

# Marcon International, Inc.

Vessels and Barges for Sale or Charter Worldwide

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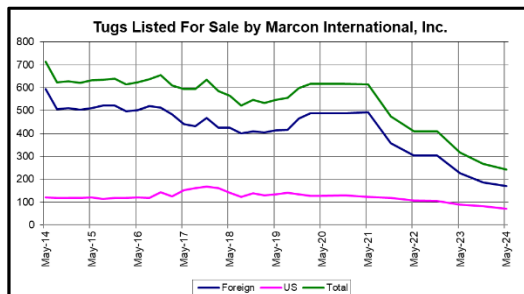
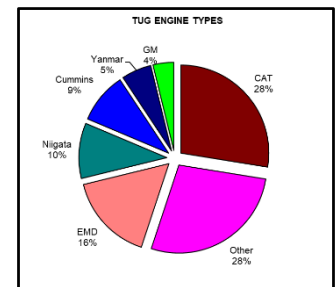
## Tug Market Report

Of the 13,275 vessels and 3,763 barges that Marcon tracked as of May 2024, 5,137 are tugs with 242 officially on the market for sale worldwide, down 74 or 23.42% from one year ago, May 2023, and down 292 or 54.68% from May 2019. 87.32% of U.S. and 39.18% of foreign tugboats for sale are direct from Owners. Twenty-six (26) or 10.74% of the tugs worldwide, primarily foreign flagged, were built within the last 10 years, are newbuilding re-sales or currently under construction – compared to 16.46% one year ago and 30.71% five years ago. Forty-four (44) (18.18%) are over 50 years of age, with three of those over 75 years old. Five have no age listed. The oldest tug Marcon currently has listed is a 1944 built 1,080BHP U.S. flag tug based on the U.S. East Coast. This “old lady” is offset by two twin screw and two azimuthing tug newbuild resales for delivery in the U.S. and Far East in 2024.



### Market Overview

The majority of tugs Marcon tracks for sale as of this report are in the US with 72 tugs officially on the market (vs. 89 one year ago), followed by 30 in Europe (34), 29 in the Far East (46), 22 in the Mediterranean (20), 21 in Southeast Asia (59), 18 in the South Pacific (13), 17 in Latin America (20), 12 in the Caribbean (9), 9 in the Mid East (same), 4 in Africa (2), 3 each in Canada (6) and Southwest Asia (2) and 2 where location unstated (7). Where machinery is known, CAT diesels power 65 or 28% of the tugs listed for sale. This is followed by 38 vessels with EMDs, 24 Niigata, 22 Cummins, 13 Yanmar and 9 with GM. 65 tugs are powered by other machinery from ABC to Wartsila with two Fairbanks Morse tugs on the market.



Five years ago, 30.71% of tugs for sale worldwide, primarily foreign flag, were built within the previous 10 years compared to 10.74% today. Then 13.30% of the tugs on the market were 50+ years old compared to 18.18% today. At that time, Marcon had six tugs older than 75 years, three more than today. The average age of all tugs that Marcon has for sale worldwide today is 33 years, with 1991 average build date, compared to 25 years, 1994 average built, in May 2019. The U.S. had the largest selection of tugs listed in 2019 with 128 available (24.0%), followed by 96 in Southeast Asia (18.0%), Mediterranean 70 (13.1%), 58 in the Mid East (10.9%), 47 in Europe (8.8%), 42 in Far East (7.9%), 36 in Latin America (6.7%), 21 in the Caribbean (3.9%), 12 where location is unknown (2.2%), 10 in the South Pacific (1.9%), 7 Africa (1.3%), 5 in Southwest Asia (0.9%) and 2 Canada (0.4%).

Looking at tugs for sale worldwide, conventional twin screw tugs lead with 150 (62.0%) available, followed by 58 azimuthing (24.0%), 24 single-screw (9.9%), seven Voith Schneider tractors (2.9%) and three triple screw (1.2%). This is comparable to five years ago when 12.9% of the 534 tugs for sale were single screw, 62.5% twin screw, 21.0% azimuthing, 1.9% VS tractor and 1.7% 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, having been relegated to nearly zero commercial work, except in certain specific cases, continue to be scrapped as few buyers are interested. Available for sale units have dropped considerably with many of those being scrapped due to age and condition. It is noted that in May 2024, Sea-Web reported 2,396 tugs worldwide scuttled, broken up or to be broken up world-wide. This is up 6.87% from May 2023's 2,242. Since May 2019, there has been a 58.68% increase in the number of tugs scrapped, with a sizable portion of those reported in 2021 and 2022. Scrapping rates slowed down in the past six months, with those which are scrapped just too costly to repair. The decline in scrapping is also a cause of an increase in demand for tugs and barges we have seen in certain areas of the market, especially when a shortage of units with desired specifications exists. Buyers are getting creative in purchasing units and then modifying the units to fit intended usage.

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Details believed correct, not guaranteed. Offered subject to availability.

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

Marcon's database shows 292 fewer tugs officially for sale than five years ago in May 2019 with the loss of 271 tugs in less than 6,000HP categories. At the same time, the average age for tugs under 6,000HP increased from 25 to 34 years. There were minor changes in the higher horsepower ranges as far as the number available for sale and average age. In summary, we saw a 54.68% drop in listings with an eight-year increase in overall average age.

The market for tugs of all sizes has been very tight for a while. With the current elevated newbuilding costs, owners are not interested in selling, but are instead trying to refresh equipment, renew certificates or otherwise get laid up vessels back into working shape to meet commitments. Various marine publications have reported that newbuilding costs doubled from 2000 to 2010 and again by 2020, with cost increases of 50-60% by the end of 2023. These statements align with what we have experienced from interactions with owners, operators and shipbuilders. On top of the already tight market, owners in states implementing tighter emissions restrictions are facing even more challenges as increased machinery costs and limited shipyard space are causing issues with keeping tugs working. So many owners are faced with a no-win situation.

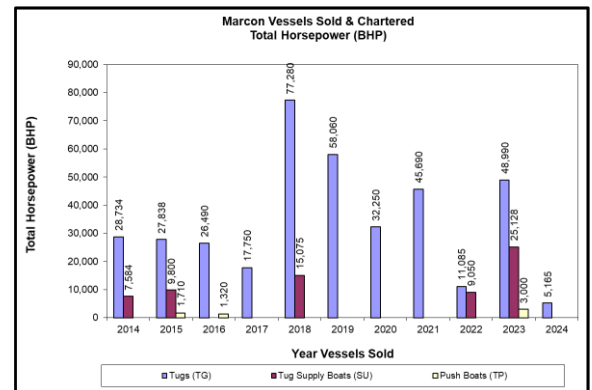
For those tugs which are offered for sale, they are few and far between at premium prices. Tugs for sale generally will need extensive steel work and/or machinery upgrades, and these costs are very difficult to predict with the spiraling shipyard costs being hit by rapidly rising labor costs, and supply chain interruptions these past few years. Related to sales prices and lack of availability of tonnage, we have seen high day rates asked for the few tugs available for charter. For foreign buyers coming into the US to find tonnage, MARAD approvals are taking at least 90 days in our most recent transactions. MARAD export times can be ignored. 60-90 days is the "new" normal and fluctuates with the availability of the MARAD Administrator's desk time as much as anything. Despite the challenges noted and many others unnamed, demand for tugs continues to remain strong, and with general shortages related to the market availability this will only look to continue.

### Recent Marcon Tug Sales & Charters

Marcon has sold two tugs totaling 5,165HP to date in 2024 out of four sales, one charter and one delivery. This is after selling or fixing tows for 12 tugs totaling 48,990BHP amongst 32 sales and charters in 2023. Since our first sale in 1983, Marcon sold or chartered 397 tugs totaling 1,301,927BHP out of 1,584 sales and charters total.

The beginning of June, Marcon closed on the sales of a 765HP single screw tug and an inland deck barge between private and confidential parties.

In March, Marcon closed on the private and confidential charter of a 4,400HP twin screw tug and completed the final delivery arrangements for an anchor handling tug supply vessel sold in a prior year.



### Featured Tugs Available for Sale in Descending BHP Order



**File: TG70136 Tug - Twin Screw:** 135.1' loa x 38.0' beam x 20.0' depth x 18.00' loaded draft. Built in 1975 by Astilleros del Atlantico; Spain. Rebuilt: 2001. Mexico flag. GRT: 721. ABS + A1, Ice C, Tow Service + AMS, Unrestricted. Exp Aug 2020. Dwt: 824mt. FO: 190,000g. FW: 22,000g. Winch: Smatco 66DAW dbl drum / GM8V-71 powered. Line Pull: 200T. Wire: 2,200' 2.25" ea drum (max). Stern Roller. Main Engines: 2 x EMD 20-645E7B total **7,200BHP**. 2 - FP props on 12" shafts. Kort nozzles. **Bollard Pull: 80MT**. Speed about 13kn on 270gph. Gensets: 2 - 152kW. Quarters: Total 9 crew. AirCon. Galley. Completely reconditioned & repowered in 2000. Welded steel hull with model bow, raised foc'stle bow, rounded stern with roller, two level superstructure forward with upper pilothouse. SB shark jaws (model: 350MTSJ), SB dual tow pins (model: 350MTTPA). 14' x 4' stern roller. **U.S. Gulf Coast.**

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

**File: TG46110 Tug - Twin Screw:** 110.0' loa x 32.1' beam x 12.5' depth x 12.90' light draft x 13.50' loaded draft. Built in 1976 by Delmar Systems, Larose LA. Rebuilt: 1990. U.S. flag. GRT: 168. ABS Loadline expired Oct. 2013. Last drydocking Oct. 2011. FO: 78,000g. FW: 5,000g. Winch: Double drum Intercon / GM6-71. Line Pull: 225T. Wire: 2,400' x 2" & 2,000' x 2.25". Main Engines: 2 x CAT 3606 total **4,300BHP**. 2 - 101" x 70" FP props on 10" shafts. Kort nozzles. Fitted with shaft brakes. Originally powered by Polar Nohabs. **Bollard Pull: 59.12T**. Pumps: Fire. Gensets: 2 - 75kW / GM6-71 208vAC. 11 bunks. AirCon. Sheer bow. Single drum bow winch with wildcat. **U.S. Northwest.**



**File: TG45013 Tug - Triple Screw:** 110.0' loa x 41.0' beam x 16.0' depth x 11.00' light draft x 14.00' loaded draft. Built in 1987 by Jacksonville, FL. U.S. flag. GRT: 139. ABS Loadline - Expired. No COI. FO: 110,000g. FW: 14,000g. Crane: 2T Hydraulic. Winch: Double drum. Line Pull: 100T. Wire: 2 - 2,000' x 2.25". Main Engines: 3 x EMD 12-645E2 total **4,500BHP**. 3 - FP 96" x 95" props on 9" shafts. Kort nozzles. Six steering "vane" rudders. **Bollard Pull: 72T**. Gensets: 2 - 70kW / GM; 1 - 90kW / GM. 11 berths (5-7 crew). Upper pilot house with 55' eye level. 1,000lpd watermaker. Range 30 days towing/60 days utility works. ITC - 450G / 135N. **U.S. Gulf Coast.**

