Iberia, LA. U.S. flag. GRT: 196. Class: ABS + A1, Towing Vessel, +AMS, Unrestricted. Docking expired Aug 2018. Special Survey expired Aug 2020. FO: 72.000a, Winch: Single drum, Wire: 2 x 1.800', Main Engines: 2 x EMD 16-645E2 total 3,900BHP. 2 - stainless steel FP props. P/S Tailshaft Surveys expired Aug 2020. Gensets: 2 - 100kW / GM8V71. Quarters: 13 berths. Upper pilothouse with 45' height of eye. Fore & aft capstans. ITC Tonnage: 392G / 117N. Contact Marcon for price guidance and to obtain further details. U.S. Northeast.

File: TG38246 Tug - Twin Screw: 85.6' loa x 26.1' beam x 13.3' depth x 12.96' loaded draft. Built in 2007 by Damen Shipyard. Foreign flag. GRT: 176. LR +100 A1, Tug, +LMC. 80m2 clear deck. FO: 80.1m3. FW: 12.2m3. Winch: towing aft 125T drum; 65T SWL. Wire: 400m x 44mm. Main Engines: 2 x Cummins 3512B total 3,822BHP. 2 - 4-blade FP props. Kort nozzles. Bollard Pull: 50T. Speed about 13kn. Pumps: Bilge: 2 - 22m3/hr. Gensets: 2 - 90kVA / CAT 3054 440vAC 60Hz. Firefighting: 300m3/hr. Foam: 5.7m3. Quarters: 8 persons. Damen ST2608 design. Central America. Q1 2022.



Tug Boat Market Report – November 2021

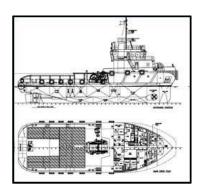


File: TG38085 Tug - Twin Screw: 85.6' loa x 26.1' beam x 13.3' depth x 12.96' loaded draft. Built in 2008 by Damen Shipyard. Foreign flag. GRT: 176. LR +100 A1, Tug, +LMC. Dwt: 52T. Light Disp.: 381mt. 80m2 clear deck. FO: 80.7m3. FW: 12.2m3. BW: 19.4m3. Winch: towing aft 125T drum; 65T SWL. Wire: 400m x 44mm. Main Engines: 2 x CAT 3512B total 3,822BHP. 2 - 2,350mm FP props. Kort nozzles. Bollard Pull: 53.7T. Speed about 13.2kn. Pumps: Bilge: 2 - 22m3/hr. Gensets: 2 - 95kVA / CAT C4.4 440vAC 60Hz. Firefighting: 300m3/hr. Foam: 5.9m3. Quarters: 8 persons. Galley. Damen ST2608 design twin screw tug suitable for towing, mooring, firefighting and pollution control. **Central America. Q1 2022.**

File: TG34085 Tug - Twin Screw: 85.9' loa x 26.3' beam x 13.3' depth x 10.56' loaded draft. Built in 1996 by Damen Shipyard; Gorinchem. Chile flag. GRT: 180. ABS A1, Towing Vessel, AMS, Unrestricted Service. Special Survey due Dec 2021. Docking due Nov 2021. FO: 21,083g. FW: 4,702g. Winch: Mampaey 45.9mt SWL tow hook. Main Engines: 2 x Cummins KTA50M2 total 3,400BHP. 2 - 2.35m Bronze FP props. Kort nozzles. P/S Tailshaft Surveys due Sep 2021 & Feb 2020 respectively. Bollard Pull: 46.9mt. Speed about 12kn free. Gensets: 2 - 47.5kW / Cummins 4BT3.9G 220/380vAC 3Ph 50Hz. Quarters: 6 crew. AirCon. Galley. Multi-functional Damen Stan tug 2608 design equipped for a wide range of towing & mooring duties. Spacious aft deck with flush engine room hatches.



Range abt. 6,300nm at economic speed. Bollard pull astern abt. 29.8mt. Laid up with all valid certificates. Small scale drawing available on request. **South America West Coast. February 2022.**



File: TG32243 Tug - Twin Screw: 124.6' loa x 38.7' beam x 15.7' depth x 12.46' loaded draft. Built in 2006 by Sealink Shipyard Sdn. Bhd; Malaysia. Malaysia flag. ABS + A1 (E) AHT + AMS. Dwt: 400T. Deck Cargo: 300mt on 150m2 clear deck. FO: 332m3. Winch: Elect. / hyd. double drum. Line Pull: 80mt. Stern Roller. Main Engines: 2 x Cummins KTA50M2 total 3,200BHP. 2 - 4-blade FP props. Kort nozzles. Range 5,500nm @ 10kn. Bowthruster 4mt tunnel. Bollard Pull: 42mt. Speed about 12kn. Gensets: 2 - 150kW / CAT 3406C 415vAC 3ph 50Hz. Quarters: 2-1, 2-2, 3-4 man berths. AirCon. Navaids comply with SOLAS and communications comply with GMDSS A3. Shark jaw & tow pins. 120-ton stern roller. Southeast Asia.

File: TG32170 Tug - Twin Screw: 105.0' loa x 29.9' beam x 13.8' depth x 15.48' loaded draft. Built in 2007 by ST Shipbuilding Co; Malaysia. Mexico flag. GRT: 296. BV I + Hull, *MACH Tug Unrestricted exp. Jan 2018. FO: 64,250g. FW: 8,622g. BW: 24T. Winch: Hydraulic double drum. Line Pull: 40T. Wire: 2 - 700m x 52mm. Stern Roller. Main Engines: 2 x Cummins KTA-50-M2 total 3,600BHP. 4-blade Mag / Bronze props on 7.5" S/S shafts. Kort nozzles. Bollard Pull: 46.4T. Speed about 11kn on 75gph. Gensets: 2 - 125kW / Cummins 6CTA8.3, 1 - 32kW 415v 3ph. Quarters: 2 single, 5 double. AirCon. Galley. Steel hull construction. Twin screw tug. Raised foc'stle. Tug sank in 2017. Needs repairs. Reduced



price. Tug partially sank at the dock in 2017 with engine room submerged. U.S. Gulf Coast. Prompt.



File: TG30051 Tug - Twin Screw: 95.9' loa x 28.0' beam x 13.7' depth x 10.50' loaded draft. Built in 1971 by Southern Shipbuilding. Panama flag. GRT: 303. Last Drydocking Fall 2021. Winch: 2 Markey Capstans. Main Engines: 2 x GM 12-645-E2 total 3,000BHP. 2 - FP props. Speed about 12kn. Gensets: 2 - 60kW. **Central America.**

Tug Boat Market Report - November 2021

File: TG30039 Tug - Twin Screw: 98.0' loa x 30.0' beam x 13.3' depth. Built in 1983 by Patti Industries; Pensacola, FL. U.S. flag. GRT: 145. ABS Loadline expired Jan 2019 - overdue. 20'x30' clear deck. FO: 60,000g. FW: 5,700g. Winch: Smatco Double Drum W/F DAW-100. Line Pull: 100,000lbs. Wire: 2,000' x 1.75"; 1,400' x 1.25". Main Engines: 2 x CAT 3512B total 3,000BHP. 2 - FP props. Kort nozzles. Repowered 2007. Gensets: 2 - 50kW / GM4-71. Quarters: 3-1, 2-2-person berths. AirCon. Galley. Contact Marcon for further details / price guidance. **U.S. West Coast.**





File: TG24161 Tug - Twin Screw: 100.0' loa x 27.1' beam x 12.0' depth. Built in 1968 by Main Iron Works, Houma, LA. U.S. flag. GRT: 149. FO: 32,000g. FW: 5,000g. Winch: 2 - Patterson barge winches. Wire: 100' x 1-1/8". Main Engines: 2 x CAT 3512 total 2,400BHP. 88" x 66" 4-blade stainless props. M/Es rebuilt 2008 starboard and 2010 port. Gensets: 1 - 75kW / GM4-71 (port); 1 - 55kW / GM4-71 (stbd). Quarters: 4 cabins. AirCon. Galley. 24' height of eye. Vertical capstan aft. **U.S. East Coast.**

File: TG21093 Tug - Twin Screw: 90.0' loa x 32.0' beam x 11.2' depth x 6.00' light draft x 8.50' loaded draft. Built in 1982 by Dakota Creek Ind.; Anacortes, WA. U.S. flag. GRT: 147. USCG COI Sub. M exp. Sep 2025. FO: 60,000g. FW: 4,000g. Winch: Single drum Smatco. Wire: 1,900' x 1 3/4". Main Engines: 2 x CAT 3512 total 2,110BHP. 2 - 4-blade FP props. Kort nozzles. Bowthruster. Bollard Pull: 23.5T. Gensets: 2 - CAT 3304. Quarters: 4-2 man cabins / 2 heads. Galley. Steel hull / aluminum house construction. Shaft Brakes. Push knees forward. Formerly ABS + A1 + AMS Class. 77" diameter x 73' pitch propellers in kort nozzles. Flanking



rudders removed in spring of 2021, but all the components left in the rudder room and they can be added back easily (flaking rudders stored at owner's shop). Recently drydocked and complete Sub M certification. **U.S. Northwest.**



File: TG21075 Tug - Twin Screw: 73.8' loa x 24.4' beam x 12.3' depth x 10.40' loaded draft. Built in 1996 by Damen, Holland. Foreign flag. GRT: 135. LR +100 A1, LMC Coastal Service. 27m2 clear deck. FO: 34.9m3. FW: 9.2m3. BW: 4.5m3. Winch: Ridderinkhof (20T) Hydraulic +20T tow hook. Line Pull: 60T brake. Main Engines: 2 x Cummins KTA-38M total 2,120BHP. 2 - Lips FP props. Kort nozzles. Bollard Pull: 23.07T. Pumps: 1 - Cummins 6BTA diesel powered FiFi pump. Gensets: 2 - 58kW / Cummins, 440vAC, 60Hz. Firefighting: 1 - monitor (300m3/hr). Quarters: 5 berths. AirCon. Galley. Dispersant - 1.5m3; Foam - 2.5m3. Damen Stantug design. Central America.

File: TG18058 Tug - Triple Screw: 92.0' loa x 36.0' beam x 8.5' depth x 3.80' light draft x 5.80' loaded draft. Built in 2010 by Fred Wahl Shipyard; Oregon. U.S. flag. GRT: 165. ABS Loadline. USCG Sub M. FO: 23,000g. FW: 2,000g. BW: 25,000g. Crane: Palfinger PL12000 MB. Winch: Markey TES-22 Single Drum; 2 - 45T Nabrico Face Winches. Wire: 1,500' x 1.375". Main Engines: 3 x CAT C18 total 1,800BHP. 3 - 50" x 34" FP props. Tier 2 / Acert. Bollard Pull: 33,000lb. Gensets: 2 - 99kW / CAT C4.4; 1 - 30kW / CAT C2.2. Quarters: 10 bunks / 3 heads. AirCon. Galley. Shallow draft arctic tug with ABS Ocean Loadline. Push knees forward. Tunneled stern for propellers. Steel hull, aluminum house. King



River Class. Water maker. Tier II main engines and generators. Fuel centrifuge. MSD for up to 12 persons. Markey electric bow winch with 2" plasma line. Markey TES-22 electric towing winch with galvanized 1,500' x 1.375" wire. 12,000 lbs. Palfinger deck crane. 2 Nabrico 45 ton make-up winches. Sat phone. Flir camera. Engine Hours August 2020: Port gen 12,263; Stbd gen 13,149; Hotel gen 3,420; Port main 12,850; Center main 12,331; Stbd main 12,349. Sold to current Owner via Marcon. Recently drydocked and complete Sub M certification. **U.S. Northwest.**

Tug Boat Market Report – November 2021



File: TG11063 Tug - Twin Screw: 67.0' loa x 24.0' beam x 9.1' depth. Built in 1978 by Terrebone Shipyard; Houma, LA. U.S. flag. GRT: 94. USCG Sub Ch. M - Exp. Sep 2025. FO: 13,000g. FW: 4,500g. Main Engines: 2 x CAT 3412 total 1,100BHP. Speed about 8kn. Gensets: 2 - 30kW GM 3-71 / Delco. Quarters: 6 crew. All welded steel construction Upper Pilot House. **U.S. East Coast.**

Worldwide Number of Tugs

While information in *IHS Fairplay Sea-web* only covers "sea-going" vessels over 100GRT, there are many tugs either under that tonnage or in inland service. According to Sea-web, as of 11 November 2021, there were 20,543 "sea-going" tugs over 100GRT worldwide, up from 19,945 (3.00%) and 18,377 (11.79%) in November 2020 and 2016, respectively. Total horsepower is 55,697,378BHP, up 1,378,300BHP (2.54%) over the past year. Even considering flags of convenience, the largest national fleet of tugs over 100GRT continues to be under Indonesian flag with 5,232 tugs totaling 9,203,193BHP. The U.S., as the second largest national fleet of tugs, operates 1,485 "sea-going" tugs over 100GRT, or 7.23% of the world market, totaling 5,567,505BHP (10.00% global BHP). Average age of tugs worldwide is 22.7 years (built 1999) with the U.S. flag "sea-going" fleet at 34.5 years (built 1987). The "Unknown" flag group is 10.80% of the world market, comprised of 2,119 tugs totaling 4,083,445BHP or average 1,840BHP each with an average age of 34.9 years. This large "Unknown" group indicates to us that older tugs may be falling off the radar.

