

# International Tug & OSV

INCORPORATING SALVAGE NEWS

March/April 2018



Challenging tug salvage – exclusive eyewitness account  
Australian Focus – new opportunities in recovering market  
Big Data – no longer the next big thing, more the here and now



TUGBOAT With Hydraulic Hybrid Propulsion System



LNG Powered TUGBOATS



Remote Operated Commerical Vessel

# WORLD Firsts By SANMAR







## FRONT COVER

**Kinaki:** The first of the Sanmar Delicay series and the lead vessel built to the innovative Robert Allan Ltd TRAKtor-Z 2500 SX (Sanmar eXclusive) design, the tug has considerable technical input from the Turkish builder's own engineers and naval architects. It is in true tractor configuration, with forward mounted Z-drives designed for maximum efficiency and safety in harbour, ship-handling and towing duties.



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## Subscriptions

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## HEAD OFFICE

The ABR Co Ltd, ABR House,  
Prospect Place, Trowbridge,  
Wiltshire BA14 8QA, UK  
Tel: +44 (0)1225 868821  
Fax: +44 (0)1225 868831  
info@tugandosv.com  
www.tugandosv.com

Chairman **Nigel Brunton-Reed**

Managing Director **Garth Manson**  
garth@tugandosv.com

## Editorial Department

Editor **John McCready**  
john@tugandosv.com

Contributing Editor **Andy Smith**

Contributing Editor **Joceline Bury**

Contributing Editor **John Oliver**

Special Projects Editor **Chris Wraight**

## Advertising Department

Advertisement Director  
**Nickie Hoddinott**  
Tel: +44 (0)1225 807456  
nickie@tugandosv.com

Business Development Manager  
**Helen Stephen**  
Tel: +44 (0)1225 868821  
helen@tugandosv.com

## Administration

Administration Manager **Melanie Tierney**  
mel@tugandosv.com

Accounts and Subscriptions Manager  
**Jane Wilson**  
jane@tugandosv.com  
Tel: +44 (0)1225 868821

IT Services Manager **David Norman**

# A time for fond memories



*The thing that has always struck me most about the sector of the maritime industry that we cover is just how tight knit a community it is. There is a camaraderie that goes way beyond the usual network of business contacts and clients found in other industries. It is akin to a large extended family with a strong sense of 'we're all in this together'. Nowhere was this more apparent than at the memorial service for our late founding chairman Allan Brunton-Reed, which was held near his home in Wiltshire, UK, in February and followed by an informal celebration of his life at his local golf club. The parish church of St James' in South Wraxall was bursting at the seams. If anyone had made a list of those attending, it would have read like a who's who of the tug, salvage, OSV and related business world. These were not merely Allan's contacts: they were his friends, many of whom had travelled half way around the world to be there. It came as no surprise to anyone there that Allan had meticulously planned the day's proceedings and that although tinged with sadness, this was not a gloomy or mournful occasion. Laughter, smiles and fond memories were shared. Allan's family are grateful to all those who attended and made the day so special, and to all those who gave so generously to the online fundraising appeal in his name for the UK charity Pancreatic Cancer Research Fund and to the collection on the day for the church and the local Dorothy House hospice.*

*As you can imagine, organising a prestigious and much-awaited industry-leading event such as the International Tug, Salvage and OSV Convention and Exhibition (ITS) involves a tremendous amount of forward-planning. In fact, planning ITS 2018, which takes place in Marseille from 25-29 June, was already underway as we packed our bags after ITS 2016 in Boston. As anyone who has attended ITS will know, this unique event is always special. However, this year it is even more special than usual, as the event will be celebrating its 50th anniversary. Always thought-provoking and ground-breaking, we have lined up a particularly strong set of papers to be presented at this year's event. There will also be a series of social events that take full advantage of the cultural delights and pictureque coast of the south of France. More details of these will be available shortly via our website – [www.tugandosv.com](http://www.tugandosv.com)*

*I am delighted to be able to say that a continuing theme running through this issue is one of cautious optimism that things are getting better. As consultant Kent Stewart says in our Australian Focus section, our industry is showing signs of clawing its way back to recovery. It's not a boom by any means, but it is a start and confidence is rising.*