**File: TG43129 Tug - Azimuthing:** 114.3' loa x 32.8' beam x 14.8' depth x 10.83' loaded draft. Built in 1996 by Kyeong-In Eng. & Shipbldg.; So. Korea. Chile flag. GRT: 375. LR 100 A1 Chile Coastal Service - Exp. May 2026. Dwt: 153mt. Light Disp.: 434mt. Winch: Towing Aft. Main Engines: 2 x Pielstick 8PA5L total **4,320BHP**. Aquamaster U.S. 2001/3150 props. **Bollard Pull: 53.1mt**. Speed about 13kn. Pumps: FiFi: 360m3/h. Gensets: 2 - 190kW / CAT 3406C-TA. Firefighting: 2 - 3,000Lpm. Monitors. Quarters: 9 persons. AirCon. Galley. Water curtain (125l/min). Oil Dispersant system (400l/min). Foam - 3mt, Dispersant - 4m3. Working but will consider serious interest. **South America West Coast.**



**File: TG43011 Tug - Azimuthing:** 114.3' loa x 32.8' beam x 14.8' depth x 10.83' loaded draft. Built in 1996 by Kyeong-In Eng. & Shipbldg.; So. Korea. Rebuilt: 2010. Mexico flag. GRT: 375. LR 100 A1 Mexican Coastal Service. SS Sept 2026. Dwt: 153mt. Light Disp.: 434mt. FO: 62.55m3. FW: 22.75m3. BW: 30.77m3. Winch: Hook. Main Engines: 2 x CAT C280-06 total **4,320BHP**. Aquamaster U.S. 2001/3150 props. Repowered in 2010 from MAN 8PA5L. **Bollard Pull: 54.5mt**. Speed about 13kn. Pumps: FiFi: 360m3/hr. Gensets: 2 - 85kW. Firefighting: 2 - 3,000Lpm monitors. Quarters: 9 persons. AirCon. Galley. Water curtain (125l/min). Oil Dispersant system (400l/min). Foam - 3mt, Dispersant - 4m3. Working but will consider serious interest. **Mexico West Coast.**

**File: TG40039 Tug - Twin Screw:** 137.1' loa x 32.8' beam x 15.1' depth x 11.81' loaded draft. Built in 2011 by Wuxue Janda Shipbuilding; China. Indonesia flag. GRT: 573. ABS Special Survey due Aug 2026. Dwt: 325mt. 120m2 clear deck. FO: 277m3. FW: 70m3. Crane: .69mt @ 8m Palfinger. Winch: 2 - 5mt tugger; 3mt capstan; 150mt double drum waterfall tow/AH. Line Pull: 100mt. Wire: 2 - 750m x 48mm. Stern Roller. Main Engines: 2 x Mitsubishi S8U-MPTK total **4,000BHP**. 2 - FP props. Kort nozzles. **Bollard Pull: 50mt**. Pumps: Fire: 2 - 1,476m3/h. Gensets: 3 - 325HP / Volvo D9 MG; 1 - 100HP / McWel MGP90S emer. FiFi-1. 2 - 1,200m3/h / monitor. Quarters: 16 persons. Anchor handling tug suitable for safety / standby ops, construction, installation and supporting accommodations, work, derrick & pipelay barges. 160mt SWL Wuxi shark jaw. 160mt SWL Wuxi towing pins. 1.5m x 3.5m 200mt SWL stern roller. Lifesaving per SOLAS. **Southeast Asia.**



# Marcon International, Inc.

## Tug Boat Market Report – May 2024



**File: TG39002 Tug - Twin Screw:** 139.0' loa x 34.0' beam x 17.2' depth x 10.60' light draft x 14.10' loaded draft. Built in 1976 by Burton Shipyard; Port Arthur, TX. Rebuilt: 2000. U.S. flag. GRT: 198. ABS +A1, Towing Service +AMS. Drydocking and special survey overdue Sept. 2015. Dwt: 647T. FO: 129,000g. FW: 12,300g. BW: 122,400g. Winch: Double drum Intercon 74077. Line Pull: 100T. Wire: 2 x 2,200' 2". Main Engines: 2 x EMD 16-645E6 total **4,200BHP**. 2 - 115"x88" 4-blade Stainless props. 12,400nm range @ 10kn. **Bollard Pull: 52.5ST**. Speed about 10-12.5kn on 104-179gph. Gensets: 2 - 99kW / GM8V71 450v 60Hz. 8 berths. AirCon. Galley. Hydraulic tow pins. 65 ton electric barge winches. Sold to current Owner by Marcon. Tanks coated at last drydocking. Low main engine and reduction gear running hours and machinery is all in very good overall condition. Laid-up in fresh water and plugged into shore power entire time. Contact this office for inspection details, price guidance and to arrange prompt inspection. Keen Seller. As brokers only, we invite best firm cash offers for owner's consideration **U.S. West Coast**.

**File: TG36015 Tug - Twin Screw:** 137.1' x 33.0' x 15.1' x 10.50' loaded draft. Built in 2010 by Jiangsu Wuxi Shipyard Co Ltd; China. Indonesia flag. GRT: 573. BKL. ABS +A1 Towing, OSV, AH (E) +AMS. SS due Jul 2025. Dwt: 328mt. 120m3 clear deck. FO: 270m3. FW: 70m3. Crane: 1.5mt @ 8m Palfinger. Winch: 2 - 5mt tugger; 3mt capstan; 75mt double drum tow/AH. Line Pull: 150mt. Wire: 2 - 1,000m x 46mm. Stern Roller. Main Engines: 2 x Yanmar 8N21A-EN total **3,600BHP**. 2 - FP props. Kort nozzles. **Bollard Pull: 45mt**. Pumps: Fire: 1,500m3/h. Gensets: 3 - 306HP / Volvo Penta; 1 - 2HP / Kama KDE emer. FiFi-1/2. 2 - 600m3/hr / monitor. Quarters: 18 persons. Anchor handling tug suitable for safety / standby ops, construction, installation and supporting accommodations, work, derrick & pipelay barges. 300mt SWL Karamoy shark jaw. 160mt SWL Karamoy towing pins. 1.8m x 4.2m 200mt SWL stern roller. Lifesaving equipment as per SOLAS. 13 men FRC c/w 220HP jet prop rescue boat. Dacon Rescue Scoop & Frame. **Southeast Asia**.



**File: TG35130 Tug - Azimuthing:** 100.5' x 31.5' x 15.8' depth x 13.50' loaded draft. Built in 1991 by Richards Shipbuilders Ltd; U.K. U.K. flag. GRT: 371. LR +100A1 Tug, +LMC + UMS. UK near continental Trading Area. SS-DD due Dec 2025. FO: 127mt. FW: 51mt. BW: 31mt. Crane: Effer Deck Crane. Winch: Fwd / Aft - Single Drum Brattvaag. Stern Roller. Main Engines: 2 x Ruston 6RK270M total **3,862BHP**. 2 - Aquamaster US 1251/2750 props. Bowthruster 182HP. **Bollard Pull: 50mt**. Speed about 12kn on 350lph. Gensets: 2 - 312kW / Gardnier 6LXB; 1 - 85kW / Gardnier 440vAC 50Hz. Firefighting: FiFi with Foam. 8 berths. AirCon. Foam - 12.3m3. **Europe Western**.

**File: TG35092 Tug - Twin Screw:** 87.6' loa x 28.0' beam x 13.1' depth x 11.20' loaded draft. Built in 2002 by Detroit Chile SA. Peru flag. GRT: 218. ABS A1 Towing Vessel, AMS. Exp July 2027. FO: 57T. FW: 20.8T. Main Engines: 2 x MTU 12V4000M60 total **3,590BHP**. **Bollard Pull: 42T**. Gensets: 2 - 84kW. **South America West Coast**.



**File: TG35014 Tug - Twin Screw:** 147.6' loa x 36.1' beam x 13.1' depth x 10.50' loaded draft. Built in 2007 by Berjaya Dockyard Sdn Bhd; Miri. Indonesia flag. GRT: 497. RINA BKL. Dwt: 465mt. 18.2m x 8.5m clear deck. FO: 280m3. FW: 150m3. Crane: 2T @ 9m. Winch: 200T brake double drum. Line Pull: 100mt. Wire: 2 x 1,000m 52mm. Stern Roller. Main Engines: 2 x CAT 3512B total **3,500BHP**. 2 - FP props. Kort nozzles. Bowthruster 4.5mt. **Bollard Pull: 41mt**. Pumps: Fire: 1,200m3/h. Gensets: 3 - 349HP / CAT 3406. FiFi-1/2. 2 - 600m3/hr monitors. Quarters: 15 persons. Standard KCM 45M design anchor handling tug / utility vessel suitable for safety / standby ops, construction, installation and supporting accommodations, work, derrick & pipelay barges. 2 - 10T tuggers. 2 - 5T tuggers. 2 - 200T SWL shark jaws. 2 - 200T SWL tow pins. Lifesaving & firefighting as per SOLAS. **Southeast Asia**.

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

**File: TG32198 Tug - Twin Screw:** 105.3' loa x 29.5' beam x 13.8' depth x 11.86' loaded draft. Built in 2008 by Tang Tiew Hee; Malaysia. Singapore flag. GRT: 299. NKK NS\* (Tug) MNS\*, LSA, RCF. Special due Jun 2023. Docking due May 2022. Dwt: 212mt. FO: 236mt. FW: 22mt. BW: 31mt. Winch: 40T brake single drum & 40T SWL tow hook. Stern Roller. Main Engines: 2 x Cummins KTA50-M2 total **3,200BHP**. 2,400 x 1,524mm 4-blade FP props. Kort nozzles. P/S Tailshaft Surveys due 28 May 2024. **Bollard Pull: 40mt**. Speed about 12kn on 295L/h. Gensets: 2 - 100kW / Cummins 6BT5.9-D; 1 - 25kW / Yanmar 4TNE 106G1A. Quarters: 15 crew. AirCon. 2 to 15-person life rafts. **Southeast Asia.**



**File: TG32053 Tug - Twin Screw:** 105.0' loa x 30.2' beam x 14.7' depth x 12.50' loaded draft. Built in 2007 by Rushan City Shpbldg. Co.; China. Colombia flag. GRT: 279. LR +100 A1 Tug +LMC. Exp Feb 2027. Dwt: 270mt. Light Disp.: 284mt. 85m2 clear deck. FO: 258m3. FW: 24mt. BW: 14mt. Winch: Thor TH-15HTW-MO8-202B. Main Engines: 2 x Cummins KTA50-M2 total **3,200BHP**. 2 - FP Kaplan props. Kort nozzles. **Bollard Pull: 45T**. Speed about 12kn. Gensets: 2 - 101.25kVA / Cummins 6CTA5.9 400vAC 50Hz. Firefighting: 300m3/h. Quarters: 10 crew. AirCon. Galley. Tug is suitable for towing, mooring, firefighting and

pollution control. Reportedly in excellent condition. Recently drydocked with main engines and gear boxes overhauled. Increased fuel capacity and additional deck space. **Caribbean.**