Top 35 "Sea-Going" Tug Fleets by Units as Of November 2021 According to IHS Fairplay Sea-Web

1 op 35 "Sea-Going" Tug Fleets	•					
Flag	Total BHP	%	# Tugs	%	Avg BHP	Avg Age
Worldw ide	55,697,378	100.00%	20,543	100.00%	2,711	1999
Indonesia	9,203,193	16.52%	5,232	25.47%	1,759	2010
USA	5,567,505	10.00%	1,485	7.23%	3,749	1987
Unknow n	4,083,445	7.33%	2,219	10.80%	1,840	1987
Japan	2,765,479	4.97%	761	3.70%	3,634	2005
Korea, South	1,884,218	3.38%	598	2.91%	3,151	1997
Russia	1,538,158	2.76%	553	2.69%	2,781	1995
Panama	1,333,033	2.39%	437	2.13%	3,050	1995
Malaysia	1,244,666	2.23%	538	2.62%	2,314	2006
Singapore	1,222,973	2.20%	449	2.19%	2,724	2011
India	1,451,119	2.61%	492	2.39%	2,949	2001
Philippines	684,373	1.23%	289	1.41%	2,368	1983
St Vincent & The Grenadines	831,208	1.49%	202	0.98%	4,115	2007
Turkey	1,175,659	2.11%	324	1.58%	3,629	2007
Italy	1,104,928	1.98%	285	1.39%	3,877	1995
Brazil	1,146,346	2.06%	282	1.37%	4,065	2006
China, People's Republic Of	774,697	1.39%	246	1.20%	3,149	1997
Iran	582,623	1.05%	250	1.22%	2,330	1993
Spain	665,627	1.20%	175	0.85%	3,804	1997
United Kingdom	846,812	1.52%	242	1.18%	3,499	1999
Australia	1,132,969	2.03%	269	1.31%	4,212	2003
Egypt	587,004	1.05%	175	0.85%	3,354	1997
United Arab Emirates	552,874	0.99%	175	0.85%	3,159	2004
Canada	718,475	1.29%	238	1.16%	3,019	1982
Mexico	650,524	1.17%	157	0.76%	4,143	1999
Vietnam	425,839	0.76%	165	0.80%	2,581	2005
Ukraine	277,479	0.50%	137	0.67%	2,025	1986
Nigeria	528,020	0.95%	186	0.91%	2,839	1992
France	476,119	0.85%	173	0.84%	2,752	2008
Netherlands	543,232	0.98%	155	0.75%	3,505	2006
Papua New Guinea	132,460	0.24%	76	0.37%	1,743	2001
Greece	305,910	0.55%	137	0.67%	2,233	1982
Norw ay	301,409	0.54%	84	0.41%	3,588	1988
Saudi Arabia	459,440	0.82%	130	0.63%	3,534	1997
Venezuela	442,288	0.79%	135	0.66%	3,276	1996

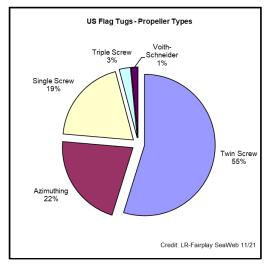
Tug Boat Market Report - November 2021

Breakdown of U.S. "Sea-Going" Fleet

Following is a breakdown of the U.S. sea-going tug fleet over 100GRT as of November 2021, according to **IHS Fairplay Sea-web**. As of November 2021, the U.S. domestic tug fleet consisted of 1,485 "sea-going" tugs totaling 5,567,505BHP. The U.S. flag fleet increased by four or 0.27%, total horsepower by 71,841BHP or 1.90% and average age increased by six months to 34.5 years, compared to one year ago. The U.S. fleet over 100GRT decreased by 18 or 1.20% but increased by 400,848BHP or 7.76% since November 2016. Average is approximately the same at 34.6 years. The fleet data supports what we have witnessed in the market with older, lower horsepower units being scrapped and replaced with higher horsepower units. We continue to see units scrapped or offered for sale outside the U.S. due to post-merger fleet consolidations and the uneven economic conditions.

U.S. Sea-Going Tug Fleet Over 100GRT By BHP According to Lloyd's Register as of November 2021

	Unknown BHP	Under 999	1000- 1999	2000- 2999	3000- 3999	4000- 4999	5000- 5999	6000- 6999	7000- 7999	8000- 8999	9000 Plus	Total
Total #	101	40	208	197	279	272	138	135	43	14	58	1,485
Avg. BHP		801	1,519	2,365	3,418	4,349	5,365	6,449	7,212	8,225	11,347	
Avg. LOA	87	77	85	96	104	105	106	109	144	135	156	
Avg. Beam	28	23	26	30	32	34	36	39	40	42	49	
Avg. Depth	11	9	11	13	15	16	17	18	20	21	24	
Avg. Year Built	1976	1956	1969	1977	1982	1996	2002	2008	1988	2007	2009	1987



Of the 1,485 U.S. tugs in Sea-web, 161 have unknown engines. 502, or 34% where type is known, are powered by CATs, 444 (30%) by EMDs, 80 (5%) by General Motors / Detroit Diesels, Cummins with 4%, Alco and M.T.U. (Rolls Royce) are tied with 3% each and Fairbanks Morse, GE Marine and Wartsila have 2% each of the market share. In the current fleet, 290 (20%) and 814 (55%) are conventional single and twin screw, respectively. 320 azimuthing (22%), 38 triple screw (3%) and 23 Voith tractor tugs (2%) make up the remaining 27%. Five years ago, of 1,503 U.S. flag tugs, 499 or 38% were powered by EMDs, 426 (32%) by CATs and 106 (8%) by GM / DD. Compared to five years ago, EMDs lost eight percentage points, GM / DD lost three percentage points, Alcos lost one percentage point but CATs gained one percentage point. In regards to propeller types, today there are 79 fewer single screw, 8 more twin screw and 53 more azimuthing U.S. flag tugs compared to the fleet statistics in November 2016.

Worldwide Articulated Push Tugs Fleet

According to **IHS Fairplay Sea-web**, as of 11 November 2021, there are 249 articulated push tugs above 199GT worldwide. 67.07% or 167 are U.S.-flagged with average 6,313BHP and average age of 23 years - with many older units being conversions of conventional tugs. The second largest fleet with 15 ATB tugs is attributed to "unknown flag"; followed by eight flagged in Liberia and seven each in Canada and South Korea. The remaining 45 are spread among 19 countries. The average age of non-U.S. flagged articulated push tugs is 32 years with average 4,494BHP. Of total tugs worldwide, ATB tugs make up 1.21%. However, in the U.S., articulated push tugs account for 11.25% of all tugs. Since November 2020, there is one less ATB in the U.S. but three more under foreign flag. Average age in the U.S. remained at 23 years old, while outside the U.S., average year built remained at 1990. The youngest ATB fleet sails under Russian flag with a single 2020 built, 3,401BHP ATB. Jamaica has the oldest ATB, a 4,734BHP 1944-built unit.

Sea-web Articulated Push Tugs Summary as of 11 November 2021									
						Avg	Age in		
	Total BHP	%	#Tugs	%	Avg BHP	Age	Years		
US	1,054,229	74.10%	167	67.07%	6,313	1999	23		
Foreign	368,514	25.90%	82	32.93%	4,494	1990	32		

Marcon is currently tracking 134 ATB tugs worldwide with eight currently for sale, ranging in age from 20 to 49 years old. Of these eight, six are in the U.S. and one each are in Canada and Sweden. We will continue to follow the changes in ATB fleets outside the U.S. given the increased popularity of these units.

Tug Boat Market Report – November 2021

New Construction & Shipyard News

As of January 2022, the most recent date available, **Colton Co.**, which reports on recent deliveries from U.S. shipyards, reported 23 tugs delivered in 2021. This compares to 16 tugs in 2020, 27 tugs in 2019, 39 tugs in 2018 and 24 tugs delivered in 2017.

2021 Deliveries of Tugs Sorted by Owner/Operator								
Name	Builder	Owner/Operator	Type of Vessel	GT	Date			
George M	Gulf Island Jennings	Bay-Houston Towing	6,000-hp Escort Tug	297	07-Jan-21			
Janice Ann Reinauer	SENESCO	Reinauer Tptn.	4,720-hp ATB Tug	199	29-Jan-21			
Aurora	Master Boatbuilders	Crow ley Marine	4,000-hp ATB Tug	291	15-Mar-21			
Cape Henry	Chesapeake SB	Vane Bros. Towing	3,000-hp Escort Tug	224	18-Mar-21			
Wyatt Moran	Washburn & Doughty	Moran Towing	6,000-hp Tractor Tug	190	25-Mar-21			
Apollo	Diversified Marine (OR)	Crow ley Maritime	4,750-hp Escort Tug	288	27-Apr-21			
Rachael Allen	Nichols Bros BB	Foss Maritime	6,866-hp Ocean Tug	196	12-May-21			
Agamenticus	Dakota Creek Ind.	U.S. Navy	3,600-hp Harbor Tug	420d	20-May-21			
Deception	Dakota Creek Ind.	U.S. Navy	3,600-hp Harbor Tug	420d	21-May-21			
Miss Judy	Corn Island SY	Norfolk Dredging	Harbor Tug	58	09-Feb-21			
Kraken	Serodino	Tennessee Valley Authority	Harbor Tug	96	07-Jun-21			
William O	Rodriguez SB	Weeks Marine	Lugger Tug	93	07-Jun-21			
Tom Cornw ell	Main Iron Works	Ingram Tow ing	1,600-hp Tug	196	11-Aug-21			
Olympus	Dakota Creek Ind.	U.S. Navy	3,600-hp Harbor Tug	420d	01-Sep-21			
Emily	Tampa Ship	Edison Chouest	6,772-hp Ocean Tug	299	13-Sep-21			
Matthew	Gulf Ship	Edison Chouest	6,772-hp Ocean Tug	299	23-Sep-21			
Illinois	Great Lakes Shipyard	Great Lakes Tow in	2,000-hp Harbor Tug	114	06-Oct-21			
Morgan	Gulf Ship	Edison Chouest	6,772-hp Ocean Tug	299	15-Nov-21			
Zephyr	Nichols Bros.	Kirby Corp.	Ocean Tug	1,335	29-Nov-21			
Andrew Moran	Washburn & Doughty	Moran Towing	6,000-hp Tractor Tug	190	30-Nov-21			
Baker	Dakota Creek Ind.	U.S. Navy	3,600-hp Harbor Tug	420d	30-Nov-21			
Polaris	Master Boat Builders	Polaris New Energy	4,000-hp ATB Tug	251	09-Dec-21			
Jack	Tampa Ship	Edison Chouest	6,772-hp Ocean Tug	299	21-Dec-21			

Robert Allan Ltd. is very pleased to announce the signing of a contract with Asian Marine Services Public Company Limited (ASIMAR) of Thailand for the design of a RAmparts 3200-SD tugboat for the Royal Thai Navy. ASIMAR signed the construction contract with the Royal Thai Navy on May 25th, 2021, with Admiral Chatchai Sriworakan, Commander in Chief presiding over the signing ceremony. The RAmparts series of tugs are a well-proven, highly successful series of Z-drive tug designs with more than 180 RAmparts 3200 tugs having been built to date. Incorporated into this design are all the features that have distinguished the RAmparts 3200 tug designs including high speed, excellent stability and sea keeping, enhanced astern performance and



manoeuvrability that enable the tugboats to successfully fulfill push and tow missions. The Royal Thai Navy currently operates two RAmparts 3200 tugs, and this third RAmparts 3200 tugboat will, similar to the previous two tugs, have approximately 55mt Bollard Pull and a speed of over 12 knots. This tugboat will support fire-fighting missions with a 2,400m3/hr Fi-Fi pump with fire monitors capable of 120 meters throw distance and oil spill recovery missions can be accomplished with DESMI oil spill response solutions and environmental friendly – biological formular oil dispersant bioQ. This cooperation between Robert Allan Ltd. and ASIMAR will open additional opportunities in the future for the Thai shipbuilding industry to learn and develop new knowledge in ship design and construction. Asian Marine Services Public Company Limited (ASIMAR) is an international shipyard located in Thailand and has been in operation since 1981. Their experience with Ship Repair, Shipbuilding, Steel Fabrication and Engineering for Marine, Offshore and Onshore sector along with many such services is extensive and specialised. Robert Allan Ltd.'s business is centred on the design of commercial working vessels of all types, with a particular focus on the international tugboat market. In addition it designs fireboats, research vessels, crewboats, barges, government service vessels (such as icebreakers and nav-aids tenders), shallow-draft vessels of all types for inland transportation, and a diverse range of specialized craft for almost any purpose as well as many other types of vessel design.

Tug Boat Market Report - November 2021

Highlights of recent activity at Jiangsu Zhenjiang Shipyards include the following deliveries. On 12th of June, 2021,



two units of 3,676kW ASD Tugboat with FiFi, named "Xu Wei Gang Xiao 1" and "Xu Wei Gang Xiao 2" were successfully completed and delivered which are designed and built for Lianyungang Xuwei Port Co., Ltd. The general particulars of this type of tugboat are: LOA: 38.65m, Breadth moulded: 10.4m, Depth moulded: 4.8m, Ahead bollard pull: 65.6mt, Astern bollard pull: 60.3mt, Endurance: 1,200nm, Speed: 13.45Kn....

Recently, two units of ASD tugboats, which were built for Tianjin port and named "Jin Gang Lun 31" and "Jin Gang Lun 32", obtained addition notation for smart vessel by CCS. It signals the first ASD tugboat according with CCS AUT-0 notation and i-ship notation in China. The addition notation for smart vessel is i-ship (M), (E), (I). This innovation result is the effort made and cooperated by Tianjin port, CCS, Wartsila company, Zhenjiang SaierNico company and Jiangsu Zhenjiang Shipyards over a three year period. Tianjin smart ASD tugboat reaches the highest level in the international ship industry by virtue of automatic and intelligent technologies. It guides the industry and changes in aspect of ship use and management in





port tugboat. Besides, the smart vessel, together with "Xue Long 2" and 21K container vessel of COSCO Shipping, are listed as model ships in the formulation of the National Standard Smart Ship 2020....On 7th of July, 2021, one 3,676kW ASD Tugboat with FiFi-1, named "Hua Hai Tuo 6" (picture 2nd left) designed and built for Qinzhou Huaxi Tugboat Engineering Co. Ltd was delivered successfully. The vessel has overall length 36.7m, Breadth 10.6m, Depth 4.8m, Ahead Bollard

Pull 63.9mt, Astern Bollard Pull 57.5mt, Endurance 900nm and Speed ≥ 13.65kn..... On 12th of July, one 3,234kW ASD Tugboat with FiFi-1, named "Su Gang Tuo 1" (picture 2nd right) designed and built for Jiangsu Sugang Shipping Engineering Co. Ltd was delivered successfully. The vessel has LOA 37m, Breadth 9.8m, Depth 4.4m, Astern



Bollard Pull of 55mt and Speed ≥ 14.75Kn.... On 19th of Sep, 2021, one 2,942kW ASD Tugboat, named "Yechang Tuo 9" (3rd left picture) designed and built for Yangjiang Port Yechang Tugboat Co., Ltd was successfully completed and delivered. The vessel has LOA 36.5m, breadth 10.2m, depth 4.6m, pull ahead 51.1mt, pull astern 46mt, endurance of 1,000nm and speed of 13.3kn.... On November 15, 2021, "Haiye Towing 2", (pictured right) a 5,200HP

ASD tugboat built for Qingdao Haive Ruibang Shipping

Co., Ltd, was delivered and set sail smoothly. The total length is 38.74m, beam moulded is 10.6m, depth moulded is 4.8m, the main engine power is 2 x 1,912kW, forward towing force is 65.8mt, backward towing force





58.8mt, endurance 1,000nm and speed is 13.4kn.... On 17th December, 2021, one 3,824kw ASD tugboat, built for Qingdao Port, was steel cut. The vessel is the first ASD tugboat with hybrid propulsion using oil/ electric power in China. It will achieve the notation of CCS AUT-0 and i- Ship (N, M, E, I). It is one of the landmark projects from Qingdao Port ideas, which are to construct smart green tugboats comprehensively, build an international leading smart and green port and fully implement overall requirements of 'Carbon peak' and 'Carbon neutral'. Leaders from Qingdao Port and Tugboat branch attended the ceremony.