*In other sections we look at activities and opportunities in emerging markets, fast-moving and industry-changing digital innovation and the latest developments in naval architecture and vessel design. We also have an exclusive detailed eye-witness account of a uniquely complex salvage operation to raise a tug from the depths of the Amazon River. It's a heady mix. Enjoy.*

**John McCready, Editor**

# We deliver!



# SMART MOVE



*By Rotortug.*



# ITS planning to mark 50 years in style

There is a growing buzz in the air about *ITS 2018 Marseille*, not least because The Rolling Stones have announced that they will be playing at the stadium next door

The *International Tug, Salvage and OSV Convention and Exhibition (ITS)* will be celebrating its 50th anniversary in Marseille, France, from 25-29 June and its schedule commences with an indispensable survey of technological and design developments during the past half century of *ITS* and *Tugology* events.

Compiled by Robert Allan, executive chairman of Robert Allan Ltd, the opening paper takes a look back at some of the key milestones in the industry, covering engine and propulsion systems, tug-and-barge configurations, evolution of the escort tug and safety issues. As the author notes in his synopsis: "The proceedings of the previous 24 *ITS* conferences, from 1969 to the present date, represent an unparalleled documentary record of the history and development of the modern tugboat."

Subsequent papers cover a comprehensive range of topics: papers have been submitted on the state of the tug market from a broker's perspective; the safety of ships' fittings, towlines and ropes; and the digital transformation of tugs. There's even a contribution on quantum mechanics!

Long-time *ITS* chairman, Mike Allen, will once again be keeping delegates in order and speakers to time.

Day two sees the convention split into two parallel sessions, one comprised of topics of general interest, the other devoted to salvage issues, chaired by ISU general manager Mark Hoddinott.

Safety and regulatory concerns, such as fire-fighting and LNG, are combined with new developments in marine engines and propulsion. Three important and innovative tug concepts will be presented in detail by



▲ ITS venue, Parc Chanot Convention Centre



their designers, and there will also be a one-to-one interview with Simon Swallow, chief executive of The Shipowners' Protection Ltd.

The inaugural keynote speaker at the event will be Christine Cabau Woehrel, présidente du directoire of the Port de Marseille-Fos, France's largest trading port.

Meanwhile, in February, The Rolling Stones announced their European tour and that they will be performing at Stade Velodrome, Marseille, next to the Parc Chanot Convention Centre where *ITS* is being held, on the night of Tuesday 26 June.

This follows the earlier announcement that the F1 French Grand Prix will be held at Circuit Paul Ricard – also known as Le Castellet – near Marseille on Sunday 24 June.

Garth Manson, managing director of The ABR Company, publishers of *IT&O*, which organises *ITS*, said: "Clearly, Marseille is the place to be this year. Both of these events were announced out of the blue, but I am sure that there will be those attending *ITS* who will be delighted and want to go to one, or maybe both of them. However, I would urge anyone still undecided about attending *ITS* to book accommodation now and, if necessary cancel it later, rather than wait and possibly find hotels full."

At the time of writing, stands at the accompanying exhibition had almost sold out.

Companies wanting to showcase their products at the industry-leading event are urged to contact us via [www.tugandosv.com](http://www.tugandosv.com) as soon as possible. As at previous *ITS* conventions, there will be a full social programme aimed at providing those attending with an opportunity to network, relax and enjoy a flavour of their host

country. Damen will be sponsoring the off-site Welcome Cocktail Reception on Monday 25 June, and is hoping to bring one of its latest tugs to the event. 'Happy hour' receptions in the exhibition area on Tuesday 26 June and Wednesday 27 June are being sponsored by Sanmar and Armon, while the Gala Dinner on Thursday 28 June is sponsored by Caterpillar.

There will be a programme of events for the spouses and partners of delegates attending the event throughout the week, including a walking tour of Marseille and a boat trip to an island off the port for lunch and a yoga session. More details of these, and events being planned for the social day on Friday 29 June following the end of the convention business sessions on 28 June, will be sent to registered attendees over the coming weeks.

Meanwhile, the early start IMS Run Crew returns, with run routes designed to suit runners with various levels of fitness and stamina, ahead of business on the Tuesday, Wednesday and Thursday mornings. More details will be available closer to the time and at on-site registration, which opens at 10am on Monday 25 June.