**File: TG32038 Tug - Twin Screw:** 105.0' loa x 29.9' beam x 13.8' depth x 11.50' loaded draft. Built in 2007 by SL Shipbuilding Contractor; Sibul, Malaysia. Mexico flag. GRT: 296. Class: RINA C + Hull + Mach. Exp. June 2024. FO: 212mt. FW: 32.7mt. BW: 50m3. Winch: Double drum hyd. Line Pull: 40T. Wire: 2 - 700m x 52mm. Main Engines: 2 x Cummins KTA50M2 total **3,200BHP**. FP props. Kort nozzles. **Bollard Pull: 41.2T**. Speed about 11kn free on 125gph. Gensets: 2 - 125kW / Cummins 6CTA8.3-D, 1 - 32kW / Yanmar. AirCon. Galley. **Mexico Gulf Coast.**



**File: TG30258 Tug - Twin Screw:** 105.0' loa x 34.0' beam x 10.7' depth. Built in 1976 by J.M. Martinac Shipbuilding, WA. U.S. flag. GRT: 151. ABS Loadline exp. 25 Feb 2015. Laid-up. Dwt: 252T. FO: 66,000g. Main Engines: 2 x EMD 12-645-E6 total **3,500BHP**. 2 - FP props. 01/2024 About 30,000hrs on M/Es. Gensets: 2 - Northern Lights. AirCon. Galley. Upper pilothouse. **U.S. West Coast.**

**File: TG30196 Tug - Twin Screw:** 120.0' loa x 31.0' beam x 14.8' depth. Built in 1970 by McDermott, Amelia, LA. U.S. flag. GRT: 177. ABS Loadline due May 2023. USCG COI Sub M - Exp. July 2027. FO: 96,000g. FW: 3,000g. Winch: Double Drum Markey TDSD 32. Line Pull: 179mt. Wire: 2 - 2,200' x 2". Main Engines: 2 x EMD 12-645E2 total **3,000BHP**. 2 - FP props. **Bollard Pull: 37.4mt**. Gensets: 2 - 110kW John Deere 6068. AirCon. Galley. Hydraulic Tow Pin / Roller system. Owner is a keen Seller and inviting offers after inspection. **U.S. West Coast.**



**File: TG30123 Tug - Twin Screw:** 101.4' loa x 26.8' beam x 12.3' depth. Built in 1954 by John E. Mattan & Sons; NY. Rebuilt: 2000. U.S. flag. GRT: 147. USCG COI Sub. M - pending Q3-Q4 2023. FO: 57,000g. FW: 2,000g. Winch: Single drum Burrard + 18" capstan. Wire: 2,500' x 2". Main Engines: 2 x EMD 12-645E2 total **3,000BHP**. 2-FP 88" x 108" Nautican/Rice props on 8.75" shafts. Kort nozzles. **Bollard Pull: 42.5mt**. Gensets: 1 - 100kw / GM6-71, 1 - 40kW / GM4-71. Quarters: 3 singles, 2 doubles. Galley. After steering station. Vessel converted to twin screw in 2000 from single screw tug. Spill containment system; Orville hook. X<150GRT. No ITC measurements have been done for this tug. **U.S. Northwest.**

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

**File: TG29114 Tug - Twin Screw:** 114.8' loa x 34.6' beam x 16.8' depth x 14.90' loaded draft. Built in 1978 by Cochrane Shipbuilders Ltd; Selby, U.K. St Vincent/Grenadine flag. GRT: 369. Caribbean Cargo Ship Safety Cert - Exp Feb 2028. Last DD Nov 2023, DD due Feb 2026. Dwt: 318mt. FO: 187m<sup>3</sup>. Winch: K&L Single drum hydraulic. 55T Tow hook. Wire: 720m x 48mm. Main Engines: 2 x Ruston 8RKCM total **2,920BHP**. 2 - FP props. Kort nozzles. **Bollard Pull: 50mt**. Speed about 12.5kn. Gensets: 3 - 78kW / Dorman 400vAC 50Hz. Quarters: 12 men. AirCon. Galley. Harbor and ocean tug. ISM



certified. Only available for sale EN BLOC with barge DB32667. **File: DB32667 Deck Barge - Ocean:** 326.4' loa x 67.0' beam x 20.0' depth x 14.60' loaded draft. Built in 1966 by Kure Shipbldg & Eng.; Japan. St Vincent/Grenadine flag. GRT: 3,312. NRT: 993. IRS Panama. Exp Jan 2028. Last DD Jan 2022, next DD due July 2024. Dwt: 6,500T. 77m x 17m clear deck. 3m high bin walls. 45' ft heavy duty stern ramp. Reportedly good condition. **Caribbean.**

**File: TG29107 Tug - Twin Screw:** 106.0' x 34.0' x 10.5' x 10.50' lt draft x 13.00' loaded draft. Built in 1970 by J.M Martinac SB. U.S. flag. GRT: 193. USCG COI Sub M. Exp. Jun 2026. FO: 59,600g. FW: 3,500g. Winch: SWANN single drum. Wire: 2,400' x 2.125". Main Engines: 2 x EMD 8-645E5 total **2,900BHP**. 2 - 87" x 86" 4-blade SS FP props. Kort nozzles. **Bollard pull astern @ 43,500lb. Bollard Pull: 30ST**. Gensets: 2 - 125kW/GM6-71 450vAC 60Hz. 8 crew in 5 cabins. Designed for shallow draft ops. Raised pilothouse. Model bow. Flanking rudders. Used for coastwise & river work. Ex-ABS + A1 Towing + AMS. Both M/Es had the top end overhauled in 2021. Working steady. **U.S. Northwest.**



**File: TG28193 Tug - Twin Screw:** 95.1' x 28.2' x 13.5' x 11.80' loaded draft. Built in 1995 by President Marine Pte; Singapore. Panama flag. GRT: 223. LR 100A1 LMC. Exp. Apr 2025. Dwt: 164mt. Light Disp.: 265mt. FO: 96.4m<sup>3</sup>. FW: 38m<sup>3</sup>. Tow Hook. Main Engines: 2 x Yanmar T240-ET total **2,800BHP**. 2 - Bronze FP props. **Bollard Pull: 39T**. Gensets: 2 - 60kW / Leroy GM6-71 380vAC 50Hz. Quarters: 7 crew. Harbor tug. Reportedly in good condition. Currently working. **South America West Coast.**

**File: TG22103 Tug - Twin Screw:** 100.2' loa x 29.0' beam x 14.5' depth. Built in 1975 by Main Iron Works; Houma, LA USA. Rebuilt: 2011. U.S. flag. GRT: 170. USCG COI Sub M - Exp. March 2025. Winch: Almon Johnson (232) single drum. Main Engines: 2 x CAT 3512C total **2,560BHP**. 2 - FP props. AirCon. Galley. Flush deck, upper pilot house. Outfitted with JAK Coupler system in 2011 at Feeney's Enterprises of NY. ITC - 292G / 87N. Capstan also fitted aft. Formerly classed ABS +A1 +AMS Towing Service class but allowed to lapse. Reportedly in good condition. **U.S. Northeast.**



**File: TG21075 Tug - Twin Screw:** 73.8' x 24.4' x 12.3' x 10.40' loaded draft. Built in 1996 by Damen, Holland. Colombia flag. GRT: 135. LR +100 A1, LMC Coastal Service. 27m<sup>2</sup> clear deck. FO: 34.9m<sup>3</sup>. FW: 9.2m<sup>3</sup>. BW: 4.5m<sup>3</sup>. Winch: Ridderinkhof 20T Hydraulic +20T tow hook. Line Pull: 60T brake. M/Es: 2 x Cummins KTA-38M total **2,120BHP**. 2 - Lips FP props. Kort nozzles. **Bollard Pull: 23.07T**. Cummins 6BTA diesel powered FiFi pump 1,400m<sup>3</sup>/h. Gensets: 2 - 58kW / Cummins, 440vAC, 60Hz. Fifi: 300m<sup>3</sup>/hr monitor. 5 berths. AirCon. Dispersion - 1.5m<sup>3</sup>; Foam - 2.5m<sup>3</sup>. Damen Stantug design. **Caribbean.**

**File: TG21074 Tug - Twin Screw:** 73.8' loa x 23.8' beam x 12.3' depth x 10.43' loaded draft. Built in 1995 by Damen Shipyard / Tczew Stocznia SP Z. Colombia flag. GRT: 145. LR +100 A1 LMC Tug, Coastal Service. Special and Docking Surveys due Jun 2025. 35m<sup>2</sup> clear deck. FO: 38m<sup>3</sup>. FW: 10m<sup>3</sup>. Winch: Mampaey Tow Hook (SWL 45.9T). Main Engines: 2 x Cummins KTA-38-M total **2,090BHP**. 2 - 1,900mm Bronze FP props. Kort nozzles. P/S Tailshaft Surveys due Jan 2023. **Bollard Pull: 31mt**. Speed about 10kn free. Pumps: GS/Bilge: 2. Gensets: 2 - 58kW / Cummins 4BT 110/440vAC 60Hz. Firefighting: 1,200m<sup>3</sup>/h pump + monitor. Quarters: 7. AirCon. Galley. Damen Stan tug 2207. National Gross Tonnage: 104.9. Currently operational. Recent dry dock maintenance. Suitable for towing, mooring, firefighting and pollution control. 1.5m<sup>3</sup> oil dispersion. **Caribbean. 2nd Half 2024.**



# Marcon International, Inc.

## Tug Boat Market Report – May 2024



**File: TG20028 Tug - Twin Screw:** 67.6' x 21.9' x 8.8' depth x 6.56' light draft. Built in 1958 by Lester F. Alexander Co./ Astivik S.A. Rebuilt: 2013. Colombia flag. GRT: 118. Class: 40.1-C-01-G Bay, Coastal, National Loadline. FO: 11,500g. FW: 20mt. Main Engines: 2 x CAT 8V 3508 total **2,000BHP**. 2 - 60" x 48" 4-blade FP props. **Bollard Pull: 20.7mt**. Gensets: 2 - 35kW / Cummins 35MCGBA. 6 crew in 4 cabins. AirCon. Twin-Screw tug. Steel hull. Currently working in bay operations. **South America.**

**File: TG13060 Tug - Twin Screw:** 68.9' loa x 26.3' beam x 13.1' depth x 7.05' light draft. Built in 1982 by Lester F. Alexander Co. / Astivik S.A. Rebuilt: 2013. Colombia flag. GRT: 72. Class: 40.1-C-01G Bay, Coastal, National Loadline. FO: 15,000g. FW: 20mt. Main Engines: 2 x Cummins QSK 19-M total **1,320BHP**. 2 - 54" x 40" 4-blade props. **Bollard Pull: 14.5mt**. Speed about 14.5mt. Gensets: 2 - 35kW / Cummins. 6 crew in 4 cabins. AirCon. Twin-screw tug. Steel hull. Currently working in bay operations. **Central America.**