Société Coopérative des Lamaneurs of Brest and Roscoff harbours entrusted the **PIRIOU** group with the building of a harbour tug. The tug will be named "Le Moros". She was shipped and unloaded in Brest harbour. Her delivery is upcoming. Built by PIRIOU VIETNAM with a sea proven PIRIOU design, her design was adapted to answer the specific requirements of the shipowner. Dedicated to harbour towing operations from the rear or alongside, pushing operations and deep-sea towing from the rear. In terms of crew comfort, the vessel has cabins at main deck and complies with the MLC 2006 rules. This



16.5m and 15mt bollard pull tug will be equipped with a new generation motorization compliant with the IMO III regulation and will have home port in Concarneau. Main characteristics are Length: 16.50m; Breadth: 6.56m; Depth at main deck: 2.55m; Max draught: 2.50m; Bollard pull: 15mt; Fuel oil capacity: 15.0m3; Fresh water: 1.6m3; Propulsion: 2 x 440kW; Crew: 4 persons; 1 bow thruster; and Hull / superstructure: steel.

Tug Boat Market Report – November 2021



PIRIOU has just recorded a new order for the OST 30 of its tug range dedicated to towage. As the operator of Pointe-à-Pitre harbour in Guadeloupe -French Caribbean Island-, **Caraibes Remorquage** confirmed the construction of their 30.30m tug with 60mt bollard pull and two azimuth stern propellers. It will be built in Vietnam and its delivery is scheduled in the 3rd quarter of 2022. This new tug will strengthen the fleet operated in Guadeloupe in joining "*Pointe Tali*", the 55mt bollard pull OST 30 PIRIOU delivered in 2018. This tug is more powerful and fitted with integrated slipping clutches for optimized operation. Felix Ramaye, Caraibes Remorquage manager: ".... It [the vessel] will expand our fleet and assist, in particular, the ever-larger container ships that call at the ports of Basse-

Terre, MarieGalante and Pointe-à-Pitre. We also provide assistance and rescue services in deep seas. The vessel will be named 'Pointe Vigie 2'...." The OST 30 is a versatile tug designed for towing and push-pull harbour assistance as well as for high sea towing operations. Featuring a 30.3m length, it can also provide assistance to vessels approaching access channels. It is equipped with two azimuth stern drive propellers and integrated slipping clutches. These propellers are driven by two high speed marine Diesel engines. On the bridge, the ergonomics of the unique control room allows the captain to perform all driving and manoeuvring tasks by himself thanks to a very good visibility both at horizontal and vertical over the working area and the environment. In order to answer Caraibes Remorquage's specific operating conditions, this tug features: A pneumatic starter system in order to limit the number of batteries on board; Gasoil and fresh water systems for ship supply; A 1/2 Fi-Fi equipment to perform firefighting; A rear winch and a towing hook for deep sea towing; Fenders adapted to push low freeboard barges; An indirect refrigeration system involving all the vessel equipment with box coolers adapted to tropical conditions and no seawater circulation. This tug is designed to carry out every three years careening with special anti-fouling and ICAF system. Accommodation is compliant with the latest ILO 2006 standards and special care was taken to sound insulation and air conditioning. Main characteristics are Overall length: 30.3m; Overall breadth: 10.4m; Depth at main deck: 4.45m; Max. draught: 5.0m; Bollard pull @ 100% MCR: 60mt; Fuel oil capacity: 87m3; Fresh water capacity: 26m3; Speed: 12.5kn; Propulsion: 2 x 1,902kW; Crew: 6; and steel hull / superstructure.

Crowley Maritime Corp.'s ship assist and harbor escort services group has taken delivery of "Apollo", a powerful and maneuverable tugboat with the most compact size in the U.S. The tugboat has completed final outfitting at shipbuilder **Diversified Marine Inc.** in Portland, Ore., and will deploy soon to serve the San Francisco Bay. Like its sister tug operated by Crowley, "Hercules", the "Apollo" was designed by Robert Allen Ltd. to be the nation's most powerful tug under 80 feet at 78 feet long with an estimated 94 tons of bollard pull. As sustainability requirements become more important in California and other ports while container ships become larger, "Apollo" will be well-suited for the Bay Area market.



Operating on biofuel, the vessel's fuel-efficient and lower carbon footprint results from a pair of Caterpillar Marine 3516 Tier IV-compliant engines that meet federal mandates and the State of California's environmental regulations. The 6,000BHP Tier IV engines drive two azimuth stern drive thrusters.



Corvus Energy is pleased to announce that it has been selected by ABB Marine & Ports to supply the energy storage system for the all electric tug eWolf by Crowley Maritime Corporation. The vessel will be installed with 6.2MWh of Corvus Orca Energy battery, which will become an essential part of the complete integrated electrical propulsion system delivered by ABB. "We are very pleased to be chosen by ABB for this project and we look forward participating in the building of this innovative vessel," says Sveinung Odegard, President of Corvus Energy USA. We see increased interest among the tug industry for all-electric propulsion systems. We believe this trend will continue globally due to the proximity to shore and opportunities to eliminate emissions within city

limits and harbors. We participated in the first all-electric tug in Europe and are excited to be a part of the efforts by Crowley to build the very first one here in North America. Corvus has an impressive track record with marine ESSs and extensive experience on board hybrid and electric vessels. I am pleased to have such a great team of battery experts supporting this breakthrough project," said Dave Lee, Senior Account Manager, ABB Marine & Ports Division. Upon delivery, the 82-foot vessel will support shipping activities in Port of San Diego in California. The ship will be built by **Master Boat Builders, Inc.**, in Alabama and delivered to Crowley mid-2023.

Tug Boat Market Report – November 2021

The 42' tug "Harbor Captain" was built in San Diego, CA in 1997 with major re-builds in 2006 and most recently in 2021. The tug is owned by **Pacific Maritime Group, Inc**, dba **Pacific Tugboat Service**, headquartered in San Diego, California. Pacific Maritime Group is a well-known Marine Services, Dredging and Construction Company. The repower of the "Harbor Captain" with Mitsubishi engines makes for the second Mitsubishi powered vessel in its fleet. Pacific Maritime Group has scheduled over the next 10 months four additional tugs that are also being re-powered with seven Mitsubishi engines ranging from 500HP up to 1,600HP each. The "Harbor Captain" was last repowered in 2006 during a major refit with a pair of Tier 2, MTU S60 engines. The 2021 re-power used two new EPA certified, Mitsubishi S6A3-Y3MPTK-4 Tier 3 engines with keel cooled water jacket and aftercooler circuits. Each



engine produced 500HP @ 1,800RPM through Twin Disc MGX-5136-SC 2.90:1 gears turning two 4 blade 39"x 46" fixed pitch props fitted in Kort nozzles. Pacific Tugboat Service selected the Mitsubishi engines because they provided similar horsepower and engine speed, allowing it to utilize existing shafts and propellers. Southern California



Mitsubishi dealer Dee Finley Diesel Repair was chosen to supply the Mitsubishi engines from Cascade Engine Center, headquartered in Seattle, Washington. Dee Finley also provided considerable technical assistance to PTS throughout the repower. PTS Port Engineer Peter Walding and Port Capt Tom Ebner led the inhouse construction team to simultaneously perform upgrades and maintenance to the vessel during the re-power. US Coast Guard Sub Chapter M certification was also obtained at completion of the repower/refit. Pacific Tugboat Service has also selected Mitsubishi S6A3Y3MPTK3, 18.6 liter, 500HP engines to replace two 14.5 liter Tier 2, MTU S60 engines in the PTS designed and constructed push tug "Harbor Commander", currently undergoing repower. PTS will also add to its Mitsubishi fleet by selecting a new S16R-Y3MPTAW, 1,600HP engine for the ocean

going tug "Blarney" and two pairs of S12R-Y3, 1,100HP engines in its tugs "Hidalgo" and "Bass". The mechanically controlled, Tier 3 Mitsubishi provides less complex maintenance as computers are not required and the large Mitsubishi displacement provides PTS vessels with reliable power.

With the design completed and the build contract signed, **Eastland Port**, Gisborne, New Zealand, is on track to have two new tug boats in operation by the middle of next year. The first stage of building has now begun in China, with steel being cut for the two 21m long vessels. The tugs are identical with interchangeable parts which will improve efficiency when repairs are needed. With an 11m beam and a 4.5m draft, each tug will have a bollard pull of 50mt. Eastland Port has two tugs working currently – the 26m long "Titirangi" and the 24m long "Waimata". "The Titirangi has provided many years of valuable service but at 39 years old is now at the end of its service life," said Eastland Group Chief



Operating Officer Andrew Gaddum. "We are looking forward to getting the brand new vessels built for our requirements." A key consideration in the decision to purchase the new tugs was to respect and preserve the integrity of Te Toka-a-Taiau, the historic rock that provided a tribal boundary in the Turanganui River and is of significant importance to local iwi and hapu. "Through the process of the Twin Berth Stage 1 consent application, maintaining the mauri of Te Toka-a-Taiau was identified as a significant consideration the Port needed to factor into its plans," said Mr Gaddum. "We undertook a research project to identify the location of Te Toka-aTaiau and had this reviewed key stakeholders, including local hapu and Hertitage NZ. As a result of this research, the Port made significant changes to its plans. The intention to rebuild Wharf 6 as a tug berth was stopped and the purchase of two shallower draft tug boats that can be accommodated on Wharf 1 was confirmed." The tugs were designed in Vancouver, Canada by Robert Allan Naval Architects and Marine Engineers, a well-respected naval architecture practice that works on vessels all over the world. The new tugs are part of Eastland Port's broader expansion plans with the Twin Berth project, with the rebuild of Wharf 7 due to start later this year. This project involves the rebuild of Wharf 7, the extension of Wharf 8, repairs to the slipway, dredging, reclamation and fixing the breakwater. The new tugs will help ensure the Port continues to be able to meet the growing export needs of the region. The Port ran a competition inviting the public to name the new tugs. August 2nd it was announced that the tugs would be named "Maki" (meaning 'orca') and "Ika Nui" (meaning 'big fish').

Tug Boat Market Report – November 2021



Recently a ceremony was held at **Damen Shipyards Hardinxveld**, to mark the naming of the first of a new model in the Damen Shoalbuster range. The ultrashallow, Shoalbuster 3514 SD was christened "*Brutus*" by Mrs Mandy Heere-van Eijk, on behalf of the leading tug and workboat company, **Herman Sr BV**. The Shoalbuster 3514 SD is one of the largest and most sophisticated in the range. A substantial and versatile working platform, it measures 35 metres in length, nearly 14 metres wide and has a free deck space of 150m2. With a draught of 2.85 metres at full tank capacity and just 2.45 metres at 50%, she is able to access waters inaccessible to other vessels of a similar size and capability. Four Caterpillar C32 ACERT engines deliver a total of 3,876bkW

(5,280HP) to four 1,900mm nozzles, an arrangement that contributes significantly to her shallow-water capability. And with 60 tonnes of bollard pull, she also has powerful towage capabilities. Among the many other roles which the "Brutus" will be capable of taking on are PLGR operations, ROV surveys and a 600 x 800mm moonpool for multibeam access, mattress installations, UXO clearance, mooring, pushing, dredging support, ocean-going towage and general offshore supply vessel duties. Other features include four-point mooring and she is also equipped for anchor handling with an open stern complete with roller. The accommodation is comprised of twelve cabins for six to seven crew plus thirteen to fourteen additional personnel. "Brutus" will be deployed primarily for wind farm support and maintenance duties where her shallow draft will allow here to work near as well as offshore. The DP2 dynamic positioning system including ancillary thrusters will ensure precise position-holding on the open sea as well in the vicinity of turbines and other structures. Her open stern will also make the vessel suitable for cable-laying operations and a sturdy aft deck HS Marine knuckle boom crane will be capable of lifting a wide assortment of cargo and equipment. "We are proud to have built our 14th Damen vessel to Herman Sr since we began our mutual cooperation more than 70 years ago in 1947," said Jos van Woerkum. "The 'Brutus' is the first diesel-electric Shoalbuster with hybrid propulsion in the range, with a shallow draft, dynamic positioning 2 and compliant with the latest IMO Tier III requirements following installation of a treatment system to reduce its emissions. These features are in line with current developments within the Damen organisation that aim to make it become the most sustainable shipbuilder in the world. The vessel's features include a deck load capacity of 10 tonnes per square metre, a free deck space of 200 square metres and is equipped with a heavy deck crane and two powerful winches. With 60 tonnes of bollard pull we wish Herman Sr much success with this innovative vessel and look forward to continuing our close relationship into the future."