In a new addition to this year's event, Moteurs Baudouin is sponsoring a relaxed communal meeting zone where refreshments will be available and delegates can meet informally, or just enjoy a few quiet moments while they charge their phone. The Shipowners' Protection will also be sponsoring a social event. Delegate bags, available on arrival, have been sponsored by Samson with the event app sponsored by Wärsilä. Uzmar Workboat and Tug Factory will be sponsoring delegate lunches, while MTU/Rolls-Royce is sponsoring tea and coffee breaks.

Manson said: "We are tremendously grateful to all our sponsors, without whom this industry-leading event could not happen. *ITS* reaching its 50th year is special to us. There is a growing buzz in the air about the event, which remains unique and unrivalled in its focus on the tug, salvage and OSV sector and ability to attract the highest-level attendees. Thank you to all those who have so far registered to attend as delegates, sponsors and exhibitors: I look forward to meeting old friends and making new ones in Marseille."



◀ Picturesque Marseille Old Port



# OSV giant appoints CEO and president

New Orleans, US-headquartered OSV operator Tidewater has appointed John T Rynd as its new president and CEO and a member of its board of directors. He replaces Larry T Rigdon who has served as interim president and CEO since October.

Chairman of the board of directors, Tom Bates, said: "After completing a comprehensive search, the board is very pleased to welcome John to the team. He brings with him considerable experience in the offshore drilling services sector and the global oil & gas industry as a whole. John's experience, leadership and vision will be tremendous assets to Tidewater as we work to continue to strengthen the company's position in this challenging market."

Rynd previously served as CEO and president and as a director of Hercules Offshore for eight years from 2008. Prior to his time with Hercules, he spent 11 years with Noble Drilling Services, where he served in a variety of management roles. Earlier in his career, he served in various roles of increasing levels of responsibility with drilling rig construction and operation company Chiles Offshore and offshore drilling contractor Rowan Companies.

Rynd was chairman of the National Ocean Industries Association from 2014-15. He serves on the board of directors of investment

► *New CEO and president at US-based Tidewater, John T Rynd*



company Fieldwood Holdings, and was on the board of directors of Hornbeck Offshore from 2011 to February this year.

Rynd said: "I'm honoured and excited to be joining the Tidewater team. The company has a strong foundation with its talented people, a long history of providing safe and reliable services to our customers worldwide and one of the strongest balance sheets in the offshore industry."

"I look forward to working with the Tidewater team to leverage these strengths to build value for our employees, customers and shareholders, as the market improves in the years ahead."

Bates said: "On behalf of all Tidewater stakeholders, I would like to thank Larry for his leadership of the business during this interim period, implementing significant progress towards achieving the company's near term objective of reaching breakeven cash flow."

"I look forward to his continued service on the Tidewater board."

## JV brings crewless tugs step closer

**Kotug International has established a new joint venture (JV) with fellow Netherlands-based firm Marana, called PortX Holding, based in Rotterdam. Under the name OptiPort, the JV will provide optimisation solutions for in-port vessel operations such as towing, bunkering and similar activities.**

The global resources and expertise of Kotug and the maritime data modelling and integration expertise of Marana will be combined. Both Kotug and Marana will own 50 per cent of the shares in the new venture.

The partners say OptiPort is a unique and game-changing optimisation solution for the global nautical services industry. It has the capabilities to dramatically improve dispatch operations and brings the autonomous sailing of tugs and bunker vessels one step closer.

OptiPort dynamically cost-optimises the utilisation of nautical assets, based on the applicable work schedule, weather and tide influences, but also crewing schedules. Besides planning capabilities, it has a cloud-based reporting solution for assistance reporting and analytics, such as commercial and operational analysis. The application is based on the latest developments in machine learning, data science and data analytics.

PortX will capitalise on Kotug's strong reputation as innovation leader in the international towage market and on Marana's strength in maritime optimisation software solutions.

Ard-Jan Kooren, Kotug CEO, said: "This agreement represents each organisation's strong commitment to provide customers with a single source for the best in port vessel optimisation."

After an extensive period of testing, the first OptiPort dispatch optimisation solution is about to go live in Rotterdam. The port is known to be one of the most complex, diversified and busy ports in the world.