**File: TG08065 Tug - Twin Screw:** 65.0' loa x 23.0' beam x 5.0' depth x 6.00' light draft x 8.00' loaded draft. Built in 1969. U.S. flag. GRT: 85. USCG COI Sub M; exp. Feb 2026. 12' x 18' clear deck. FO: 16,500g. Winch: 1 - 6T. Main Engines: 2 x CAT D353 total **1,200BHP**. 2 - 62" 4-blade props on 5" shafts. Endurance: 20 days or 3,000 miles. Speed about 10kn. Gensets: 1 - 10kW / Miller; 1 - 5kW / Farymann. **U.S. Gulf Coast.**

### Worldwide Number of Tugs

According to **S&P Global Sea-web Online Ship Register**, which only covers "sea-going" vessels over 100GRT, as of 10 May 2024, there were 21,861 "sea-going" tugs over 100GRT worldwide, up from 21,360 (2.35%) and 19,342 (12.79%) in May 2023 and 2019, respectively. Total horsepower is 60,043,759BHP, up 1,679,226BHP (2.88%) over the past year. Even considering flags of convenience, the largest national fleet of tugs over 100GRT continues to be under Indonesian flag with 6,714 tugs totaling 12,137,629BHP. The U.S., as the second largest national fleet of tugs, operates 1,447 "sea-going" tugs over 100GRT, or 6.62% of the world market, totaling 5,428,780BHP (9.04% global BHP). Average age of tugs worldwide is 23.3 years (built 2001) with the U.S. flag "sea-going" fleet at 35.9 years (built 1989). The "Unknown" flag group is 9.44% of the world market, comprised of 2,063 tugs totaling 4,291,363BHP or average 2,080BHP each with an average age of 40.1 years (built 1984). This large "Unknown" group indicates to us that older, lower horsepower tugs may be falling off the radar. Five years ago, the average age of the worldwide fleet was 21.8 years (built 1998). Average horsepower of the worldwide fleet over the past five years has held steady at approximately 2,740BHP.

**Top 15 "Sea-Going" Tug Fleets by Units as Of May 2024 According to S&P Global Sea-web Online Ship Register**

Flag	Total BHP	%	# Tugs	%	Avg BHP	Avg Age
<b>Worldwide</b>	<b>60,043,759</b>	<b>100.00%</b>	<b>21,861</b>	<b>100.00%</b>	<b>2,747</b>	<b>2001</b>
Indonesia	12,137,629	20.21%	6,714	30.71%	1,808	2011
Unknown	4,291,363	7.15%	2,063	9.44%	2,080	1984
<b>United States Of America</b>	<b>5,428,780</b>	<b>9.04%</b>	<b>1,447</b>	<b>6.62%</b>	<b>3,752</b>	<b>1989</b>
Japan	2,721,183	4.53%	730	3.34%	3,728	2008
Korea, South	1,864,624	3.11%	587	2.69%	3,177	1997
Russia	1,520,405	2.53%	555	2.54%	2,739	1996
Malaysia	1,202,337	2.00%	524	2.40%	2,295	2007
India	1,453,032	2.42%	504	2.31%	2,883	2003
Singapore	1,124,188	1.87%	391	1.79%	2,875	2012
Panama	1,228,883	2.05%	374	1.71%	3,286	1996
Turkey	1,248,450	2.08%	333	1.52%	3,749	2010
Philippines	702,270	1.17%	293	1.34%	2,397	1983
St Vincent & The Grenadines	1,200,008	2.00%	287	1.31%	4,181	2014
Italy	1,138,269	1.90%	286	1.31%	3,980	1996

# Marcon International, Inc.

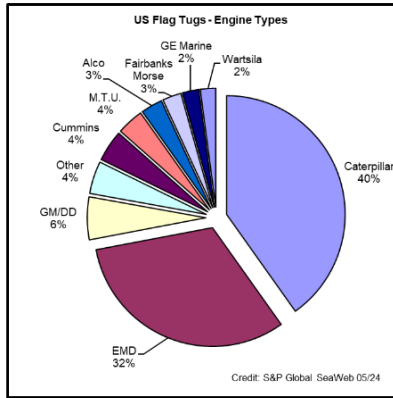
## Tug Boat Market Report – May 2024

### Breakdown of U.S. “Sea-Going” Fleet

According to **S&P Global Sea-web Online Ship Register**, as of May 10, 2024, the U.S. domestic tug fleet consisted of 1,447 “sea-going” tugs totaling 5,428,780BHP. The U.S. flag fleet decreased by 39 or 2.62%, total horsepower decreased by 160,996BHP or 2.88% and average age increased by about seven months to 35.3 years, compared to one year ago. The U.S. fleet over 100GRT decreased by 13 or 0.89% but increased by 82,527BHP or 1.54% since May 2019. The average age increased by two years and three months. 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. Unfortunately, we do see many that should be scrapped being offered for sale.

**U.S. Sea-Going Tug Fleet Over 100GRT By BHP According to S&P Global Sea-web Online Ship Register as of May 2024**

	Unknown BHP	Under 999	1000-1999	2000-2999	3000-3999	4000-4999	5000-5999	6000-6999	7000-7999	8000-8999	9000 Plus	Total
<b>Total #</b>	100	37	194	187	272	275	139	146	32	14	51	1,447
<b>Avg. BHP</b>		798	1,501	2,355	3,407	4,353	5,376	6,485	7,226	8,225	11,354	
<b>Avg. LOA</b>	87	77	84	95	104	105	106	108	133	135	142	
<b>Avg. Beam</b>	28	23	26	29	32	35	36	39	41	42	47	
<b>Avg. Depth</b>	11	9	11	13	15	16	17	18	19	21	24	
<b>Avg. Year Built</b>	1977	1958	1970	1978	1982	1997	2002	2010	1993	2007	2007	1988



Of the 1,447 U.S. tugs in Sea-web, 157 have unknown engines. 518, or 40% where type is known, are powered by CATs, 411 (28%) by EMDs, 75 (5%) by General Motors / Detroit Diesels, Cummins 4%, Alcos and M.T.U.s (Rolls Royce) with 3% each, and Fairbanks Morse, GE Marine and Wartsila have 2% each of the market share. Five years ago, of 1,460 U.S. flag tugs, 464 or 32% were powered by CATs, 457 (31%) by EMDs and 81 (6%) by GM / DD. Comparing May 2024 against May 2018, EMDs lost three percentage points, while CATs gained four percentage points. All other types were consistent between the time points. In the current fleet, 265 (18%) and 791 (55%) are conventional single and twin screw, respectively. 325 azimuthing (22%), 43 triple screw (3%) and 23 Voith tractor tugs (2%) make up the remaining 27%. Compared to May 2019, today there are 33 fewer single screw, 15 fewer twin screw and 28 more azimuthing tugs in the U.S. tug fleet where over 100GT.

### Worldwide Articulated Push Tugs Fleet

According to **S&P Global Sea-web Online Ship Register**, as of May 10, 2024, there are 247 articulated push tugs above 100GT worldwide. 67.61% or 167 are U.S.-flagged with average 6,352BHP and average age of 25 years - with many older units being conversions of conventional tugs. The second largest fleet with 16 ATB tugs is attributed to “unknown flag”; followed by seven flagged in Liberia and six each in Canada, Indonesia and South Korea. The remaining 39 are spread among 20 countries. The average age of non-U.S. flagged articulated push tugs is 34 years with average 4,383BHP. Of total tugs worldwide, ATB tugs make up 1.13%. However, in the U.S., articulated push tugs account for 11.54% of all tugs. Since May 2023, there was only a one unit decrease in U.S.-flagged ATB tugs. Average age in the U.S. remained at 25 years old, with outside the U.S., increasing one year to 34 years old. The youngest ATB fleets sail under Liberian and Russian flags; Russia with a 2020-built, 3,400BHP ATB and Liberia with seven average 2020-built ATBs. Bahamas has the oldest ATB, a 1,923BHP 1966-built unit. Compared to May 2019, the worldwide ATB tug fleet grew by 31 vessels, 19 in the U.S. and 12 elsewhere. Average age then was 19 years for U.S. vessels and 32 years old for non-U.S. Average BHP was slightly higher at 6,683BHP for U.S. and 4,586BHP for non-U.S.

Sea-web Articulated Push Tugs Summary as of 10 May 2024							
	Total BHP	%	# Tugs	%	Avg BHP	Avg Age	Age in Years
US	1,060,842	75.16%	167	67.61%	6,352	1999	25
Foreign	350,607	24.84%	80	32.39%	4,383	1990	34

Marcon is currently tracking 132 ATB tugs worldwide with eight currently for sale, ranging in age from a 2024 newbuild to 50 years old. Five of the eight ATB tugs for sale are in the U.S. with two in the Far East and one in the Caribbean.



# Marcon International, Inc.

## Tug Boat Market Report – May 2024

### Vessel & Shipyard News

According to the **U.S. Coast Guard Merchant Vessels of the U.S.** database updated June 5, 2024, 32 towing vessels are listed with 2024 build dates. These range from 25' to 115' LOA, 820BHP to 7,000BHP (where BHP given) vessels. In 2023, 92 towing vessels were built or completed, following 83 in 2022, 107 built or completed in 2021 and 128 in 2020.

**S&P Global Sea-web Online Ship Register** as of May 10, 2024, reports 846 towing vessels, all over 99GT, built or to be built in 2024 or later. The 846 towing vessels represent 2,991,543HP (average 3,536HP). 274 are on order for Indonesia, 140 for St Vincent & The Grenadines, 98 for Turkey, 45 for Singapore, 36 for Egypt, Bangladesh 24, 20 for Panama, 18 India and 16 for the U.S. The remaining 175 are being built for 43 other countries. Looking at average BHP for each country's newbuilds is interesting as the U.K. has the lowest with an average 592BHP, while Hong Kong with three tugs under construction averaging 8,039BHP ranks the highest for average BHP under construction. The U.S.' 16 tugs under construction average 5,040BHP.

On February 27th, 2024, the world's first Voith propelled tractor tug with LNG dual fuel propulsion was successfully launched by **Uzmar Shipyard** in Istanbul, Turkey.