Damen Shipyards Group has signed a contract with Fairplay Towage Polska for the delivery of a Shoalbuster 2711 ICE. The company will use the versatile vessel to perform diverse operations, including in the offshore wind industry, in the Baltic and North seas. Damen is building the vessel in Poland. The Shoalbuster 2711 is a proven vessel from Damen's standardised workboat portfolio. Its versatility comes via various features in its design, including its extreme shallow draft capability, large cargo capacity and its 45 tonne bollard pull. Despite the standard nature of the design, Damen is able to tailor the vessel to the



requirements of its clients. In this instance, Fairplay Towage required a number of non-standard features that make this order stand out. This will be the first Shoalbuster 2711 to feature ice class to enable her to work all year round in Baltic ports. It will also be the first vessel of this type not only compliant with, but certified to, IMO Tier III emissions regulations. Fairplay Towage Polska, Offshore Wind project manager Arkadiusz Ryz said, "We are very happy with this order. The process of selecting a platform was not easy. Finding a multi-tasking vessel meeting our requirements and built to the highest standards was a challenge, but the Damen team managed this difficult task perfectly. This vessel will be the first in our fleet of this power that is able to enter Baltic and North Sea ports with limited depths. I am convinced that this Shoalbuster, meeting IMO Tier III emission requirements, will open up new markets for us. She has the potential to play an important role in developing our presence in the emerging offshore wind industry in Poland. A big advantage of the project is the local content – Damen is building the vessel entirely in Poland. She will be the first such vessel built here, though I think she will not be the last one." Damen sales manager Joschka Boddeling said, "Damen Shipyards Group has the ambition to become the world's most sustainable shipbuilder. This vessel, with its IMO Tier III certification and contribution to future renewable energy projects, is completely aligned with this goal. We are very proud of this project and very pleased to be working together with Fairplay Towage."

Tug Boat Market Report - November 2021



Sanmar has delivered a high-performance Voith Schneider Propeller (VSP) tractor tug designed for maximum efficiency when towing, harbour shiphandling and escorting large ships, to Trieste, Italy-headquartered operator Tripmare. Re-named "Eitan" by its new owners, the tug is based on the innovative exclusive-to-Sanmar VectRA AVT 3000 design from Canadian naval architects Robert Allan Ltd. It will operate in Ashdod Port, Israel. Sanmar has previously sold two tugs to Tripmare, named "Arie A" and "Ashdod", which also operate at Ashdod Port. "Eitan's" unique propulsion arrangement features high speed diesel engines connected to the Voith units via reduction gearboxes with integral clutches. With a bollard pull of 73.5 tons,

the VectRA AVT 3000 form can generate escort steering forces in excess of 100 tons. Additionally, the design has fire-fighting and oil recovery capabilities and is fully MLC compliant. With a LOA of 30.25m, moulded beam of 13m and navigational draft of 6.6m, "Eitan's" propulsion drive train comprises a pair of CAT 3516C high speed diesel engines, each rated 2,525kW at 1,800RPM, and driving Voith 32RV5 EC/265-2 cycloidal propellers. The engines are connected to the Voith drives through a pair of Reintjes WAF 863 gearboxes and Vulkan composite shafts, rather than using the more traditional turbo coupling. This combination is smaller, lighter and less costly than the traditional medium speed drive system. The electrical plant consists of two identical diesel gensets, each with a rated output of 86kW. "Eitan" can achieve a speed ahead of 13.25 knots and has been designed with tank capacities to enable extended endurance at sea, namely fuel oil 163m3, fresh water 20m3 and fire-fighting foam 11m3. All crew accommodation is on the main deck for optimal comfort. There are four single crew cabins plus one double crew cabin, each with an en-suite bathroom. Comfortable lounge/mess area and galley facilities are also in the deckhouse, with galley stores and laundry room located below the main deck forward. All towing, ship handling, and escort work is performed using a double drum escort winch and escort rated staple fitted on the aft deck. One drum can store 710m of steel wire line, while the other stores 150m of synthetic towline. For increased operational flexibility radial type tow hooks are installed on the main deck forward and aft. As in a traditional tractor configuration, the stern is the working end of the tug, and as such features a heavy duty cylindrical fendering with a course of 'W' fenders below. Hollow 'D' fenders protect the sheer lines and tie neatly into the 'W' fenders at the bow. The wheelhouse is designed for excellent 360-degree visibility and includes overhead windows. The split type console is biased aft to ensure unobstructed visibility of the working deck - including the winch, staple, bulwarks and fenders - during operations.

Sanmar has delivered the ASD tugboat "Med Antares" to MedTug SA, the towage company of the giant container shipping line MSC, where it will operate at the expanding port complex at Sines, Portugal. Based on the RAstar 2800 series design by Canadian naval architects Robert Allan Ltd, "Med Antares" is a state-of-the-art escort/offshore terminal tug powered by two MTU 16V4000 main engines, each producing 2,240kW at 1,800RPM and driving Schottel SRP 1515 FP thrusters to achieve a bollard pull of 75 tons both ahead and astern. Measuring 28.2m LOA with a moulded breadth of 12.6m and extreme draft of 5.52m, "Med Antares" benefits from its unique-to-class sponsoned hull form, which has been proven to enhance escort forces along with the tug's foil-shaped escort skegs. Roll



motions and accelerations are less than half those of comparable sized 'standard' tug hulls. Built in 2019, "Med Antares" is the second tugboat from its own fleet that Sanmar has sold to MedTug, which took delivery of the 2017built 70 tonnes BP tug "Med Altair" earlier this year. RAstar 2800 design tugs are intended for escort operations in weather and sea-exposed areas where a high standard of sea-keeping is required. Port of Sines, which is already the largest by volume port in Portugal, containing multiple specialist terminals, is expanding with the construction of its new Vasco da Gama terminal, named after the 15th century explorer who sailed from the port, which is due to be completed in 2024. The versatile "Med Antares" also has a remotely operated fire pump with a capacity of 2,800m3/hour powered by a dedicated CAT C32 diesel, giving it a fire-fighting capability to Fi-Fi 1 standard. Deck equipment includes a Data Hydraulic DHC 5000 H40 hydraulic driven 400mm diameter capstan, a Data Hydraulic DTH 90-135, SWL 90T tow hook and a Palfinger PK11001(M)A marine grade hydraulic knuckle-boom/folding boom type crane. Crew comfort and the need for a safe working environment were paramount in the design and construction of "Med Antares", with special care given to resilient mount all engines and essential equipment including hydraulic pipes to reduce noise. The tug has been fitted out to a very high level of quality, comfort and safety suiting the requirements of European flag authorities such as Norway, Germany, Italy and the UK. The captain and engineer cabins are above deck with ensuite WC and shower. The mess, lounge and separate galley are also above deck, while below there are three double cabins for crew with WC and shower and a laundry.

Tug Boat Market Report – November 2021



Sanmar has delivered the most powerful escort tug ever built to Turkish Directorate General of Coastal Safety which, among other things, operates tugs used for emergency response escort services and assistance towage in Turkish waters. Renamed "Kurtarma 15" by its new owners, the newbuild escort tug is based on the exclusive-to-Sanmar RAstar 2900SX design from Canadian naval architects Robert Allan Ltd and is powered by two MTU 16V 4000 M73L main engines each producing a hefty 2,700kW at 1,850RPM to drive Schottel ASD units to achieve Sanmar's most powerful bollard pull yet, well in excess of 90 tons. The RAstar escort/offshore terminal tug designation is reserved for a distinctive class of ASD escort, coastal and harbour tugs,

designed with the unique sponsoned hull form developed exclusively by Robert Allan Ltd, which provides significantly enhanced escort towing performance. Escort forces are enhanced by the effects of the sponsons as well as by the prominent foil-shaped escort skeg forward. Deck equipment on the 29.4m x 13.3m x 5.5m "Kurtarma 15", includes a Palfinger 18500MC marine grade hydraulic knuckle-boom/folding boom deck crane. Tank capacities include 169m of fuel oil. Previous tugs in the range from Sanmar have had accommodation for up to eight crew, but this has been expanded to ten crew on "Kurtarma 15". All accommodation complies with MLC standards, with the captain and chief engineer's cabins with en-suite WC and showers above deck, along with the mess/lounge and a separate galley, and four person cabins with shared two WCs and showers, and a laundry below deck.

Sanmar Shipyards has signed a contract to deliver two cleaner and greener versions of its Bogacay series of tugs to Sicily-based operator **Rimorchiatori Augusta SrI**, marking the start of a new era for this popular range of tugboats. "Bogacay LII" and "Bogacy LIV" have been refurbished and their propulsion systems upgraded using the latest technology to make them IMO Tier III emissions compliant. They will be delivered to Augusta Port in Sicily towards the end of 2022. The 24.4m x 12m x 5.45m sister tugs will be powered by two Caterpillar CAT 3512E C rating main engines, each achieving 1,901kW at 1,800RPM and driving US205 FP 2.5m propellers in an IMO Tier III emissions compliant installation. The vessels



can achieve an impressive 60mt of bollard pull and have a top speed of 12.5 knots. Fire-fighting pump is driven through clutched flexible coupling in front of the port side main engine and has a capacity of 2,700m3/hr. Tank capacities include 77,900ltrs of fuel oil and 11,500ltrs of freshwater. The accommodation meets MLC 2006 standards and is for up to six crew, with the master's cabin above deck along with a mess/lounge and galley and WC with shower. Below deck, there are the chief engineer's cabin and two double cabins, a WC with shower, and laundry. All accommodation space is heated, vented and air-conditioned. Rimorchiatori Augusta Srl is part of the Rimorchiatori Riuniti group which operates towage services at ports throughout Italy. Sanmar has previously delivered to Rimorchiatori Riuniti the tugs – "Turchia" in 2014, "Citta Di Salerno" in 2017, "Arechi" in 2019 and "Italia" in 2020. "Bogacay LII" and "Bogacy LIV" will be classed by RINA with the notations: C &TUG, Escort, &AUT-UMS, Fire Fighting Ship 1 with water spray, Oil Recovery Ship – Flash Point > 60 deg C, Inwatersurvey, Unrestricted Service.



Med Marine, the leading Turkish shipbuilder and operator, has successfully launched its brand-new tugboat, RAstar 4200 (MEDA42120). The tugboat is being built by at its group owned **Ereğli Shipyard**. The RAstar series, designed by Robert Allan, is a unique class of very high performance ASD tug. The state-of-the-art vessel (Hull Name: "Eregli 94") will be a vital addition to East Africa's largest port of Mombasa and is part of the Kenya Ports Authority's modernisation and maintenance programme that aims to enhance efficiency and safety at sea. Mr. Kemal Bektaş, Shipyard Manager from Med Marine's Ereğli Shipyard said: "The launching of our ER94 vessel,

which is the longest, widest and deepest tug boat project ever built in our shipyard by now, has made us really proud. We will continue our efforts to complete the sea trials as soon as possible to deliver the state of the art vessel. We also thank all our employees and solution partners for their dedication and hard work on this project." The RAstar 4200 (MED-A42120) will join the KPA fleet of tugboats and will be available for salvage and harbour operations. Equipped with excellent manoeuvrability and packing a hefty 120 metric tons of bollard pull, the vessel will deliver enhanced ship-handling and coastal towing performances. The vessel will be constructed and equipped according to SOLAS requirements. Technical details: Length o.a.: 42.0m; Beam, moulded: 16.0m; Depth, least moulded: 6.4m; Draft, maximum: 7.2m; Bollard pull: 120mt; Fuel oil: 500m3; Fresh water: 60m3; Complement: 18 Crew.

Tug Boat Market Report - November 2021

Abu Dhabi Ports' **SAFEEN Group** and **Med Marine** have signed a contract for a MED-A2360 series tugboat that will be deployed to meet the growing marine service requirements of Abu Dhabi Ports and the increasingly complex demands of the wider maritime industry. The vessel, a Ramparts 2300MM tug designed by Robert Allan Ltd exclusively for Med Marine, was chosen by SAFEEN for its versatile, multi-purpose, compact ASD design, which features efficient ship-handling, coastal towing, and other general purpose towing capabilities. Delivery of the tug was set for July 2021. Med Marine has built six units of the same design - including a 50mt Bollard Pull (TBP) version. The tug's specifications include: Length o.a.: 23.00m; Beam: 10.90m; Depth: 4.4m; Draft:



5.05m; Bollard pull: 60mt; Speed: 12 knots (approx.); Main engine: 2 x CAT 3512, 2 x 1,765kW @ 1,800RPM; Propeller: 2 x Kongsberg US205 P20 FP with 2,400mm dia; Fore towing winch: THR Marine EFTW 300 kN; Deck crane: Toimil Marine / T12505M/3 SWL 1.03mt at 10.1m; Generator set: 2 x Caterpillar C4.4 86ekW; Fifi system: 1 x 1,400m3/hr. Pump, 2 x 1,200m3/hr foam / water monitors; Accommodation: 6 persons.



Ocean Group and Med Marine have signed a new contract for a 25 m, 75 TBP new state-of-the-art ER97 vessel. The tugboat, designed by Robert Allan Ltd. exclusively for Med Marine, was chosen by Ocean Group for its versatile, multipurpose, compact and stateof-the-art ASD design which features efficient shiphandling, coastal towing, and other general purpose towing capabilities. Delivery is set for December 15, 2021 and once delivered, the ER97 will be operating in Kingston, Jamaica. The tugboat's specifications include: Length o.a.: 25.20m; Beam: 12m; Depth max. 5.75m; Bollard pull 75mt.; Speed 12 knots; Main engine Caterpillat 3516C; Thruster Kongsberg US 255S P30 FP;

Towing winch THR Marine EFTW 300 KN; Generator set Caterpillar C4.4; Accommodation 7 persons (MLC Design).