Vincent van Os, managing director of Marana, said: "Our aim in Rotterdam is to achieve a significant reduction in the number of mobilisation miles, subsequent fuel reduction and carbon emissions by smarter dispatching of tugs to vessels."

"The dispatch solution is an applied big-data solution, which seamlessly integrates available data sources, such as port management data, agency information and actual vessel positions. This integration allows us to provide the most optimal schedule for any given situation in the port."

## In brief

Fuel monitoring system provider FloScan, based in Seattle, US, closed at the end of February after more than 40 years serving the marine industry. In a statement to customers ahead of the closure, sales manager Joe Dydasco said: "It is with regret that I must inform you that FloScan will be closing its doors at the end of February. We have had a great 40-year run but the past few years have been difficult to maintain operations and profitability." He added that the company was in negotiations with a buyer to take over supplying spare parts.

Unique Group has re-established a dealer agreement with Kongsberg Maritime covering the Middle East, under which its offices in the region will offer sales and service of Kongsberg's range of underwater mapping, navigation, acoustics and camera solutions in Bahrain, Saudi Arabia, Kuwait, Qatar and the UAE. The companies have a similar agreement in Nigeria and Kenya.

Alfa Laval PureBallast 3, the third generation of the ballast water treatment technology, is the first solution to meet the revised IMO G8 testing requirements. DNV GL, acting on behalf of the Norwegian Maritime Authority, has issued an updated type approval certificate making Alfa Laval the first supplier to be compliant with the revised G8 demands.

The variable speed generator market is expected to grow from an estimated US\$5.8bn last year to US\$8.4bn by 2022, primarily due to the increasing emphasis on alternative energy production, of which offshore wind is an integral part, according to a report from MarketsandMarkets.

Nordic American Offshore is to reactivate three laid-up vessels amid increased optimism about the North Sea market. The move will mean all 10 of its fleet of PSVs, with an average age of just four years, will be active.

The IMO has decided that the theme of this year's World Maritime Day will be: 'IMO 70: Our Heritage – Better Shipping for a Better Future', marking the 70th anniversary of the convention establishing the organisation.



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# Plan aims to tackle OSV connectivity needs

**Inmarsat has launched a new set of Fleet Xpress plans designed specifically to meet the technical and commercial requirements of OSVs.**

The plans exploit the technical capabilities inherent to Fleet Xpress, such as high-speed connections and guaranteed performance, to offer vessel operators levels of flexibility that are naturally suited to the demanding requirements of a high-end sector such as offshore support.

They recognise that connectivity needs on board OSVs change frequently, and that swings in data usage are likely to be more pronounced than for conventional cargo ships by accommodating free upgrades and downgrades in service levels during the

36-month contract period.

When on-hire, the appetite for bandwidth from OSVs can be immense. Projects often generate considerable volumes of data that need sending back to shore for analysis, with third-party contractors on board and an intense working environment. Furthermore, OSV operators are traditionally generous with crew welfare.

Supported by a 1m antenna, Fleet Xpress for OSVs delivers committed information rates of up to 6Mbps for downloads and 3Mbps for uploads with a standard antenna, climbing to 10Mbps and 5Mbps respectively with an enhanced antenna. When off-hire, a more economic 128kbps link for uploads and downloads may be sufficient to keep core

operational data exchange ticking over.

This elasticity means that OSV operators can utilise the full potential of Fleet Xpress for the duration of a project and then switch to a narrower 'standby' link between projects, also avoiding early termination costs. A network service device manages bandwidth and regulates the flow of data traffic between the vessel and shore.

In addition, the new set of OSV plans can be used in conjunction with new hardware from existing terminal manufacturers that will provide a dual antenna solution to minimise outages caused by line of sight blockages, a common occurrence for OSV vessels due to their proximity to rigs and operating in high seas. This will be managed by a single antenna control unit that will handle the service and seamless switching between antennas.

Eric Griffin, Inmarsat VP maritime, offshore energy and fisheries, said: "The connectivity requirements of offshore support vessels place unique demands on satellite operators. Successful and timely completion of a contract is increasingly dependent on a highly resilient, high-capacity data link. The technology behind Fleet Xpress has the capacity to meet these demands and our new plan sets a precedent in joining the dots between the technical requirements and commercial realities of OSV operation and highlights how Fleet Xpress can be used in the energy sector."