Named the "*Sultanhani*", this is the first of two hulls being built for Turkish tug operator **BOTAS to Robert Allan Ltd.**'s TRAKtor V3900-DF design. A first of its kind design, the TRAKtor V3900-DF builds on Robert Allan Ltd.'s extensive experience designing both Voith tractor tugs and LNG dual fuel tugs. It combines the excellent maneuverability and reliability of Voith propulsion in a greener envelope where the tug can operate on either diesel oil or LNG. Even when operating on diesel oil alone emissions are reduced with an IMO Tier III after-treatment installation. Due to the forward location of the VSP units the LNG tank hold is located aft of the engine room, providing separation of the gas system and any associated hazardous areas from the accommodation block. Particulars of the TRAKtor V3900-DF are as follows: Length Overall: 39.0m; Beam, Moulded: 15.0m; Depth, Moulded: 6.0m; LNG Capacity: 40m<sup>3</sup>; Diesel Oil Capacity: 164m<sup>3</sup>; Power: 2 x 3,000kW; Bollard Pull (predicted): 80mt.



London, 19 December 2023 – **Svitzer**, a leading global towage provider and part of **A.P Moller-Maersk**, has announced the successful delivery of "*Svitzer Estelle*", the second tug built as part of the company's ongoing partnership with **Uzmar Shipyards**. "*Svitzer Estelle*" represents another step in Svitzer's ongoing European fleet modernization and expansion program. The newly built, Robert Allan Ltd. designed RAstar 3200W will be deployed by Svitzer on the River Thames and the River Medway, bolstering the company's operations in the busy Port of London. The first tug delivered by Uzmar Shipyards in May 2023, "*Svitzer Elizabeth*", is currently in service in the Port of Liverpool. Svitzer's partnership with Uzmar Shipyards began with the delivery of two tugs for the company's fleet in Australia. Success over the years has enabled the two businesses to work together to support the safe, efficient, and sustainable delivery of marine towage services. "*Svitzer Estelle*" has a bollard pull of 80mt, and has an L.O.A. of 32m, with a beam of 13.2m and a depth of 5.5m. The RAstar 3200W series tug has a 199m<sup>3</sup> fuel capacity and 40m<sup>3</sup> freshwater capacity, with Escort Tug and Firefighting 1 notation. The vessel is powered by two Caterpillar 3516E main engines rated at 2,525kW at 1,800rpm, with IMO III certified aftertreatment, and has two Kongsberg US255 Z-drives with 2.8m FP propellers. As "*Svitzer Estelle*" is UK-based, the vessel will be able to fall under Svitzer's EcoTow net-zero carbon harbor towage solution. As part of EcoTow, Svitzer deploys sustainable marine biofuel across its UK fleet to reduce the carbon impact of towage for its customers.

**Med Marine**, a leading provider of top-tier tugboats and workboats, proudly announces the successful delivery of the MED-A2575 series Robert Allan RAstar 2500-W design tugboat to **Boluda Towage**. The vessel, named as "*VB Ahmose*," is equipped with advanced features that exemplify operational versatility, making it an optimal choice for terminal escort and harbor towage operations. Additionally, the tugboat is outfitted with state-of-the-art fire-fighting systems, ensuring safety in all operational circumstances. Boluda Towage's selection of Med Marine's unit underscores the vessel's outstanding operational capabilities, solidifying its status as an ideal solution for a range of maritime activities. The "*VB Ahmose*" is set to embark on its maiden voyage to its designated home in Egypt. Technical specifications of the tugboat: Length: 25.2m; Breadth: 12m; Depth: 4.60m; Draft: 5.75m; Crew: 7 people; Bollard Pull: 75mt; Speed: 12kn.



# Marcon International, Inc.

## Tug Boat Market Report – May 2024



**Med Marine** and **SVS Maritime** owned by **Vernicos Scafi Group**, signed a contract for the construction and delivery of a MED-A2575 series tug on March 7, 2024. The RAmports 2500W series tug is scheduled to be delivered to her owner in Greece in September 2024. This powerful tug will be the second newbuilding for Vernicos Scafi Group by Med Marine's Eregli Shipyard. The MED-A2575 series tug, measuring 25m in length and boasting a 75mt bollard pull capacity, is equipped to meet Class FIFI-1 requirements. This powerful RAmports 2500W series tug is constructed as a multi-purpose tug, working off a forward winch for ship handling, towing, pushing, mooring, firefighting facilities and also equipped with an aft towing hook and a capstan.

Technical specifications of the tugboat: Length: 25.20m; Width: 12m; Depth: 4.60m; Draft: 5.75m; GRT: <400; Bollard pull: 75mt; Speed: 12 knots; Crew: 8 people.

**Vernicos Scafi Tugs** and **Salvage Maritime Co.**, a Greek Towage and Salvage operator in Greece/East Med/Black Sea/Red Sea, together with its partners in SVS, announced the purchase of a second newbuilding tug which is expected to be delivered in Turkey within March 2025, under Greek flag. MED-A2575 was built by **Med Marine** in Eregli Shipyard in Turkey, one of the most reputable shipyards in Europe. It belongs to RAmports 2500-W design series by Robert Allan Ltd. and it is one of the most versatile ASD tug design for ship-handling, coastal towing, general purpose or escort duties. It can deliver more than 80mt of bollard pull. Its high power and maneuverability making it capable to provide both high quality harbor and deep-sea towage services. The tug is fitted with two Caterpillar/3516E main engines, each developing 2,100kW at 1,600rpm and with two Kongsberg/US 255S FP thrusters. It is also equipped with Fifi 1 class fire-fighting system, capable also of providing oil recovery and escort services.



**Med Marine** and **IGMAR** (member of **Spanopoulos Group**), signed a contract for the construction and delivery of a MED-A2875 series tug on May 17, 2024. The RAstar 2800 series tug is scheduled to be delivered to her new owner in Greece in September 2024. The MED-A2875 RAstar 2800 series Terminal – Escort Tug, measuring 28 meters in length and boasting a 75mt bollard pull capacity, will be equipped to meet Class FIFI-1 requirements. It is constructed as a multi-purpose tug, working off a forward winch and an aft winch for ship handling, towing, pushing, mooring, firefighting facilities and equipped with an aft towing hook. Technical specifications of the tugboat: Length: 28.40m; Breadth: 13m; Depth: 5.40m; Draft: 5.70m; GRT: <500; Bollard pull: 75mt; Speed: 12 knots; Crew: 8-10 person.

**Sanmar** is celebrating the launching of the first ground-breaking electric battery-powered ElectRA tug for its own fleet, which provides towage, ship assist and escorting services at six ports around Turkiye. She will be the seventh (7th) electric battery tug delivered from Sanmar Shipyards within a year. Five of them are already operating in Vancouver, Canada and the sixth is currently on the way heading to her new home in Norway. Based on the exclusive-to-Sanmar ElectRA 2300SX design from Canadian naval architects **Robert Allan Ltd**, the powerful and highly maneuverable new tug has been named *"Dinamo 2023"*. *"Dinamo 2023"* belongs to a new era of pioneering emissions-free tugboats being built by Sanmar to protect the environment and create a sustainable tug industry. This has been achieved with no loss of performance or power with *"Dinamo 2023"*, for example, being able to achieve a minimum of 70mt of bollard pull ahead while operating on battery power. The ElectRA 2300SX has been designed to accommodate a large battery capacity to enable it to achieve a high bollard pull in a flush deck design, with the option to maintain some backup diesel generator capacity. Measuring 23.4m LOA, with a moulded breadth of 11.85m and moulded depth of 5.16m, *"Dinamo 2023"* will join the Sanmar fleet of more than 30 tugs with an average age of less than three years. Chairman of the Board of Sanmar Shipyards, Ali Gürün said: *"We have received a huge amount of interest in the ElectRA Series from operators around the world. Doing everything, we can towards protecting our planet is of paramount importance and we are, of course, delighted to see the first emissions free tugboat in our own fleet. This is a milestone moment for us."*



# Marcon International, Inc.

## Tug Boat Market Report – May 2024



**Sanmar** has delivered two newbuild tugs from its Boğaçay Series to returning client **Rimorchiatori Mediterraneo Group**. “*Ortigia*”, known as “*Boğaçay LX*” while under construction, has joined Rimorchiatori operations at the Port of Syracuse in Sicily, together with Augusta Italy’s main oil port and center for petro-chemical refinery operations, while “*Sanvitale*”, previously known as “*Boğaçay LXIV*” and delivered this year, will work initially also in Sicily. Based on the exclusive-to-Sanmar RAmports 2400-SX MKII design from **Robert Allan Ltd**, the environmentally-friendly “*Ortigia*” is powered by two high-speed, electronically-controlled CAT 3512E marine diesel main engines which meet stringent IMO Tier III emissions standards and each produce 1,901kW at 1,800rpm, to achieve a bollard pull of at least 60mt and a free running speed of 12.5 knots. The more powerful “*Sanvitale*”, which is also based on the RAmports 2400-SX MKII design, can achieve a bollard pull of at least 70mt over the stern and is also IMO Tier III emissions regulations compliant. It too has a free running speed of 12.5 knots. Both tugs measure 24.4m length overall with a 12m beam, least moulded depth of 4.5m and a navigational draft of approximately 5.45m and have accommodation for a crew of up to seven people.

**Sanmar** has delivered a compact RAscal 1500 ASD tug designed for high performance at a competitive cost to new customer **CCI Bayonne Pays Basque**, which manages the Port of Bayonne in France. Based on the RAscal 1500 design series from **Robert Allan Ltd**, “*Göksu V*” is 14.95m long with a moulded breadth of 8.30m and a least moulded depth and navigational draft of 3m. It can achieve 16mt of bollard pull and a speed of 10 kn. “*Göksu V*” is an ASD tug was specifically designed and developed for ship-handling in modern, but typically smaller harbor and port operations. The forward winch also serves emergency towing over the stern as a pipe tunnel runs underneath the wheelhouse. With a crew of up to four people, its tank capacities include 20m<sup>3</sup> of fuel oil and 2m<sup>3</sup> of fresh water.



**Sanmar Shipyards** has delivered its 300th tugboat based on a design by **Robert Allan Ltd**. The milestone was reached with the recent delivery of one of its ground-breaking emissions-free battery electric ElectRA tugs to Norway-headquartered operator **Buksér og Berging**, where it will be based at the Port of Oslo. Named “*BB Electra*” by its new owners, the eco-friendly tug was built based on the exclusive-to-Sanmar ElectRA 2200 SX design from Robert Allan Ltd. Sanmar, which operates three purpose-built, state-of-the-art, and environmentally-friendly shipyards in the heart of the Turkish maritime sector, has always prided itself for being at the forefront of innovative technological advance.

**Sanmar** has launched a new-build tugboat in its exclusive Kocaçay Series of high-powered escort tugs which is scheduled to be delivered to long-term Italian customer **Rimorchiatori Laziali** in May. “*Kocaçay IX*” is based on the RAstar 3200SX design developed especially for the Turkish tug-builder and operator by Canadian naval architects **Robert Allan Ltd**, with a specific focus on meeting an individual client’s customization requirements. The tug’s design is primarily intended for demanding escort operations in exposed areas where exceptional seakeeping capabilities are essential. Following its launch, she will now undergo extensive sea trials. Measuring 32m LOA, with a moulded breadth of 13m, moulded depth of 5.35m and maximum draft of 6m and featuring an 83mt towing capacity like its sister vessel “*Blasco*” delivered in 2023, she has a hull design that significantly improves towing and seakeeping performance, as indicated by model and full-scale tests.