UZMAR Group of Turkey and **Augustea Gran Colombia**, part of Rimorchiatori Mediterranei SPA, signed a deal week of December 15, 2021 for the delivery of two RAstar 3200 series enhanced tugboats with 32m LOA and 81mt of bollard pull. RAstar 3200 series tugboats were designed by Robert Allan Ltd. and built by UZMAR Shipyard in 2019. The tugboats were on service at UZMAR's National Fleet at Ambarlı port, Istanbul for ship-handling, coastal towing, general-purposes, or escort duties. The signing ceremony was held at UZMAR Head Office in Istanbul on December 9, 2021. The documents were inked by Mr. A. Noyan Altug, Chairman of UZMAR and Massimo Peluso, Augustea Gran Colombia Managing Director with the UZMAR sales team, and senior project and contract managers' physical presence. Giacomo Gavarone,



Rimorchiatori Mediterranei Commercial Manager and Mr. Andrea Mignone and Mr. Maurizio Re attended the ceremony virtually. Mr. Noyan Altug stated that; he is very proud that Rimorchiatori Mediterranei Group and Augustea Gran Colombia chose UZMAR built and operated tugboats to expand their fleet and strongly believe their cooperation will only improve and grow in the following years with different projects. Being in the maritime industry as an operator and builder for more than 36 years, UZMAR shared its know-how to implement the latest building methods and technologies to Rastar 3200 series for the most capable operational design. UZMAR operates with more than 500 employees, serves up to 30,000 ship maneuvers at four different ports in Turkey, UZMAR Shipyard, with more than 1,500 employees, has doubled its production areas with the newly invested facilities that came into operation during 2020-2021, reached up to the capacity to build 25 tugboats simultaneously. Having built more than 200 vessels and delivered them to more than 22 countries on 6 continents, UZMAR Shipyard has proved itself as the go-to builder of the highest quality tugs and workboats along with a various range of high-performance vessels. Previously operated in UZMAR Fleet, the Anka sisters will be named "RR Macondo" and "RR Santa Marta". Augustea Gran Colombia's stateof-the-art tugboats will be serving their duties in Colombia. Once delivered, Augustea Gran Colombia will highly strengthen its presence in the Colombian market with the might of RAstar 3200 design tugboats as the tugboats will be the most powerful tugs in the country. Rimorchiatori Mediterranei is a leading harbor towage operator, incorporated under Italian law, and it is part of the Rimorchiatori Riuniti Group. Rimorchiatori Mediterranei operates in 18 major Italian and international ports through over 100 tugs and employs about 600 people. Rimorchiatori Mediterranei has always been proud of staying on top of the service it provides and has always been successfully comply with the latest safety developing standards.

Tug Boat Market Report – November 2021



UZMAR, the private pilotage and tugboat company with Turkey's strongest and most modern fleet, sent off its newly built tugboat "Alsancak 20" to its service area, at Ambarlı Port. The new Ramparts 2500W series tugboat with a length of 25 meters and a bollard pull of 80mt will begin her duty in the first days of 2022. The "Alsancak 20" measures 25.2m length by 12.0m breadth by 4.6m depth by 5.68m navigational draft. Gross tonnage is 348.4. The vessels is powered by two CAT 3516C 2,350kW each engines at 1,800RPM with a KM US255CP 2.8m thruster. The vessel is classed as BV 1, **X** Hull, MACH, TUG, FI-FI 1 with Water Spray, Unrestricted Navigation,

AUT-UMS. Its capacities are: 6 person crew; 90.6m3 fuel oil; 16.6m3 fresh water; and 7.1m3 foam.

Svitzer, **A.P. Moller** - Maersk's world leading towage operator, has signed an agreement with **Robert Allan Ltd**, leading naval architect company, to design the world's first fuel cell tug for harbour operations, running on green methanol. The project builds on close cooperation between Svitzer and Maersk with the aim to jointly explore the combination of methanol fuel cells, batteries, storage/handling systems, electric drives and propulsion units as a carbon neutral alternative to the conventional fossil fuelled propulsion train. Commenting on the agreement, Ingrid Uppelschoten Snelderwaard, Global



COO, Svitzer, says: "Fuel cells will be applicable as main propulsion power for tugs earlier than for larger vessels and further, the time to build a tug is significantly less than for a container vessel. Svitzer will obtain valuable knowledge and operational experience handling fuel cells as an alternative to diesel or pure electric power. We consider this project a significant step in Svitzer's ambition to lead the decarbonisation of towage and an important contribution to the joint efforts to develop solutions with a positive impact on the environment." Svitzer and Maersk are working closely together to determine technologies that support the overall Maersk decarbonisation journey. The objective is to extract and apply knowledge and operational experience of methanol feasibility from the near shore small scale tug onto larger ocean-going container vessels. Commenting on the collaboration, Ole Graa Jakobsen, Maersk Head of Fleet Technology, explains: "Fuel cell technology could be a disruptor in the maritime technology space, promising high efficiencies and eliminating the need for substantial amounts of pilot ignition fuels while removing harmful emissions. Thus, we have been monitoring the technology for the last few years, and with the accelerating developments in the 'Power-to-X' arena, it has become evident that we should step up our engagement in fuel cells, especially in combination with Green Methanol." The 80 tons bollard pull newbuild tug with escort notation will come with a hybrid electrical propulsion system solution where fuel cells can be dimensioned to deliver a specific amount of sustained bollard pull using fuel cells alone, adding additional power from the batteries during the short but often frequent peaks that characterises towage. The fuel cells can be used to charge the batteries when the tug is mobilising and when the tug is berthed, minimising the need for expensive shore side charging facilities. The combination of fuels cells and batteries will deliver a self-sustained tug with longer endurance and with less operational constraints than a pure battery powered vessel. The fuel cell tug will function as a pilot design for future Svitzer newbuilds and is planned to be put into operation within the Svitzer Europe region by Q1 2024.



In July, **Svitzer Australia**'s port in Cairns, Far North Queensland welcomed the second of two new vessels, "Tarcoola" into service. "Tarcoola" joined her sister, "Wajarri", that had entered service eight weeks earlier. The matching pair of 28-metre tractor tugs have a combined bollard pull of 100 metric tons, and will improve efficiency and flexibility in the port. Both vessels were relocated to Cairns from Geraldton, following the arrival of Geraldton's new fleet earlier this year. By relocating assets nationally, Svitzer Australia can improve its fleet in various ports and better meet operational requirements regionally. Most importantly, this gives Svitzer the ability to serve its customers better and meet local port needs while utilising its assets to their potential. These new tugs will replace "Giru" and "Tusker", and Svitzer have already engaged "Giru" in work at

Groote Eylandt in response to a request for assistance from an operator in that region. Svitzer's Far North Queensland Port Manager, Rick Goffin, said the two new assets have been warmly welcomed into the port by local stakeholders. "The introduction of these two new assets to the port of Cairns underpins Svitzer's commitment to the region, and doubles our firefighting support capabilities within the port. We have worked closely with our port stakeholders and customers to see how we can best meet their requirements, now and into the future."

Tug Boat Market Report - November 2021

"Svitzer Suez 1", the first RAstar 2800-CL ASD escort tug, has been delivered to Svitzer Egypt LLC by Cheoy Lee Shipyards and will soon commence operations in the Suez Canal. Svitzer are the first owners of this new escort tug design and a further nine tugs to this design have already been ordered with Cheoy Lee. The RAstar 2800-CL design started with a "blank sheet of paper". One of the primary goals of the design was to make it extremely flexible allowing for various propulsion machinery options, IMO Tier III solutions, deck machinery choices, accommodation layouts, etc. all with minimal impact on the overall design. This was to allow Cheoy Lee to easily offer customized solutions to clients even at a relatively late stage in the construction process.



The hull form has the proven sponsoned shape typical of all RAstar designs and was refined and tested using CFD to ensure the desired free running performance, manoeuvrability, and escort performance characteristics. The escort performance was analyzed using CFD at various stages of the design to ensure the desired escort performance while achieving a design that is fully compliant with IMO escort stability criteria at speeds up to 10 knots. The house works are low profile for working under the flare of attended vessels and visibility from the operator's position is excellent. Design work was completed to ensure compliance with all the major classification societies' rules, and it exceeds many flag and/or owner specific safety requirements such as being fitted with 45 degree stair angles throughout. Particulars of the RAstar 2800-CL design are: LOA: 28.4m; Beam, moulded: 13.0m; Depth, moulded (hull): 5.40m; Maximum draft: 5.5m (with 175 DWT). The first RAstar 2800-CL off the line, "Svitzer Suez 1" was constructed to Lloyd's Register rules with the following notation: \$\Delta 100A1 Escort Tug, Fire Fighting 1 with Water Spray, \$\Delta LMC,\$ ⊕UMS, IWS. Tank capacities of the Svitzer Suez 1 are: Fuel oil: 149m3; Potable water: 31.8m3; Foam: 7.9m3; Dispersant: 3.8m3; Sewage tank: 5.8m3; Grey water: 5.8m3. Accommodations are outfitted to high, MLC compliant standards for a crew of up to 10 personnel. The Master and Chief Engineer cabins are located on the main deck with four double crew cabins located in the lower accommodations. Main propulsion comprises a pair of CAT 3516C diesel engines, each rated at 2,350kW at 1,800RPM, and each driving a Kongsberg model US 255S P30 Fixed Pitch Z-drive. The electrical plant comprises two identical Caterpillar C 7.1 diesel gensets each with a power output of 118ekW. On the foredeck is a MacGregor MGHAET/GDG-22-1224U02060 x 2-BL hydraulically driven, split drum, escort towing winch accommodating 2 x 200m of 60mm diameter synthetic rope and fitted with double gypsies and warping heads. The winch is equipped with a length and tension monitoring system with load indicating display in the wheelhouse. First layer low speed pull is 120mt @ 5m/min. and high-speed pull is 5mt @ 80m/min. First layer pay-out is 144mt @ 5m/min. and 36mt @ 18m/min. Brake holding force is 240mt. On the aft deck, there is a MacGregor MG-HTW1-0220D07556-BL hydraulically driven towing winch. The drum can accommodate 750m of 56mm diameter steel wire rope and has a brake holding force of 200mt. First layer low speed pull is 20mt @ 15m/min. and high-speed pull is 8mt @ 30m/min. The winch has a spooling gear and a 530mm diameter horizontal warping head. The aft deck is further outfitted with a gob eye, tugger winch, rescue boat, and knuckle boom crane. The "Svitzer Suez 1" is equipped with an off-ship fire-fighting system meeting class Fire Fighting Ship 1 requirements with water spray. The system was supplied by Fire Fighting Systems and comprises one main engine driven centrifugal pump type FFS SFP 300 x 400 XPC with capacity of 2,850m3/hr. The two monitors deliver 1,200m3/hr of water and 300m3/hr of foam. Ship handling fenders at the bow consist of an 800mm diameter cylindrical fender with 480 x 300mm "W" block fendering below. 300 x 300 hollow "D" fendering provides protection at the sheer line, and 480 x 300mm "W" block fendering is used at the stern. On trials, the "Svitzer Suez 1" exceeded performance expectations with the following results: Bollard pull: 82.1mt ahead, 77.6mt astern; Free running speed, ahead: 13.3 knots.



Vallianz Holdings Limited has secured a newbuilding contract with TIPC Marine Corporation Ltd (TIPM) for the construction of a 3,200BHP tugboat. TIPM is a subsidiary of Taiwan International Ports Corporation which is a state-owned company that administers and manages ports in Taiwan. TIPM operates a fleet of vessels that includes tugs, crew transfer vessels and deck barges. Vallianz will build the 35m tugboat at PT. United Sindo Perkasa (PT USP), a wholly owned subsidiary of Vallianz Holdings Ltd, which operates a shipyard in Batam, Indonesia. The construction will be based on a design by Khiam Chuan Marine Pte Ltd, a consultancy firm that specialises in ship design

services and has amassed extensive experience in Taiwan's tugboat market. Fitted with two Azimuth Thrusters, the 35m tugboat will have a 40mt bollard pull and is equipped with two generators, as well as two firefighting units driven by the main engine. The 35m tugboat is scheduled to be delivered to TIPM during the second quarter of 2022. When operational, it will assist merchant ships in berthing and unberthing operations, port entry and exit, and undertake external fire-fighting duties at the Terminal of Kaohsiung Port, which is currently under construction.

Tug Boat Market Report - November 2021

Starnav has contracted **Detroit** shipyard in Itajaí, Brazil, for equipping four newly built tugs with SCHOTTEL RudderPropellers. One of the 32m long and 11.6m wide escort tugs will feature the SCHOTTEL patented SYDRIVE-M technology right from start; the other three will be configured to be SYDRIVE-ready. As a mechanical hybrid solution without the costly complexity of common hybrid technology, SYDRIVE-M will ensure lower maintenance costs and less fuel consumption. SCHOTTEL SYDRIVE-M will enable Starnav to offer more profitable and emission-reduced towing services in Brazilian ports. Beyond this, the towage group contributes to meeting the IMO 2030 and 2050 goals initiated by the International Maritime Organization. Carlos Eduardo Pereira, CEO at Starnav Servicos



Marítimos: "By making use of SCHOTTEL hybrid solution, we are taking the initiative to increasingly seek a clean operation. Starting now is particularly important: the vessels that are built today will be in the water for decades to come. Our focus has always been the high level of reliability in the equipment, mainly safety and environment care. With 34 vessels propelled by SCHOTTEL in our fleet, we will continue expanding our operations and benefit from a strong partner with extensive know-how in Brazil." The main propulsion of each ASD tug consists of two diesel-driven SCHOTTEL RudderPropellers type SRP 490 (2,525kW each) featuring fixed-pitch propellers with a diameter of 2.8 metres. With this thruster configuration, they will achieve more than 80 metric tons of bollard pull and a maximum speed of 12.5 knots. The first of the four tugboats is scheduled to enter service in 2022. Lower maintenance costs, less fuel consumption SCHOTTEL SYDRIVE-M connects a port and starboard mounted azimuth thruster in one



vessel, allowing the thrusters to be driven together by only one of the main engines. In turn, this leads to reduced operating hours of the main engines, resulting in lower maintenance costs as well as less fuel consumption and lower emissions. The system needs no additional electronical components, which offers many advantages as demonstrated in three main operation modes: Light Operation or Free Sailing Mode, Full Thrust Operation Mode and FiFi-Mode. New and more energyefficient solutions The International Maritime Organization's (IMO) strategy on reducing greenhouse gases (GHGs) challenges all

stakeholders in the maritime industry to find, develop and integrate new and more energy-efficient solutions, to meet GHG emission reduction goals for 2030 and 2050. A set of toolkits, such as the Ship Emissions Toolkit and the Port Emissions Toolkit, provide practical guidance on assessing emissions from and identifying emissions reduction opportunities for the fleet. By investing in innovative hybrid concepts and offering greener operations, ship owners like Starnav contribute to achieve these goals.