## Director resigns from new company board

**Sverre Andreas Farstad has resigned from the board of directors of SolstadFarstad, the Norway-headquartered global OSV operator formed from the merger last year of Farstad Shipping, Solstad Offshore and Deep Sea Supply.**

Resigning in January with immediate effect, Farstad, *pictured below*, has reportedly asked for his family name to be removed from the company title. The Solstad Farstad nomination committee was due to consider whether a new board member should be proposed.

Farstad, who holds a business degree from Heriot-Watt University in Edinburgh, UK, was chairman of the Ålesund-based shipping company Farstad Shipping. He has been a director since 1988. He joined the board of the new company, one of the world's largest offshore operators with more than 150 vessels in its fleet, when the companies merged.



## PSV converted into W2W vessel



▲ Triton lowers the accommodation unit on to **Blue Queen** and, left, tug **Waterpoort** tows the unit on board the barge **Wagenborg 2**

**Floating crane Triton was used to install a new accommodation unit for 15 people on Wagenborg Offshore's PSV Blue Queen which is undergoing conversion to a walk to work (W2W) vessel at the Royal Niestern Sander shipyard in the Netherlands.**

The accommodation unit was towed to the yard on the barge *Wagenborg 2* by the 20.5m long by 6m wide, 68gt, 1962-built tugboat *Waterpoort*.

Once conversion is complete, *Blue Queen* will support the offshore maintenance operations of NAM/Shell UK on the southern North Sea under a six year contract. The vessel was scheduled to be delivered in March.

*Blue Queen* will also be equipped with emergency response and rescue capabilities, including a recovery area, survivor area, decontamination room and hospital facilities.



## In brief

**E**ngine manufacturer Cummins has unified its brand across its power systems business, which provides high-speed engines from 760-4,400hp and power generation equipment from 2,000-3,500kW. Previously the portfolio featured the Cummins, Cummins Power Generation and Cummins Onan brands. It has now been consolidated under the Cummins brand with Cummins Power Generation and Cummins Onan brands retired. The Onan name has been repositioned as a generator product line.

**T**elford Offshore, a new name in the global oil & gas industry, officially launched in February after acquiring four DP3 multi-purpose offshore construction vessels from Sea Trucks Group following its liquidation. Headquartered in Dubai, Telford Offshore has a global presence and will focus on West Africa, South East Asia, Middle East and Latin America.

**G**armin and Navico, the parent company to the Lowrance, Simrad and B&G brands, have ended a three-year-long dispute relating to sonar and auto guidance patents. The agreement includes a broad cross licensing of patents and other intellectual property.

**E**ngineering and technology group, Sener, organised two technical seminars on its Foran system earlier this year at the Croatian universities of Split and Rijeka.

**G**ermany-headquartered marine systems supplier Hoppe Group has opened a wholly-owned subsidiary in Singapore. The group already has subsidiaries in China and South Korea.

## Thank you to all who gave so generously

An online collection for the UK-based charity **Pancreatic Cancer Research Fund** in memory of **Allan Brunton-Reed, founder chairman of The ABR Company, publishers of IT&O, has raised £3,716 – almost four times its original target.**

Allan, who started the biennial *International Tug, Salvage & OSV Convention and Exhibition (ITS)* 50 years ago and, more recently the intervening *Tugology* technical conferences, died peacefully at home, aged 71, surrounded by his family, on 2 December, seven months after being diagnosed with pancreatic cancer.

A memorial service was held at St James' Church in South Wraxall, near Allan's home in Wiltshire, on 15 February, followed by a celebration of his life at nearby Cumberwell Golf Club, where he enjoyed many a game.

A collection at the end of the service in aid of the church and the Dorothy House hospice at Winsley, Wiltshire, raised a further £1,178, and was divided equally between the two.

► *Allan Brunton-Reed, 1946 - 2017*



The service was attended by hundreds of people, including family, colleagues and friends, many of whom had travelled across the world to attend.

Garth Manson, managing director of The ABR Company and Allan's son-in-law, said: "I would like to thank all those who joined in the celebration of Allan's life and raised such a magnificent sum for charity. Allan had planned the day and would have been proud of the amount of money raised for the important work of these charities."