**Sanmar** has sold two tugs to **Boluda Towage**. Both boats “*VB Horus*” and “*VB Amon*”, were delivered the beginning of December. They are based on the exclusive-to-Sanmar TRAKtor-Z 2500SX design from **Robert Allan Ltd** and were specifically designed for ship-handling, escort, and terminal support work. With a LOA of 25.30m, moulded beam of 12.00m, least moulded depth of 4.46m and extreme draft of approximately 6.55m, the tugs are powered by two CAT 3516C HD D-rated main engines, each achieving 2,100kW at 1,600rpm and producing a bollard pull of 75mt, and free running speed of 12.5kn. Both have 360-degree azimuthing US 255 FP thrusters, and can carry 83,900ltrs of fuel oil and 12,300ltrs of fresh water.



# Marcon International, Inc.

## Tug Boat Market Report – May 2024

On 12th April **Damen Shipyards Group** launched the second of its fully electric RSD-E Tugs 2513 at Damen Song Cam Shipyard. The tug is being built for the **Port of Antwerp-Bruges**, together with five conventional RSD Tugs 2513. When delivered later this year, it will be the first fully electric tug to operate in European waters. The port was one of the first to operate a conventional RSD Tug 2513 following Damen's release of the vessel onto the market in 2018. It was the success of this vessel that led to the Port of Antwerp-Bruges latest order with Damen, as it seeks to increase sustainability. The Belgian port, one of the busiest in Europe, is committed to becoming carbon neutral by 2050. This six vessel order with Damen is representative of this commitment. Each of the vessels in the order is in full compliance with IMO Tier III regulations, with the RSD-E Tug 2513 able to operate with zero emissions. It is the port's intention to gradually move towards zero emission and takes a leading role as innovator



and facilitator to reach this goal. The port currently operates a hydrogen powered tug and is soon to begin operations with a retrofitted methanol tug. The RSD-E Tug 2513 is able to perform at least two towage operations on a single charge and can be fully recharged in just two hours. The battery system is designed to withstand 30,000 cycles during its lifecycle, which is consistent with the lifetime of the vessel. In addition to supplying the vessel, Damen is also providing the Port of Antwerp-Bruges with the charging equipment and onshore charging infrastructure required to operate the vessel.

**Fairplay Towage Group** placed an order with **Damen Shipyards** for the delivery of two further tugboats, one of which is of the ASD Tug 2813 design, the other one being a tug fitted with azimuth stern drives and a bollard pull of 60mt. The latter acquisition will be fitted with an aft winch for offshore towage. The ASD Tug 2813 boasts an impressive bollard pull in excess of 80mt for harbor assistance. Both vessels will be fitted with external FiFi capabilities for swift response to emergencies. These are the most recent vessels to be purchased by Fairplay from Damen, following an ASD Tug 2813 that was delivered at the end of 2023. Fairplay is continuously expanding and rejuvenating its fleet and when the latest two acquisitions are delivered late this year, the total number of Damen vessels in the fleet will have grown to thirteen. Arkadiusz Ryz, Director Offshore Division at Fairplay Towage, commented on the occasion of the signing of the ship building contracts: *"When considering our acquisition plans, we had been looking for modern tug designs with outstanding ice class capabilities to strengthen and rejuvenate our fleet. This is precisely what we have found in Damen's proposal. One vessel will be equipped with an aft winch which will allow us to offer a large variety of services. She will plug a gap in our lineup between our harbor tugs such as the Damen RSD Tug 2513 design, and our Damen Shoalbuster 2711 Fairplay-37. We have also noticed that our customers are increasingly demanding high bollard pull and this is why we are adding another newbuild tug with 80 tonnes plus bollard pull to our fleet in the form of a Damen ASD Tug 2813."* Fairplay understands the need to improve the sustainability of its operations and the group has therefore decided to invest voluntarily in after-treatment systems for both vessels to ensure IMO Tier III compliance. Further environmental gains will be realized by reducing and optimizing consumption via new tugs as older units are retired.



On 20th of December, 2023, the 3,680kW hybrid ASD tugboat "Yonggang Tuo 80" which is designed and built by company **Jiangsu Zhenjiang Shipyard** for **Ningbo Oil Handling & Tug (Barge) Co., Ltd** was delivered successfully. The vessel uses the parallel oil-electric hybrid propulsion, that is, the superimposed drive of a traditional diesel engine and battery-powered motor. In the hybrid mode, energy saving and emission reduction can be achieved through the system working condition optimization and intelligent energy scheduling, it can not only meet the optimal power output requirements of the main engine, but also achieve the best energy consumption through the superimposed lithium battery propulsion. When the tugboat enters the emission control area, it can switch to the battery mode for propulsion, low noise, low vibration, comfortable and quiet, to achieve *"zero fuel consumption, zero pollution and zero emissions"* in the port. In the diesel propulsion mode, the excess power of the main engine can be fed back to the electric grid and the lithium battery for charging. The product fills the gap in the domestic *"diesel-electric + battery"* parallel hybrid tug and is another landmark product that Jiangsu Zhenjiang is iteratively upgrading in the direction of green, low-carbon, new energy for environmental protection and new drives.

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

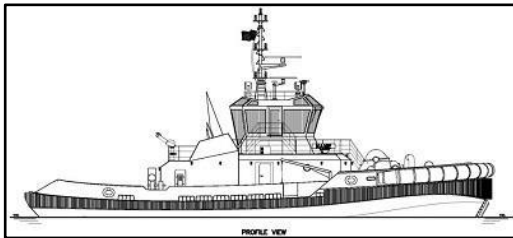
On 2nd February 2024, one 3,236kW ASD tugboat with diesel plus battery power, which was built by **Jiangsu Zhenjiang Shipyard** for **Qing Huangdao** and named "*Qin Gang 28*", was delivered. The vessel is adopted by global advanced DC frequent power net as the basis, with advantage of traditional big pull power and energy saving and emission reducing. It is estimated that the vessel, as the first type with new energy in Bohai Bay, could reduce 355mt of CO2 emission. The vessel has length of 37.5m, breadth of 10.4m, depth of 4.7m, BP ahead of 52.2mt, BP astern of 19.1mt, endurance of 700nm and speed of 12.85kn.



On 5th April, 2024, two ASD smart tugboats- "*Jing Gang Lun 36*" and "*Jing Gang Lun 37*" were delivered successfully by **Jiangsu Zhejiang Shipyards**. The vessels measure length of 34.6m, breadth of 11.2m, depth of 5.22m, design draft of 3.92m and speed of 12.5kn, with integrity of smart navigation, engine room, efficiency, and platform. In "*Jing Gang Lun 36*", it equips with self-navigation function and bears mission of key project "*research on tugboat self-navigation smart technology and test*". The function of the vessel is the first research cooperation project implemented since the framework signing of the Memorandum of Understanding on Technical

Cooperation between China and **Finland Smart Ships & Ports**. This project can promote further research and wide application in a wider scope, leading a new smart tugboat's technical development, further improving ship and port's safety and efficiency and opening up the first unmanned ASD tugboat in China.

On 25th May, 2024, two 2,940kW ASD tugboats built by **Jiangsu Zhenjiang Shipyard** for **Huizhou Chengang Tug Shipping Co., Ltd**, and named "*Cheng Gang Tuo 68*" and "*Cheng Gang Tuo 69*" were delivered successfully. The tugboat's overall length is 35.5m, the width is 9.8m, the depth is 4.5m, ahead bollard pull is 51.5mt and astern bollard pull is 48.3mt, the endurance is 800 sea mile, and the speed is 13.4kn.



**Robert Allan Ltd.** is pleased to announce that the company's longtime clients **Bay-Houston Towing** and **Suderman & Young Towing Company**, have awarded construction contracts to **Sterling Shipyard** in Port Neches, Texas for multiple new tugs of RAStar 3200-W design. The first tug is expected to be delivered in October 2025. The specially designed RAStar 3200-W tug for this application is based on the very successful RAStar 3200 design series to which more than 100 units have been delivered or under construction worldwide. The tug will be powered

by a pair of EMD 16 E23B HD tier 4 EPA compliant engines and propelled by two Schottel SRP-610 units generating bollard pull of 105mt. When performing escort operations, the 105-foot long escort tug will be capable of providing a steering and braking force of 115mt and 162mt, respectively, at speeds up to 10 knots. The tug will be fitted with a towing winch on its aft deck for coastal towing service. The tug will have ABS notations of  $\boxtimes$  A1, Towing Service,  $\boxtimes$  AMS, Escort Service, Fire-Fighting Vessel 1, Low Emission Vessel (US). Robert Allan Ltd. is to provide a production design package including steel parts and piping spools, etc. to Sterling Shipyard as well.

**McAllister Towing** is proud to announce the arrival of the tug "*Grace McAllister*". The "*Grace McAllister*" was recently delivered from Maine shipyard, **Washburn & Doughty**. She is equipped with 3516E Tier IV Caterpillar engines powering twin Schottel SRP 490 Z-drive units. The "*Grace McAllister*" received a Low Emission Vessel class notation from ABS. Packed into her 93' x 38' hull producing 6,770 horsepower, the "*Grace McAllister*" achieved over 85 metric tons during her bollard pull certification. Combining her eco-friendly CAT engines with Markey winches on the bow and stern makes the American-made "*Grace McAllister*" one of the most advanced and powerful shipdocking tractor tugs serving the Port of New York.

Combining McAllister's talented mariners and seasoned Pilots with the newest and most technologically advanced tugboats on the East Coast, McAllister has set the bar for services unlike any other. The "*Grace McAllister*" joins a fleet of certified Low Emission vessels, including the "*Ava McAllister*" and "*Capt. Brian A. McAllister*" in New York. The maritime industry will not only enjoy the safety and power of these tugs' abilities, but can be assured that their carbon footprint has been reduced while calling our Ports.



# Marcon International, Inc.

## Tug Boat Market Report – May 2024



**Empresa Nacional del Petróleo (ENAP)** and **SAAM**, through its tugboat division **SAAM Towing**, signed a service agreement that will make Chile the first country in Latin America with an electric, and therefore emission-free, maritime tugboat. The vessel will operate in Puerto Chacabuco, Aysén region, one of the world's southernmost terminals. It will provide GHG emissions-free berthing and unberthing services for vessels and significantly reduce environmental and underwater noise. Chile's Minister of Energy, Diego Pardow, remarked: *"ENAP's access to this service, which is unprecedented in Latin America, will allow it to reduce operating emissions, which supports Chile's commitment to move towards carbon neutrality*

*by 2050 or earlier."* ENAP Chief Executive Officer Julio Friedmann commented, *"Implementing this new technology in our processes supports our company's goal of being more sustainable every day and advancing towards decarbonization. This milestone is in addition to the LNG powered trucking services we contracted last year and aligns with our dedication, as a state-owned company, to undertaking extensive public-private efforts to transition as a society to different types of energy."* SAAM Chief Executive Officer Macario Valdés highlighted the long-standing relationship with ENAP, *"We share a vision for advancing sustainability. This service agreement is crucial to addressing the shared challenge of climate change through concrete emissions-reduction actions. SAAM aspires to become a global leader in the tugboat industry. This type of pioneering technology provides innovative solutions for our customers and enables us to continue providing safe, efficient services as we move towards more sustainable operations."* The new tug is expected to begin operating in Chile within the next 18 months.