Van Wijngaarden Marine Services BV is proud to announce that they have expanded their fleet with the DP1 Eurocarrier 2712 "Aitana B" from Zumaia Offshore, in good cooperation both companies have come to an agreement. The vessel will sail under the name "Waalstroom", she is built in 2016 by Neptune Shipyard in Hardinxveld in The Netherlands. The "Waalstroom" fits very well in VWMS' range of tugs & workboats operating dredging, construction and renewable energy markets; said Peter van Wijngaarden. She is fruitfully kicking off with some interesting projects in the Mediterranean and is ready to operate under the VWMS flag with its experienced crew.





The "Condor" recently delivered to **Verbeke Shipping**. **Neptune Marine** has a long-standing relationship with Verbeke Shipping, which has been strengthened by building the "Condor". The vessel is 24m long, 10m wide and the draft is approximately 4 meters. The vessel is equipped with powerful IMO Tier 3 engines, which reduces emissions. The new EuroTractorTug 2410, "Condor", was completely built in the Netherlands by Neptune Shipyards in Aalst. Within 14 months the "Condor" went from drawing to sailing. The "Condor" is a harbour assistance tug with optimum manoeuvrability. The vessel can be used for plough work and because of an efficient aframe, she can be mobilised immediately for quick

response jobs. The "Condor" is equipped with two Caterpillar C32 main engines, which generate 970kW propulsion power and two Volvo D7A generator sets. During the bollard pull the vessel reached 27 metric tons bollard pull and a maximum speed of over 11 knots. The vessel is equipped with Voith propellers, to create excellent manoeuvring capabilities. The "Condor" is outfitted with a 60mt towing winch, an A-frame with dredging plough and a compact deck crane. The "Condor" is classed by Bureau Veritas and delivered with a Dutch flag.

Tug Boat Market Report - November 2021

The "Tidal Pioneer" recently delivered to **Sustainable Marine**. The "Tidal Pioneer" is a **Neptune Marine** built EuroCarrier 2611. The vessel is 26m long, 11m wide and the draft is approximately 3.2m. The "Tidal Pioneer" is a Tier III compliant vessel. The new EuroCarrier 2611 is fully fit for purpose for the Canadian renewable energy market. The vessel will mainly be used in the building and maintenance of tidal energy projects in Nova Scotia. The vessel is outfitted with a powerful four point mooring system, for operation in currents of seven knots. The complete vessel, including the hull, was built in the Netherlands by Neptune Shipyards. Both the assembly of the hull and outfitting was performed at the yard in Aalst. The vessel is equipped with two C32 caterpillars main engines, two Volvo D13 generator sets and a



DPI system. The engines drive two 1.85 meter propellers through Masson gearboxes. During the bollard pull the vessel reached a 34.7 metric ton bollard pull and a speed of 10.3 knots. For electric power the vessel is equipped with two IMO Tier III compliant Volvo D13 generator sets. A Heila 230-4SL deck crane is fitted on PS at the bow and a Heila 140-3S at the aft deck. Also a 100mt anchor handling winch, a 50mt towing winch, a 15mt tugger winch and a 25mt 4-point mooring system. In the bow a wide bowroller is fitted in combination with hydraulically operated wireguide pins. The "Tidal Pioneer" is classed by Bureau Veritas and delivered with Canadian flag.



Sanmar has delivered the third tug to SAAM Towage from its successful RAmparts 2400SX design of compact tugboats. Named "SAAM Palenque" by its new owners, she will work in Panama where SAAM Towage is the largest supplier of towage services, with operations at all ports on both the Atlantic and Pacific coasts. Based on the exclusive-toSanmar RAmparts 2400SX design from Canadian naval architects Robert Allan Ltd, "SAAM Palenque" previously worked at Izmir in Turkey as part of Sanmar's own fleet. "SAAM Palenque" is a sister vessel to "Albatros", a RAmparts 2400SX design tug delivered to SAAM Towage earlier this year following the expansion of its services into Peru. SAAM Towage also operates the Sanmar-built RAmparts

2400SX tug "SAAM Valparaiso" in Panama, which was delivered in 2020. Measuring 24.4m x 11.25m x 5.6m and powered by two Caterpillar 3516C main engines, each achieving 2,100kW at 1,600RPM, the technologically-advanced "SAAM Palenque" can achieve an impressive 72 metric tons of bollard pull and has a top speed of 12.5 knots. The FiFi 1 classified tug's fire-fighting pump is driven through clutched flexible coupling in front of the port side main engine and has a capacity of 2,700m3/hr. Tank capacities include 72,400ltrs of fuel oil and 10,800ltrs of fresh water. Accommodation meets MLC standards and is for up to six crew, with the captain and chief engineer's cabins above deck along with a mess/lounge and galley and WC with shower. Below deck there are two double cabins, a WC with shower, and laundry. All accommodation space is heated, vented and air-conditioned. Special care was taken to resilient mount all engines and essential equipment including hydraulic pipes to minimise noise and maximise crew comfort. Acclaimed for their manoeuvring ability, sea-keeping and stability performance, the multi-tasking RAmparts 2400SX design tugs from Sanmar are designed for maximum efficiency in the performance of ship-handling duties for sea going ships. "SAAM Palenque" is classed by ABS having ♣A1, Towing Vessel, ♣AMS, ABCU, UWILD, Unrestricted Service, Fire Fighting Vessel 1 notations.

McAllister Towing is excited to announce that it has signed a contract for the construction of two 93' x 38' tier IV, 84 metric ton bollard pull tractor tugs with the option for two more. These tugs will further enhance McAllister's East Coast fleet with the ability to service its customers largest ships and bring McAllister's tractor fleet to 39 tugs with a total of over 182,000 horsepower. The new 6,770HP tugs will be powered by



3516E Tier 4 Caterpillar engines with twin Schottel SRP 490 Z-drive units and Markey winches on the bow and stern. Sister vessel "Eileen Mcallister" (pictured) achieved over 84 metric tons during her



ABS bollard pull certification and McAllister anticipates the same or better performance. Hulls 135 and 136, are being built at **Washburn & Doughty Associates** (W&D) in East Boothbay, Maine, with the first boat slated for delivery in November of 2022, these will be the 3rd and 4 tugs built at W&D for McAllister. This will bring the total tugs in McAllister's fleet built at W&D up to seven.

Tug Boat Market Report - November 2021

KOTUG Canada Inc., a partnership between KOTUG International B.V. and Canada's Horizon Maritime Inc., was awarded a long-term agreement with Trans Mountain, operator of Canada's only oil pipeline servicing the West Coast of Canada providing tidewater access to foreign markets for Canada's petroleum resources. KOTUG Canada will provide escort towage to tankers loaded at Westridge Marine Terminal. KOTUG Canada was selected for this purpose by shippers on the Trans Mountain Pipeline after a rigorous and competitive process, facilitated by Trans Mountain. Besides the strong technical specifications of these modern vessels, decisive factors for the award included KOTUG Canada's commitment to a strong and



innovative approach to Indigenous involvement and the partnership's strong foundation in operational excellence in Canada and around the world. This agreement was established in partnership with the Sc'ianew First Nation, located in Beecher Bay, on Vancouver Island. This strategic location along the Trans Mountain escort route will provide KOTUG Canada with a safe home for a dedicated berthing facility as well as supporting the commercial activities of the Sc'ianew First Nation in Beecher Bay. The escort tug names will commemorate two important people from the Sc'ianew community. Rendering of the two Escort Tugs and the Oil Spill Response Vessel to the agreement provides the Expansion Project, and all other marine movements, with necessary resources in support of Trans Mountain's stringent commitment to marine safety and will further enhance the overall safety of vessel transits along the commercial shipping route between Westridge Marine Terminal in Burrard Inlet and the open ocean. KOTUG Canada will provide and operate the two dedicated escort tugs, each approximately 50 metres long, with minimum bollard pull capacity of 110mt BP, which will be flagged in Canada and operated by highly skilled and capable Canadian mariners. Provision of new technologies will assist to reduce underwater radiated noise and greenhouse gases. This includes the application of a revolutionary vessel hull coating developed in Canada by Graphite Innovation & Technologies. The vessels' propulsion systems will use the latest engine drive technology. KOTUG Canada will operate in close coordination with the Sc'ianew First Nation. The agreement also includes related training and development of community members of Indigenous communities to maintain the necessary experience and knowledge in the field of advanced safe tug operations and marine response. Importantly, the partnership between KOTUG Canada and the Sc'ianew First Nation provides vessel crews opportunities to learn from traditional knowledge and operate with respect and appreciation of the unique natural habitat of British Columbia's coastal environment.



Also, under a separate transaction, **KOTUG Canada** has an agreement with **Western Canada Marine Response Corporation** (WCMRC) for the provision of one dedicated offshore supply vessel (OSV) to support the protection of the Salish Sea/Haro Strait and Juan de Fuca Strait. KOTUG Canada has an agreement with WCMRC to supply and operate a dedicated OSV, suitably equipped for 24/7 oil spill response services. This highly capable vessel also possesses significant bollard pull capacity of 207 T BP and is also capable of vessel towing, if required to do so. Together, these three KOTUG Canada-operated vessels, based out of Beecher Bay, will help to further improve the safety of the marine network

in the region. Early operations are expected to commence from late 2022. "The offshore supply vessel (OSV) is a substantial enhancement of oil spill response capacity on Canada's West Coast. Offshore supply vessels have proven to be very effective oil spill response ships. At 245 feet and with 1,000 tonnes of oil storage capacity, it will be the largest ship in our fleet. The OSV will allow WCMRC to mount a large-scale response within six hours anywhere along the shipping lanes. WCMRC will be outfitting the OSV with 4,000 feet of offshore boom, a high-speed sweep system and a high-capacity skimming system." Kevin Gardner, President, WCMRC "Today represents a significant milestone in meeting our marine shipping commitments as a result of innovative partnerships between marine industry and Indigenous communities. With KOTUG Canada's operations based out of Beecher Bay First Nation on southern Vancouver Island, these tugs will bring significant new tow capability to the region and will to raise the level of marine safety and emergency response, benefiting the shared waters of the Salish Sea. Chief Chipps and his community have shown great leadership in the protection of the marine environment, and this partnership will provide significant employment and commercial opportunities. I could not be happier for the Sc'ianew people. This is a great example of how shared values of protecting the marine environment, building capacity and growing local economies can work together." Ian Anderson, President and Chief Executive Officer, Trans Mountain Corporation.

Tug Boat Market Report - November 2021

KOTUG's new build Rotortugs "RT Imperieuse" and "RT Clerke" arrived in Port Hedland, Australia. Both vessels, chartered to **BHP** for the long term, will further optimize the fleet of mining group BHP to support their bulk carrier loadings at Port Hedland. Both 32m ART80-32 tugs, built at Cheoy Lee Shipyard, have three Caterpillar main engines, that

deliver a total output of 5,295kW each, 13 knots sailing speed, and 80 metric tons bollard pull power. Both Rotortugs are equipped with advanced DMT Escort Winches. With these two new state-of-the-art Rotortugs, the



total number of Rotortugs deployed by BHP is eight. Imperieuse & Clerke The names of these Rotortugs are derived from Clerke Reef and Imperieuse Reef, two of the three stunning reefs that form coral atolls in the Rowley Shoals Marine Park, 300 kilometres west of Broome. The names were chosen by BHP in honour of the amazing marine life and the breathtaking scenery of the Park Trust.

Supporting **Perenco Oil & Gas** in optimizing their marine spread with proven Rotor Tug Technology. **KOTUG International B.V.** (KOTUG) was awarded a long-term contract by Perenco Oil & Gas Gabon S.A. (Perenco) to provide towage support for their operations off Port Gentil, Gabon. The contract includes the chartering, operation and manning of three vessels, two of which are Kotug's first-ever Rotor Tugs, the "RT Magic" and "RT Spirit". After successfully operating in several countries, the "RT Magic" and "RT Spirit" will set sail to Gabon to support Perenco Oil & Gas in optimizing their marine spread thereby providing cost savings simultaneously with redundancy in operations. In addition, Kotugs' "SD Honour" will be



temporarily deployed to support the operations in Gabon, whereby she will be replaced by a third Rotortug. KOTUG established KOTUG Gabon S.A. to align with the local community and provides knowledge and work experience for local people. The operation will start in the second half of October, 2021.



Remontowa Shipbuilding recently announced that two anti-flood linear icebreakers "Ocelot" and "Tarpan" were built in its shipyard to order of the State Water

Management Company Wody Polskie – Regionalny Zarząd Gospodarki Wodnej in Szczecin are ready to perform their functions. Both icebreakers – "Ocelot" and "Tarpan" left the shipyard on 26th August 2021 starting their first, probably the longest journey from Gdansk to the home port Szczecin – Podjuchy, which they reached on 10th September 2021. The voyage in difficult weather conditions was an excellent test of the efficiency and reliability of the propulsion and other ship's systems, ensuring safety and efficient operation. Upon arrival in Szczecin, the crew were trained in the

operation and maintenance of the engine room, radio navigation systems and onboard equipment. 17 September this year saw the official handing over to the Ordering Party of the currently most modern icebreakers in Poland. The delivery and acceptance documents were signed on behalf of RZGW in Szczecin by the contract engineer Mr. Wojciech Grześkowiak, on behalf of Remontowa Shipbuilding – by the project manager Mr. Tomasz Sulkowski. "Ocelot" and "Tarpan" will take part in the next icebreaking operation on the Oder River during Polish-German icebreaking action replacing two now more than 50 years old vessels. The construction of the icebreakers was partly financed by the Operational Programme Infrastructure and Environment 2014-2020 under the Cohesion Fund.

Eregli Shipyard announced recent launchings. Hull Number ER97 – MEDA2575 RAmparts 2500W Tug Boat was launched successfully. It measures 25.20m in length, 12m in width, 4.6m in depth and it is equipped with CAT 3516-C, 2,100kW engines and Kongsberg US 255S P30 FP, HD Slipping Clutch Propulsion Systems.





Hull Number ER98 – MED-A2360 RAmparts 2300-MM Tug Boat was launched. It measures 23.00m in length, 10.90m in width, 4.40m in depth and it is equipped with Caterpillar 3512C Engines and Konsberg US205 FP Propulsion Systems.