*"Signet Sirius"*, the first of two ART 92-32W Rotortugs® was recently delivered by **Signet Maritime** at their Pascagoula Shipbuilding and Repair facility. This is the first ART Rotortug® that Signet has built and operated in their fleet. Designed by **Robert Allan Ltd.** in collaboration with RotorTug BV, the Advanced Rotortugs® (ART)

incorporate the patented triple Z-drive Rotortug® propulsion layout, featuring omnidirectional maneuverability, and the benefits of a fully redundant and precise propulsion machinery configuration. The Rotortug® concept offers increased redundancy for ship-handling, terminal support, and escort towing, as well as enhanced crew safety. Particulars of the *"Signet Sirius"* and *"Signet Capella"* are as follows: Length overall: 103'-4"; Beam, moulded: 45'-6"; Depth, moulded: 15'-7"; Maximum draft (overall): 21'-6"; Power: 3 x 2,575HP; US gross tonnage: 299; Bollard pull: 92 metric tons. The tugs are classed by American Bureau of Shipping, with the following notations: ✕ A1, ✕ AMS, ✕ ABCU, FFV-1, CS-1, ENVIRO, LEV, Escort, USCG Inspected (Subchapter M). The ART 92-32W is the most powerful 32 meter ART to date. It is designed to escort deep-draft VLCCs in and out of the Port of Corpus Christi. Extensive analyses and simulations have been performed to confirm the suitability of the ART 92-32W for the proposed operations, including simulations at the Seamen's Church Institute and TDT-Sim analysis by RAL, in conjunction with **Markey Machinery**, to ensure proper winch selection for the tug to meet the environmental criteria for the escort and docking of the VLCC's. The close collaboration between Signet, Robert Allan Ltd., and Markey Machinery resulted in truly unique, next-generation Advanced Rotortug design that exceeded initial design criteria. Robert Allan Ltd. and Signet also collaborated with Signet's selected vendors, including Markey Machinery, MTU, Kongsberg, R.A. Mitchell, Buoyant works Ltd., Fabtek/Procurve, ABS and others to ensure the development of the highly capable escort/terminal tug with the combined maneuverability of three controllable-pitch thrusters and the high-speed, high-torque performance of the AGILE winches: unmatched close-quarters ship-handling and constant line *"time under tension"* to safely maneuver laden 300,000 DWT+ ships. The ART 92-32W is the first commercial vessel in U.S. history to be produced using 3D structural models in combination with key plans in design, approval, and construction. The full cycle of design and construction has been completed in 3D, and it's improved

the production methodology of the Signet shipyard significantly. All future vessels constructed at Signet Shipbuilding and Repair (SS&R) will follow the same design regimen. A 3D design process reduces costs and time investment, while streamlining interaction between all stakeholders throughout the design, verification, and construction phases, without compromising safety. In addition to using 3D structural design methods, the *"Signet Sirius"* has several additional firsts, including: • First 32 meter ART to achieve greater than 90 tonnes bollard pull; • First towing vessel to receive ABS ENVIRO Notation; • First vessel in the United States to achieve ABS Low Emissions Vessel (LEV) Notation; • First vessel in the United States to receive ABS CyberSecurity-1 (CS-1) Notation.



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# Marcon International, Inc.

## Tug Boat Market Report – May 2024

**Mitsubishi Shipbuilding Co., Ltd.**, a Mitsubishi Heavy Industries (MHI) Group company based in Yokohama, recently held a christening and launch ceremony for a salvage tug currently being built for **Nippon Salvage Co., Ltd.** The ceremony took place at the Enoura Plant of MHI's Shimonoseki Shipyard & Machinery Works in Yamaguchi Prefecture. The vessel, named "*Koyo Maru*", is scheduled for handover to Nippon Salvage in June 2024 following completion of outfitting work and sea trials. The vessel has a length overall (LOA) of 80.6m and beam of 15.5m, with gross tonnage of approximately 3,000. It will replace the current "*Koyo Maru*", originally constructed at MHI's Shimonoseki Shipyard & Machinery Works, and which has been in continuous service since 1998. The new vessel has one of the highest pulling capacities (bollard pull) in Japan to respond to large-scale marine accidents, while optimal placement of fire extinguishing equipment such as water cannons, and improved fixed-point holding capacity, provides enhanced efficiency when firefighting on other ships. The "*Koyo Maru*" is also equipped with a selective catalytic reduction (SCR) system to comply with environmental regulations, allowing it to operate in designated areas where nitrogen oxide (NOx) emissions are restricted, such as the coastal waters of the United States and Canada, the North Sea, and the Baltic Sea. Further, the vessel utilizes a new hull form (semi-vertical stem) to improve propulsion performance and has been designed to allow temporary equipment such as remotely operated vehicles (ROVs) to be mounted on the exposed deck (Note) as necessary, improving workability. Private rooms for supervisors have also been provided to improve livability. With the construction of this vessel, Mitsubishi Shipbuilding will contribute to the various salvage activities carried out in seas around the world, as well as environmental conservation.



On 8 May 2024, **KOTUG Canada Inc.**, a partnership between **KOTUG International B.V.** and **Horizon Maritime Inc.**, held a keel laying ceremony for two RAsalvor 4400-DFM dual fuel methanol escort tugs – Robert Allan Ltd. design – to service the Trans Mountain Expansion Project, at **Sanmar Shipyards** Altinova in Yalova, Turkiye. This keel laying ceremony signifies a major milestone for the project enabling it to proceed to the construction phase to meet the delivery schedule by mid-2025. This milestone was celebrated in the presence of representatives of KOTUG Canada and Sanmar Shipyards to mark the commencement of construction of the two revolutionary vessels. The two innovative

tugboats, designed by Robert Allan Ltd., are the first of their kind to be powered by methanol and are engineered to provide the high bollard pull required for the Trans Mountain Expansion Project. The tugs will escort tankers from the harbor limits of the Port of Vancouver to the open Pacific Ocean through the commercial shipping lanes of the Salish Sea. To provide this service, KOTUG Canada has partnered with the Sc'ianew First Nation from Beecher Bay, strategically located along the shipping route. These two innovative tugs, to be named "*SD Aisemaht*" and "*SD Qwii-Aan'C Sarah*" in honor of important members of Sc'ianew First Nation, are scheduled to be the world's first large purpose-built high bollard pull methanol fueled tugs when they enter service in 2025. They will provide significant environmental benefits by further reducing greenhouse gas (GHG) emissions and underwater radiated noise.



**Landfall** is expanding its fleet with a fantastic shallow draft multipurpose workboat with a Bollard Pull of 37.2mt. The two strong HEILA marine deck cranes with a maximum lift capacity of 10.0mt at 16.5m, the waterfall double drum towing/anchor handling winches of 50 and 100 metric tons. The "*Wind Lass*", built in 2011, is a shallow draft multipurpose workboat of 26.00 by 11.50 meters. The twin Caterpillar engines deliver 1,902kW which results in 37.2mt bollard pull. In combination with the minimal draft, the hydraulically driven 200kW and 360° bow thruster and triple fixed pitch propellers in Optima nozzles, gives the vessel maximum maneuverability. The two strong HEILA marine deck cranes

fwd and aft with a maximum lift capacity of 12.3mt at 15.0 meters, the waterfall double drum towing/anchor handling winches of 50 and 100 metric tons (pull), a 8mt tugger winch, additional spud poles two at 15 meters and a maximum clear deck area, makes the vessel more than multifunctional and definitely one of a kind. All deck equipment is running on biodegradable lubricant oil. Options for seabed levelling/dredging operations are an Aft Portal A-frame for ploughing, of one 60mt SWL or two 30mt SWL.

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

Landfall's fleet of anchor handling tugs and workboats has expanded with the versatile Hybridcat 2611/workboat "Leon-H". The "Leon-H" has an ultra-shallow draught of 1.00-1.50 meter (min-max) and is hybrid powered including additional battery-container on deck. The "Leon-H", built in 2024, is a Hybridcat WERFT2411e and ultra-shallow draft multipurpose workboat of 23.95 by 11.46 meters. The twin Scania engines delivering 930kW supported by two electric driven e-motors of 450kW, which results in 15.0mt bollard pull. In combination with the minimal draft of 1.00-1.50 meters, the Hydraulically driven 200BHP bow thruster and double fixed pitch propellers in nozzles, gives the vessel maximum maneuverability. The two strong HEILA marine deck cranes fwd and aft with a maximum lift capacity of 7.70mt at 16.39 meters and 7.85mt at 14.42 meters, the double drum towing/anchor handling winch of 50mt (pull), a 10 and 12 metric tons tugger winches, option for spud poles two Ø 610mm and a maximum clear deck area, makes the vessel more than multifunctional and definitely one of a kind. Options for seabed levelling/dredging operations are an Aft Portal A-frame for ploughing.



**Master Boat Builders, Inc.** announced recently the successful delivery of the "Tortuga", the latest tugboat to join **Seaside LNG/Polaris New Energy's** expanding fleet. The "Tortuga" will operate out of Jacksonville, FL alongside her sister vessel, "Polaris". "Seaside LNG/Polaris New Energy is leading the way in LNG maritime distribution, with the largest LNG bunker fleet in the country. We are proud to partner with an innovative company at the forefront of providing clean, dependable, competitively priced fuel for the shipping industry and look forward to working with them in the future." Said Garrett Rice, president of Master Boat Builders. The "Tortuga"

marks the second tugboat that Master Boat Builders has constructed and delivered for Seaside LNG/Polaris New Energy. The sister vessel, "Polaris", was constructed by Master Boat Builders in 2022. The "Tortuga" has an overall length of 109' and features two Caterpillar main engines (3512E), EPA Tier 4 certified and each producing 2,000HP. The vessel also features two Berg model Z-Drive thrusters (MTA 523) and JAK Beacon Finland Coupler System.

With the successful delivery of the "M.T. Joymoni" to **Mongla Port Authority**, Bangladesh, **Cheoy Lee Shipyards Ltd.** has reached a significant milestone. This latest tug is the 50th RAmports 3200-CL to be completed, and it represents more than a decade of evolution and refinement in tug design. There are vessels operating for clients such as Svitzer, Boluda, SAAM, PSA, KOTUG, and Ocean Sparkle/Adani. The RAmports 3200-CL is operating in regions all over the world, including Asia-Pacific, Africa, Europe, Middle East, North and South America. The RAmports 3200-CL was designed by **Robert Allan Ltd.** in 2008 exclusively for Cheoy Lee Shipyards Ltd., with the first tug, "Ocean Pioneer", delivered to Ocean Sparkle in India in 2011. Based on the popular RAmports series, the hull form was developed to provide a high performance, multi-function tug in a shallow draft configuration, with bollard pull of up to 85 metric tons. Over the years, there have been some significant changes to rules and regulations that have required updates to the design. These include IMO MLC Crew accommodation requirements, supporting structure in way of towing systems, and towing stability criteria, etc. The RAmports 3200-CL design has been kept current and is compliant with all these new standards, and with 50 vessels in service, owners can be confident of the tug's suitability for many operating scenarios. The carefully developed design has shown its flexibility to suit operators' preferences. Harbor service, terminal towage, escorting and offshore support can all be performed comfortably by this exceptional tug. All major engine manufacturers, Z-drive suppliers, deck machinery makers, etc. can be fitted, allowing full customization for every owner's needs.



EuroCarrier 2712 named "Sea Phanagoria" is 27 meters long and 12 meters wide. The vessel is purpose built for dredgers and offshore operations and is equipped with anchor handling and towing winches. The "Sea Phanagoria" has knuckle boom cranes on the aft and the forward deck. A bow and stern roller are provided. She has a bollard pull of 35mt. Brief specification Classification: Bureau Veritas | HULL MACH AUT-UMS DYNAPOS AM/AT, Unrestricted navigation, TUG Special Service / Multi-Purpose Ship design, GMDSS Area A3; Generator sets: two Volvo D13 Tier 3, one Caterpillar C4.4; Main Engines: two Caterpillar C32 Acert, Tier 3; Deck Crane Forward: Heila HLRM 280-3SL; Deck Crane Aft: Heila HLRM 140-3S; Anchor Handling Winch: 100mt; Towing Winch: 100mt; Tugger Winch: 15mt.



# Marcon International, Inc.

## Tug Boat Market Report – May 2024

**CMB.TECH** and **Damen** are pleased to announce their collaboration on hydrogen-powered ASD Tugs. Built by Damen, these vessels use CMB.TECH's innovative dual fuel hydrogen technology that will significantly reduce emissions. The collaboration for the first four vessels was signed on 23 May at Albwady Damen in Sharjah. The signing took place during the 27th International Tug & Salvage (ITS) Convention in Dubai. Earlier that day, classification society Lloyd's Register presented CMB.TECH and Damen with an approval in principle (AiP) for the hydrogen solution that will be installed in the tugs. CEO of CMB.TECH, Alexander Saverys - *"This contract marks another very important step in the development of our hydrogen-powered vessel portfolio. Tugboats are ideal assets to start the decarbonization of port operations. With our hydrogen tugs, every port in the world will now be able to lower its carbon emissions and create demand for green hydrogen production."* Lloyd's Register Chief Commercial Officer, Andy McKeran said: *"The AiP for CMB.TECH's hydrogen dual fuel technology represents a cost-effective decarbonization solution for tugs and will provide Damen's new ASD tugs with dual fuel hydrogen propulsion to greatly reduce the vessels' emissions profile. Lloyd's Register congratulates Damen and CMB.TECH for the successful realization of this innovative design and will continue to provide classification and advisory services that help to drive forward the maritime energy transition."* Damen and CMB.TECH have previously cooperated on the development of a series Commissioning Service Operations Vessels (CSOV) - which are powered by hydrogen dual fuel generator sets - the so-called Elevation Series, that Damen is building for CMB.TECH's subsidiary Windcat. The hydrogen dual fuel ASD Tugs 2812 FF-H2, with 80mt bollard pull, that meets the most stringent IMO Tier III and EU Stage V standards, are a new step in the parties' cooperation. The vessels will feature four high-speed hydrogen dual fuel engines, designed to minimize NOx and CO2 emissions. They will also have modular storage systems for compressed hydrogen, ensuring safe storage below deck. Each tug can carry up to 16 hydrogen bottles, storing a total of 736kg of pressurized hydrogen at 350 bar. While these tugs will primarily run on hydrogen, they're equipped to switch to traditional fuel if hydrogen isn't available and can operate on 100% traditional fuel if needed. The tugs feature a total of 160m3 fuel holds.



A new technological highlight has been in regular operation in the **Port of Singapore** since mid-May 2024: *"JMS Sunshine"*, the world's first LNG tug powered by a hybrid system with MTU gas engines from Rolls-Royce. **Seatrium Limited**, a leading engineering solutions provider to the global offshore and marine industry is the designer, builder and operator of the new 29-metre, 65mt bollard pull tug. The Port of Singapore has committed to the Maritime R&D Roadmap 2030 with the aim of making it environmentally friendly and reducing energy consumption. Rolls-Royce has supplied two 16-cylinder MTU Series 4000M55RN gas engines and the gas regulating unit (GRU) for the harbor tug. Chiam Toon Chong, Technical Superintendent, Seatrium Marine Services, acknowledged: *"The handling of MTU engines is straight-forward, and user-friendly. Additionally, spare part availability and service support is excellent for the operation of tugs."* *"We are proud that we were able to contribute to Seatrium's innovative project with our gas engines. The workboat market is one of our strategic business areas. The MTU engines were selected because they meet the demanding requirements of harbor tug operations - in terms of reliability, ease of operation, dynamic engine behavior and low emissions,"* said Chew Xiang Yu, Head of Rolls-Royce Power Systems' civil marine business in Asia. The MTU gas engines are already well below the limit values of current emission guidelines (such as IMO III) without exhaust gas after treatment. The particulate mass is below the detection limit and they emit only small quantities of nitrogen oxides. The hybrid system is particularly suitable for the load profile of the harbor tug: it enables very precise maneuvering and a strong bollard pull when the full power is used. To achieve maximum thrust, the total power of the two azimuth stern thrusters is 4,000 kilowatts. This is achieved by adding to the 1,492 kilowatts each supplied by the MTU gas engines and 500 kilowatts of electric motor power on each shaft. The tug is equipped with a battery capacity of 904 kilowatt hours. The battery power is used to absorb peak loads, for example during acceleration, to maneuver purely electrically in port and to supply the ship on board with electricity. 11 ships worldwide sailing with MTU gas engines Rolls-Royce's Power Systems division has already received orders for MTU gas engines as propulsion systems and on-board gensets for a total of eleven ships worldwide. These include ferries, tugs and government vessels. Two catamarans belonging to the Doeksen shipping company have been operating reliably with MTU gas engines on the North Sea in the Wadden Sea nature reserve since 2021. The Richmond ferry has been operating a commuter service on the Lake Constance drinking water reservoir in southern Germany since 2023. Operators and passengers are delighted: the engines are particularly quiet, produce no vibrations, no unpleasant odors and no black smoke.

# Marcon International, Inc.

## Tug Boat Market Report – May 2024

### Company News

**Boluda Towage** – one of the divisions of **Boluda Corporación Marítima** that focuses its activity on port, coastal, and offshore towage, as well as maritime salvage – acquired the towage company **Resolve Salvage and Fire (Gibraltar) Ltd.** With this acquisition, Boluda Towage continues its expansion process in the international market strengthening its presence in a strategic point for maritime transport such as the Strait of Gibraltar, the gateway from the Atlantic to the Indian Ocean via the Mediterranean Sea. Resolve Salvage and Fire, owned by **Resolve Marine Group**, is a company with decades of experience in towing and marine salvage services for all types of vessels as well as in engineering and maintenance projects for marine installations and constructions. Boluda Towage has been operating for many years on both sides of the strait; in Cadiz, Algeciras, and Gibraltar - on the European side - and in Ceuta and Tangier - on the North African coast - assisting with maneuvers in all these important ports. With this acquisition, Boluda Towage adds the tugs “*Elliot*”, “*Hercules*”, “*Rooke*”, and “*Wellington*” to its extensive global fleet, increasing its service and support potential and capacity in the Strait. Boluda Towage, aware of its responsibility and sustainable commitment, is strengthening its activities despite global geopolitical tensions. Following the latest events in the Red Sea, the ports in the Strait of Gibraltar will be the first in Europe to be touched by the shipping lines now sailing the Cape of Good Hope route and will be a key point on the trade routes between Europe and Asia. The Strait of Gibraltar, with a length of 42 miles and a width at its narrowest point of only nine miles, is one of the areas with the highest density of navigation in the world, through which more than 100,000 ships pass each year, more than 10% of the total world traffic. The conditions in the area, with strong and variable tides, powerful easterly and westerly winds, and frequent fog banks due to the high temperatures, make the work of the tugboats essential for the optimization of operations.



**KOTUG International B.V.** announced recently that it has concluded the acquisition of **Kotug Seabulk Maritime LLC** taking full ownership of the business. KOTUG acquired the interest of its joint venture partner, SEACOR Holdings Inc. via its Seabulk subsidiary **KS Maritime Holdings LLC**, owner of the 50% share in KSM. Established in 1911, KOTUG is a premier, family-owned towage and maritime service operator that offers a variety of towing, subsea, and other marine-related services to customers worldwide. Presently, the fleet comprises more than 70 tugs and barges. Founded in 2017, KSM acts as the exclusive provider of maritime terminal support services for Buckeye Partners’ Bahamas Hub, which includes launch and line handling services. Buckeye Partners is one of the largest independent operators of liquid petroleum products pipelines and terminals in the United States and currently holds the sole operating license for all bunkering operations in Freeport harbor. Dan Thorogood, CEO of Seabulk, expressed optimism about the transaction, stating, *“This is an extremely positive outcome. Over the course of our decade-plus relationship, we not only integrated the proprietary Rotortug vessel into the KSM JV but also into the formerly owned Seabulk US-flag harbor towing fleet. KOTUG is a leader in towing innovation, and I can confidently say they are uniquely suited to carry the business forward and ensure the continuation of high quality, customer-centric operations.”*

Port towing service providers **Group Ocean** of Canada, Sulnorte of Brazil, and **CPT Towage** of Chile are proud to announce that they have joined forces to create a strategic cooperation network called **TugNetwork Team**. The goal of TugNetwork is to enhance port towing business operations through better services and alternatives for customers, wide coverage, identifying synergies, and exchanging best practices with other operators. The creation of this cooperative network will increase the competitiveness of local players and put them on par with international counterparts to provide customers with competitive prices and advantageous market coverage. This partnership comes at a time when there has been market consolidation in the port towing sector for several years. This has resulted in immense pressure on ship owners, who ultimately have less freedom of choice in their port services. To offset this threat, the aforementioned players have taken the initiative to unite their forces in a strategic cooperation network. This network offers tangible benefits to customers, including a comprehensive understanding of local maritime conditions, flexible intervention and response times tailored to customer needs, a presence in ports outside major centers, and ultimately access to competitive offerings. The current coverage of the TugNetwork team includes 82 ports with 108 tugs in 9 countries in the Americas, positioning the network as a key player in the Americas.