Tug Boat Market Report - November 2021

Bogazici Shipyard has successfully delivered new building Twin Screw (CPP) Harbour Tug Boat "Yalova 4" to her new Turkish Owners **Yalova Pilotaj A.S**. at Altinova, Yalova / Turkey. M/Tug "Yalova 4" was built at modern indoor building facility of Bogazici Shipyard. The Vessel is fully customized for Yalova Pilotaj A.S. known as Yalpas. All equipment used on board have been selected from reputable brands and all details on the vessel have been designed according to Owner's requirements and preferences to create a fully satisfactory ship for her operator. This modern and high performance 50+mt BP tug boat is powered by two Caterpillar,



1,500kW, 1,600RPM main engines combined with Schottel Twin Screw CP propulsion system. Main particulars of M/Tug "Yalova 4" is as follows; Type: Harbour Tug Boat; Propulsion: Twin Screw (CPP) with 2 x Schottel SCP 60 4-XG propeller units; Design: V Denge Technology; LOA / Breadth: 24.00m / 9.00m; Max. Draft: 3.50m (approx); Bollard Pull: 50+mt; Free Running Speed: 13.0 Knots; Accommodation: 6 Berths (2 single + 2 double); Classification / Notation: (American Bureau of Shipping - ABS) A1, AMS, ABCU, FFVI Towing Vessel, UWILD, BP(50+); Main Engine: 2 x Caterpillar Type 3512C, IMO Tier II, 1,500kW at 1,600RPM; Auxiliary Genset: 2 x Caterpillar Type C7.1, 100kWe; Bow Thruster: YMV, Type BWT-E-C90, 90kW; Fire Fighting System: Fi-Fi 1, two foam monitors of 1,200m3/h; Navigation/Communication: GMDSS Area A2; Deck Machinery: Data Hidrolik make, Anchor Windlass of Pull Nominal 20kN+; Towing Hook of 50mt SWL quick release disc type + Capstan of max. pull 5.0mt.



The Royal Canadian Navy (RCN) announced recently that the names of its new fleet of large tug boats will pay homage to Canada's extensive maritime history. "I am pleased today to announce the names of the Royal Canadian Navy's new fleet of Naval Large Tugs. 'Haro', 'Barkerville', 'Canso' and 'Stella Maris' provide important linkages to Canada's rich maritime history and their role is tied to our future," said Vice-Admiral (VAdm) Craig Baines, Commander of the Royal Canadian Navy. The four Naval Large Tugs (NLT) are being built by Ocean Industries Inc. of Isle-aux-Coudres, Quebec, under the National Shipbuilding

Strategy, and are named after tugs that perished in the performance of their duties or locations on the East and West coasts that are linked to RCN maritime heritage. NLT "Haro" is named after the Haro Strait, which connects the Straits of Georgia and Juan de Fuca in British Columbia, and is frequently transited by RCN vessels proceeding north from Esquimalt, the home of RCN's Pacific Fleet. NLT "Barkerville" takes its name from the Second World War-era Villeclass tug of the same name, which sank on December 17, 1945 at the entrance of Bedwell Harbour, B.C., while towing His Majesty's Canadian Ship (HMCS) "Hespeler" to its mooring. The Ville-class tug was named after the town of Barkerville, located in Central British Columbia. NLT "Canso" is named after the Canso Strait, which separates Nova Scotia from Cape Breton Island. The region figures prominently in Canada's formative history, and in the RCN's past with HMCS "Canso", a Bangor-class minesweeper that served in the Pacific and Atlantic during the Second World War and was on hand for D-Day. NLT "Stella Maris" is named in recognition of the valiant actions of the crew of the tug of the same name that came to the assistance of the Steam Ship (SS) "Mont Blanc", a French munitions ship laden with explosives, on December 6, 1917 in Halifax Harbour. The "Mont Blanc" had collided with the Norwegian SS "Imo", starting a fire on the French ship that forced the crew to evacuate. "Stella Maris" was the first to arrive at the burning munitions ship, spraying the flames with its fire hose. As the fire was too intense to stop with a single fire hose, the "Stella Maris's" crew began to prepare a towline to pull the French vessel away from Pier 6 to prevent the fire from spreading ashore. The crew were in the process of retrieving a 10-inch hawser from the hold to assist a party of volunteers from HMCS "Niobe's" steam pinnace in securing a line to "Mont Blanc". Before this could be done, the now-infamous Halifax Explosion occurred. "Stella Maris" was severely damaged and thrown up on the beach near Pier 6 with the bow ashore and the shattered stern submerged. Nineteen of the crew were killed, including Captain Horatio Harris Brannen. Miraculously, five managed to survive. Today, navy tugs continue to be an important component of the RCN fleet, performing a wide variety of tasks including harbour berthing, coastal towing, harbour firefighting and other naval fleet support duties. The new tugs will replace the current Glen-class fleet, which were acquired in the mid-1970s and are reaching the end of their service life. Serving on both coasts, this new, more powerful fleet of tugs will support the RCN's current and future fleets, including the six Arctic and Offshore Patrol Ships, two of which have already been received, two Joint Support Ships and 15 Canadian Surface Combatants. The steel cutting for the first tug began in September 2020, with formal construction following in November 2020. The first two tugs are expected to be launched in April 2022 and June 2022, respectively, with first deliveries expected by the fall of 2022.

Tug Boat Market Report - November 2021

SCHOTTEL was awarded a contract from **Master Boat Builders**, Alabama, U.S.A., for the supply of four rudder propellers for two newly built tugs of the U.S.-based operator **Suderman & Young Towing Company** (S&Y). Beyond this, the tugs will feature MariHub, the IoT Gateway and monitoring solution from SCHOTTEL. Kirk Jackson, President at Suderman & Young Towing Company: "We have used SCHOTTEL propulsion units in our tugs for many years. SCHOTTEL's excellent products and service have proven themselves time and time again. We are excited to welcome these new Rapport 2600 tugs to our fleet. The use of SCHOTTEL RudderPropellers and MariHub highlights our continued commitment to provide the best available equipment to serve our customers' growing requirements." Each of the tugs will be propelled by two diesel-driven





SCHOTTEL RudderPropellers type SRP 430 (1,650kW each) with a propeller diameter of 2.2m. By this, the Robert Allan RApport 2600 design vessels will achieve a bollard pull of about 52 metric tons. The 26m long and 12m wide vessels will feature SCHOTTEL MariHub: it collects, analyzes and transfers signals from sensors, machinery and other ship equipment to an onshore cloud server. With MariHub, owners benefit from data-driven services such as performance evaluations and onboard high-speed data processing for

real-time condition analysis. Intelligent maintenance for increased availability. With the condition monitoring service ProCMS, MariHub allows for early detection of irregularities in the drive train. This predictive maintenance approach significantly increases the availability of vessels, while reducing in order to reduce maintenance costs and improving maintenance planning. Expected delivery dates for the first tug is October 2022 and April 2023 for the second tug.

Company News

Eastern Shipbuilding Group, Inc. (ESG) hosted the grand opening of its Port St. Joe Facility (PSJ) adding to the company's operational capabilities a 40-acre site that encompasses 1,000 feet of deepwater bulkhead with unrestricted access to the Gulf of Mexico test and trials grounds. The new facility is dedicated to final outfitting and testing of commercial new construction vessels as well as topside repairs. "We are proud to commission our third facility with the strong support from the local community and our dedicated workforce," said Joey D'Isernia, President of Eastern Shipbuilding Group. "This is an exciting chapter in our long history of quality shipbuilding as we add new capacity and capabilities to offer our customers and build a longstanding presence in Gulf County." Hundreds gathered from across the



Florida panhandle to celebrate the economic development event and see the new Ollis-class Staten Island Ferries constructed by ESG. The occasion was marked by remarks from Congressman Neal Dunn, local dignitaries, and a ribbon cutting. "This is an exciting day for Gulf County and the rest of Florida's Second Congressional District. This town was ravaged by Hurricane Michael just three short years ago affecting the livelihoods of everyone in the area. This project will bring hundreds of jobs to the area and will give more Gulf County residents the chance to achieve the American Dream. Thank you to everyone who worked to make this opportunity possible!" said U.S. Congressman Neal Dunn. ESG recently completed a \$6 million infrastructure improvement project at the Port St. Joe Facility to allow for vessel outfitting to commence and has embarked on a \$50 million 15,000 ton dry-dock project to provide full vessel sustainment services. This dry-dock was specifically designed to be able to service both government and commercial ships and can haul large deep draft vessels. The PSJ Facility expands ESG's labor pool into a new region and will not be competing with ESG's other shipyards for skilled trades. With three facilities along the Gulf Coast on Florida's Panhandle, Eastern is one of the only shipbuilders in the United States that can perform commercial shipbuilding competitively while simultaneously managing a large government program. The 40-acre Nelson Street Facility and operational headquarters is dedicated to the U.S. Coast Guard Offshore Patrol Cutter project to ensure continuous and uninterrupted construction of those critical national security assets. ESG is well underway on a \$45 million facility optimization project at the Nelson Street Facility that is fully permitted and funded. The 300-acre Allanton Facility where ESG operates the commercial side of the business has over 6,000 feet of water frontage leading into St. Andrew's Bay and the Gulf of Mexico. ESG is currently the largest private employer in Bay County and has approximately 1,300 employees and contract workers across its three main shipbuilding facilities.

Tug Boat Market Report - November 2021



McAllister Towing LNG Services, LLC, is proud to announce that it will be serving as technical manager for the Polaris New Energy LNG bunkering operation in Florida. McAllister will operate the Articulated Tug Barge (ATB) "Polaris/Clean Canaveral" for Polaris New Energy. The tug Polaris is a 4,000HP tug fitted with a JAK-400 coupling system being built at Master Boat Builders, Inc. The tug will be married to the barge "Clean Canaveral" a 5,500cbm capacity barge being built at Fincanteri Bay Shipbuilding. Polaris New Energy has constructed the ATB for coastwise transportation of LNG



and to deliver LNG as a clean maritime transportation fuel. Captain Steven Kress, Vice President of Operations for McAllister believes that this endeavor further demonstrates McAllister's commitment to safeguard the environment by expanding upon its LNG experience in Cove Point, MD and Jacksonville, FL. "We are honored that Polaris New Energy has recognized McAllister's reputation for quality and safety, through our robust QSM system. We look forward to operating this brand-new ATB, safely and efficiently servicing Polaris's customers." Marino Hwang was named General Manager of McAllister Towing LNG Services. Captain Hwang, Marine Compliance Manager for McAllister Towing, has more than 20 years of experience in marine transportation and has held various leadership roles at K-Sea Transportation and Kirby Offshore Marine before joining McAllister. Marino Hwang said: "It is

a tremendous privilege to partner with Polaris New Energy and its affiliated companies to manage and operate the 'Polaris/Clean Canaveral'. LNG is a clean fuel alternative and its use as a marine fuel is expanding. McAllister is equipped and ready to be a part of this emerging industry." Tom Sullivan, Chief Operating Officer for Seaside LNG Holdings, the parent company of Polaris New Energy, said: "We are excited to work with McAllister Towing because, as one of the oldest marine transportation companies in the US, they bring a tradition for providing unsurpassed operational excellence. We look to strengthen our strategic partnership with McAllister as we continue



to develop our position in the market by adding additional ATBs to our fleet and expanding to all coasts of the United States." Polaris New Energy is the marine bunkering subsidiary of Seaside LNG Holdings, a subsidiary of Northstar Holdco Energy focused on the production and delivery of LNG as a clean transportation fuel. Northstar is a diversified logistics company providing services to the North American energy industry.

KOTUG Australia Pty Ltd and **Westug Pty Ltd** have successfully concluded an agreement to re-shape the towage services for **Pilbara Marine**, a subsidiary of Fortescue Metals Group in Port Hedland. The service includes the operation of nine state of the art Rotortugs at Port Hedland, which have been servicing Fortescue and other port users since the commencement of operations in 2019. After almost three years of working together to successfully establish the towage service for Fortescue in Port Hedland, Westug and KOTUG have mutually and amicably agreed to exit



their agreement as of August 1st, 2021 with regard to this operation. The boards of both companies agreed that Fortescue's Port Hedland towage business will benefit from having a single party managing operations, and believe that a single contractor delivery model will have a positive impact on the management of operations and overall responsiveness to the end client. KOTUG will retain its existing Head Agreement with Pilbara Marine, requiring the company to supply tugs and have overall responsibility for the delivery of Port Hedland towage services. The operation of the towage services was previously sub-contracted to Westug, however KOTUG will assume

control upon Westug exiting the business and will directly manage the towage operation at Port Hedland. All existing Westug personnel will be transferred across to KOTUG as part of this agreement. KOTUG's CEO Ard-Jan Kooren stated; "KOTUG is fully committed to Pilbara Marine and Fortescue, we now look forward to focusing on working to fully optimize our Port Hedland towage operations and working in partnership with our valued client, Pilbara Marine. We thank Westug for their cooperation over the years. With our tugs, motivated back office team, shore support staff and crew partnerships, we look forward to taking the Port Hedland towage business to the next level." Westug CEO Mark Malone: "We are proud of the work our team has done to build the operation in Port Hedland, but the intensity of the operational requirements to keep such a busy port serviced to the required level is best served by a single towage operator. Despite our best efforts, having two parties sharing responsibility proved to be too much of a challenge. We wish KOTUG well in servicing Fortescue, and leave the operation with strong relationships and our focus squarely on other growth opportunities in the Australian market."

Tug Boat Market Report - November 2021

Leading tugboat builder **Sanmar** has announced that it has acquired a third shipyard in Turkey. Founded in 1976, Sanmar builds technologically-advanced state-of-the-art tugboats at its two shipyards, Sanmar Tuzla and Sanmar Altinova, in the cities of Istanbul and Yalova respectively. The shipyard that Sanmar has purchased was specialized in the repair and construction of small work boats and fishing boats. Located next to Sanmar Tuzla Shipyard. It will be totally rebuilt to meet to Sanmar's shipyard standards, ensuring maximum respect to the environment. Very high levels of employee safety and comfort will be a major priority in the planning of the new yard. The new yard will incorporate new offices, warehouses and pre-assembly halls and will be optimized for construction of



Sanmar's new electric tugboat series ElectRA, designed by Robert Allan Ltd. Once operational, the new yard will have a major positive effect on Sanmar's already outstanding production processes.



1 September 2021 marks **Svitzer**'s 10-year anniversary operating at the **Angola LNG (ALNG) terminal** in Soyo. A great milestone, which is made possible only through the excellent collaboration with its customer, ALNG, and the ongoing support from the crew and staff. Today, a team of 132 crew and onshore staff ensure safe and efficient operations at the ALNG terminal in Soyo and the CABGOC oil terminal offshore Cabinda, where Svitzer was operating since 2018. Although the composition of

the fleet and personnel has changed over the years, the level of service was consistent without any vessel delays since 2011. This means ALNG can continue to play a critical role in Angola's economy, and the loading of the 300th LNG cargo on 23rd July illustrates the success of this major Angolan project. Importantly, from the start, localization was key to delivering the needed marine services, although the absence of a large seafaring community in Angola was a bit of a challenge prior to setting up operations in 2011, as Nils de Jong, Country Manager Svitzer Angola explains: "We were determined to train as many Angolan seafarers as possible when we started operating in the country. That meant they had to follow a training program on board the training ship "Danmark" where the cadets undertook extensive training both on- and offshore to learn seamanship and the value of safety and teamwork," says Nils de Jong. Global, but local – getting the best of two worlds. With a very experienced crew, who have extensive knowledge to safely navigate the small channel in Soyo where the current from the Congo River makes berthing and un-berthing a rather complicated exercise, Svitzer Angola is combining its in-depth local knowledge with the advantages of being part of a global company. "Towage is very much a local business, and at Svitzer we strive to turn our global operational knowledge and industry insights into safe, reliable and efficient towage services for our customers in the local ports - in this case Soyo and Cabinda," says Nils de Jong. As most other countries in the world, the COVID-19 pandemic has also impacted Angola, but as things are easing, Svitzer Angola can focus on growing the business even further. "This year we are celebrating our 10-year anniversary here in Angola and I look forward to continuing the great collaboration with ALNG for many years to come. On behalf of Svitzer, I would like to thank everyone, from past and present, who has contributed to this successful partnership" ends Nils de Jong.

Svitzer Australia has signed a contract with **Southern Ports Authority** for a non-exclusive towage license at **Port of Bunbury** in Western Australia for five-years. Svitzer Australia's entry into the Port of Bunbury builds on the company's commitment to WA's regional ports, creating synergies with existing operations in Albany, Geraldton, Onslow, Fremantle and Kwinana. To service the port, Svitzer will deploy two state-of-the-art new builds equipped with fifi capability to provide safe, efficient and reliable towage services to customers and the port. Svitzer's entry to the port will include installing solar panels on the tug berth and the use of



fuel efficiency tools to track and help reduce emissions. Svitzer Australia Managing Director Nicolaj Noes said: "We are pleased to add the Port of Bunbury to our network of ports around the coast, providing safe, efficient and reliable towage services to our customers calling one of the largest regional ports in Australia. Svitzer is committed to the future of port sustainability, and with our entry to Bunbury we will look to invest further in sustainable, energy-efficient and nature-driven power options to support our port infrastructure." Southern Port Authority Chief Executive Officer Steve Lewis said: "After an extensive tender process, Southern Ports determined Svitzer was best suited to meet our towage requirements at the Port of Bunbury....Southern Ports welcomes Svitzer's investment in new tonnage and the benefits to the Port's customers from this contract in Bunbury Svitzer already provide towage services at the Port of Albany, and we look forward to continuing to work together to drive trade through the South West region."

Tug Boat Market Report – November 2021



With effect from September 2021, **Boluda Towage** commenced towage activities in the port of Rostock, Germany. The presence in the port of Rostock is another stepping stone towards strengthening and further expansion of Boluda Towage's activities in North West Europe and at the Baltic Sea region. Boluda Towage was asked by its valued customers to consider extending its towage services to Rostock, the most important German port in the Baltic Sea. Boluda Towage is already well-acquainted with this port, thanks to a track record of numerous special towing jobs, e.g. ships, pontoons and wind farm components, which Boluda Towage has passed the pier heads in Warnemünde. With the start-up of this new operation in Rostock, Boluda Towage also expresses its commitment and adaptability to follow its customers' business and to support further growth

and development in the Port of Rostock in cooperation with the local authorities and all stakeholders. At this initial start, Boluda Towage operates a fleet of two powerful tugs and will scale up the required tug capacity depending on the needs and requests of customers in this port. Thanks to a close cooperation with the local port authorities and pilots, the dedicated and well-experienced German crew of Boluda Towage was able to make the necessary preparations for a smooth start of towage operations. With this new port base, Boluda Towage will offer its local crew members, who are at home in and around Rostock as well as in Mecklenburg Vorpommern a nearby workplace. Boluda Towage's Executive Vice President Vicente Boluda Ceballos has welcomed the fact that "the Boluda flag will be a permanent presence in the Baltic Sea, which supports the expansion strategy of Boluda Towage's towing service in northern Europe, in line with various strategic acquisitions, recently closed by the company".

Boluda France, together with the Autonomous Port of Nouakchott, have formed the Society of Maritime Services of Nouakchott (SSMN). The CEO of Boluda Towage, Antonio Bordils, attended the presentation ceremony and announced that the new towing, mooring and pilotage services will begin operation on November 1st. Boluda Towage, through its subsidiary Boluda Towage France, has formed with the Autonomous Port of Nouakchott Port de l'Amitié (PANPA) the Society of Maritime Services of Nouakchott (SSMN). A business entity that will provide, as of November 1, towing, mooring and pilotage services in this port. This new activity in Mauritania will complement the service



that Boluda Towage France was offering since 2017 at the mining dock of the National Industrial and Mining Corporation(SNIM). On September 29th, the launching ceremony of the new entity took place in the port of Nouakchott, attended by the CEO of Boluda Towage, Antonio Bordils, and the CEO of Boluda France, Denis Monserand, on behalf of the Company. The Mauritanian authorities were represented by the Ministers of Transport, Fisheries and Trade, as well as the French Ambassador to Mauritania, Robert Moulié. The CEO of Boluda Towage highlighted in his speech that Boluda Towage, the second largest port towage services company in the world, with more than 325 tugboats operating in 95 ports around the world in more than 30 countries on three continents. "is really proud and satisfied to be able to be in Nouakchott to serve this port that is in constant development". The Society of Maritime Services of Nouakchott is born with the vocation to establish "the services of towing, mooring and pilotage at the highest international standards. Our desire," Bordils said, "is to make the port of Nouakchott a benchmark in terms of quality of service, safety, training, performance and competitiveness". The creation of SSMN, by investing heavily in nautical equipment, training and management systems, is proof of the commitment of the Boluda family to the port of Nouakchott and Mauritania. For Boluda, the Boluda Towage fleet, made up of the tugs "VB Jamsah" with a power of more than 5,000HP, "Oualata 1", "Chinguitty" and "Tergit", as well as a pilot boat "is our calling card to support and accompany the port of Nouakchott in its development". This family business, with more than 150 years of history and five generations, thanked the efforts made by the Government of Mauritania and PANPA in all these transformation and port extension projects, as well as the trust placed in Boluda to support them in this progress. Eighteen years of relations with Mauritania In his speech, the Boluda Towage representative also alluded to the close ties of Boluda Maritime Corporation and the Boluda family with Mauritania and its capital, recalling that in 2003 the company's shipping division, Boluda Lines, called for the first time in Nouakchott. "In this port and in this country we are at home," he added. Before those attending the event, it was highlighted that Boluda Lines has, for 18 years, supported the development of the Port of Nouakchott and experienced the transformation of this port, which today is a benchmark in the region. Boluda Lines, with more than 16 container ships, connects the Iberian Peninsula with the Canary Islands, Morocco, Senegal, Cape Verde and Mauritania. Regular freight services connect Nouakchott and Nouadhibou with Las Palmas and from there, throughout Europe. "The importance of having a regular, reliable and safe service is our priority," concluded the CEO of Boluda Towage.

Tug Boat Market Report - November 2021



SEA.O.G Offshore, an integrated services provider to the offshore energy industry, has announced a merger with **Crosby Tugs**. The partnership will focus on delivering installation support and operations and maintenance services for the US offshore wind industry. "The offshore wind industry must 'ADAPT and Evolve' as we like to say," James Clouse, CEO of SEA.O.G. Offshore. "That's where we come in. We work to address the regulatory and operational challenges facing developers in this quickly evolving industry." The partnership allows SEA.O.G to combine its services with Crosby's assets and experience to deliver low-cost and innovative solutions to the industry. "The Crosby

family of companies always finds a way of getting things done, and we immediately recognized that SEA.O.G Offshore had the same kind of dedication to solving problems," says Director of Special Projects Aaron Guidry. "We are thrilled to invest in an innovative company that is working tirelessly to address the needs of the offshore wind industry and, in doing so, foster a better, more sustainable blue economy." Crosby Tugs is one of the world's most experienced marine transportation providers. The Louisiana-based company delivers wide-ranging offshore and inland marine towing, dredging, and rock placement services along the Gulf Coast region and beyond. From a single tugboat launched in the 1970s, Crosby Tugs has grown to become a leader in multi-functional operations in both the Gulf of Mexico and internationally. "We are looking forward to continuing to support the ever-changing energy market, and with the combined synergies, we are going to be in a better position to service our clients. Our team is ready to drive the future forward." Kurt Crosby, CEO of Crosby Tugs. SEA.O.G Offshore is an active participant in the US supply chain for renewables. Supporting marine operations for over 5qw of the largest onshore turbines, they are a market leader in offshore tug and barge operations in renewables. The company also provides marine transport, subsea, logistics and compliance solutions. The new combined fleet has 130 inland and offshore towboats and a fleet of over 400 barges, in addition to dozens of industry professionals across several business units. Together, Crosby and SEA.O.G Offshore will bring the ADAPT feeder barge concept to market. ADAPT is a stable, semi-autonomous delivery and installation platform for Wind Turbine Components, Foundations, Scour Protection, and Cable lay. "We are all about connecting the dots," says Clark Buffam, COO of SEA.O.G Offshore "Over the years, we've listened to the offshore energy industry and figured out where and how to add value. We are passionate about promoting local content, reducing costs, and delivering innovation through collaboration for the many challenges the US faces on its path to sustainability."

19 Dec 2021 **Boskalis** announces that it has embarked on a review of its position as shareholder in the strategic joint venture **Smit Lamnalco**. Boskalis has held a 50% stake in Smit Lamnalco since 1964 with the remaining shares held by **The Rezayat Group**, whom is also reviewing its position. An update of this review will be provided by Boskalis as soon as there is reason to do so.





Boskalis and its co-shareholder KS Investments Pte. Ltd. (Keppel) have signed an agreement relating to the sale of their harbor towage activities in Singapore and Malaysia to Rimorchiatori Mediterranei S.p.A. The sale transaction relates to Keppel Smit Towage Private Limited (KST) and Maju Maritime Pte Ltd (Maju). Under the terms of the agreement, Boskalis expects to receive approximately EUR 80 million in cash for its 49% equity stake. The contribution of KST/Maju to the net profit of Boskalis over the last two years was EUR 4 million per annum.

Keppel Smit Towage (KST) was established in 1991 as a joint venture between Keppel and SMIT, a wholly-owned subsidiary of Boskalis. Over the past thirty years, KST has developed into one of the largest and leading harbor tug service providers in Southeast Asia. KST operates a combined fleet of 58 tug boats in Singapore and through its joint venture in Malaysia. The sale of KST follows the strategic decision taken by Boskalis in 2019 to divest its harbor towage activities. Boskalis divested its stakes in Saam Smit Towage and Kotug Smit Towage in 2019. Rimorchiatori Mediterranei S.p.A. is a subsidiary of Rimorchiatori Riuniti Group, a leading maritime service provider headquartered in Genoa, Italy established in 1922. Rimorchiatori Mediterranei operates a fleet of more than 100 modern vessels in more than 20 major ports employing approximately 900 people. The agreement is subject to approval from the regulatory agencies in Singapore and the transaction is expected to close in the first half of 2022.

Tug Boat Market Report – November 2021

PIRIOU ATG Romania is a 100% group subsidiary PIRIOU just bought. ATG shipyard is located in Giurgiu, 60km south of Bucarest-Romania. Firstly, exclusively dedicated to building vessels for inland waterway shipping, ATG gradually broadened its scope in building hulls and vessels for the offshore cargo transport, harbor workboats and fishing industries. Vincent Faujour, PIRIOU Group declares: "We are very happy and proud to involve ATG shipyard and its 300 employees inside the PIRIOU group. This shipyard we have been working with as a subcontractor in the past years enjoys a very good local and international reputation. We will rely on the management team we have already reinforced and carry on with the development of the site which offers a great potential." He adds: "Whereas our sites in Brittany have a great workload for several years, the acquisition of ATG strengthens our industrial



capacities and gives us the means to achieve our ambitions, namely to double our activity by 2025. We used to subcontract some hulls in Eastern Europe to third-party yards in case of overload. We will now be able to offer our customers, both civilian and military, French and foreign, 100% built by PIRIOU -fitted and delivered in Concarneau- at a competitive price. This new offer is completely complementary to our construction offer in Vietnam." In taking over ATG, the PIRIOU group workforce increases to 1,300 employees including 550 in France. PIRIOU is now established in Asia (Vietnam), Africa (Nigeria, Algeria, Morocco, Senegal), in the Indian Ocean (La Réunion) and Europe (mainland France, Romania). Moreover, the group intends to continue its international development and keeps being in line with its strategy -Be where our customers need us- with ongoing projects of establishment and development. PIRIOU ATG Romania is located inside the free zone of Giurgiu, on the Romanian shore of the Danube in front of Bulgaria, and also owns a concession in the harbor of Constantza – on the Black Sea. The shipyard of Giurgiu is located on 15 Ha of land and fitted with 30,000m² of workshops. Four 110m assembly halls communicate via a transfer area with a 110m and 3,000mt lifting capacity synchrolift. This synchrolift overlooks a well-protected dock that connects with the Danube. The shipyard outfit quay is nearly 250m long. Answering the European standards of quality management and respect for the environment, ATG has ISO 9001:2015 and ISO 14001:2015 certifications.