The online JustGiving account in Allan's name has now been closed, but anyone wishing to donate to the cancer charity can still do so at [www.justgiving.com/pancreaticcancer/donate](http://www.justgiving.com/pancreaticcancer/donate)

## Prime Minister attends tug naming

**Operator Tug Malta's new Damen ASD 2913 tug was named *St Angelo* at a ceremony attended by the Prime Minister of Malta, Joseph Muscat, and the island nation's Minister of Transport, Ian Borg.**

Acting as sponsor of the vessel was Michelle Muscat, who is the wife of the Prime Minister.

Tug Malta is part of the Rimorchiatori Riuniti Group. The ceremony was also attended by Tug Malta chairman John E Sullivan and CEO Mario Mizzi, Rimorchiatori Riuniti Group chiefs Giovanni Delle Piane and Gregorio Gavarone, and Damen sales manager Antonio Marte.

In his address, the Prime Minister said that the vessel was an indication of Tug Malta's commitment to helping Malta establish itself



▲ *St Angelo, TugMalta's Damen ASD 2913*

as a global player in the maritime sector.

The tug will provide port towage services and environmental assistance, and will also be able to serve the island's LNG needs by safely operating at Delimara LNG terminal.



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Setüstü-Kabataş, İstanbul



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## In brief

Three people died and at least six others were injured when tugboat *William E Strait* exploded while undergoing repairs on the Tennessee River. The explosion happened aboard the vessel, owned by Smithland Towing, while it was docked at First Marine Shipyard near Calvert City, Kentucky, US.

Three decommissioned tugboats are to be sunk off the coast of South Carolina, US, in a US\$200,000 Coastal Conservation Association project to form artificial reefs to create a productive environment for fish and anglers. The first will be off the coast of Charleston and the second off the coast of Georgetown. A third vessel and suitable site are being sought.

UK-headquartered Alphastrut, the supplier of aluminium support systems and handrails to the offshore oil & gas, construction and marine sectors, has reached an agreement for Zamil Trade & Services to act as its sales agency in Saudi Arabia.

Maritime UK has established a Taskforce to address fairness, equality and inclusion within the maritime sector. The Women in Maritime Taskforce brings together leaders from across the marine sector to identify practical steps to increase the number of women in maritime.

A World War II-era tug sank off the coast of Portland, Maine, US, after colliding with a second tug that was towing it. The exact cause of the collision is under investigation, but the US Coast Guard said *Capt Mackintire* was under tow by the 40ft *Helen Louise*. Nobody was injured.

Classification society Indian Register of Shipping (IRClass) has received authorisation as a recognised organisation from Merchant Shipping Directorate of Transport, Malta.

Prevention at Sea has gained recognition from the Cyprus flag for its multi-award winning Oil Record Book software developed with the Liberian Ship Registry.

S&P Global Ratings has revised its Outlook on marine insurer, The Swedish Club, from stable to positive.

## Tug firm expands operations



Dutch firm Iskes Towage & Salvage has established a new operation under the name Port Towage Groningen, with the aim of operating a modern tug fleet in the ports of Eemshaven and Delfzijl in the Netherlands.

The company has also established a joint venture (JV) with Swedish tug operator BogserTeam Öresund (BTÖ) to be known as Port Towage Nordic (PTN), that will continue to deliver towing services in the Sound area including the ports of Malmö, Copenhagen and Helsingborg.

The newly created JV will initially operate the BTÖ managed contracts in the Sound, with the aim of expanding its operation in the area with further options to expand to other ports, if so requested by clients.

Iskes says it has made the Groningen move following requests from stakeholders in order to accommodate and provide clients with an alternative, flexible and international towage service provider.

Managing director of the new operation, Peter Rondhuis, said: "We are very happy that we are able to accommodate the request we got from clients for the ports of Eemshaven

▲ Iskes's Lynx, one of two tugs now operating under the Port Towage Groningen banner

and Delfzijl and we will provide our clients with the best possible service. It is great to see that the ports are flexible and growing. For me personally it brings additional pleasure being able to operate in the ports where I was born and raised."

Michael Stauffeldt from BTÖ and MD of the new PTN, said: "The skills and professionalism of our team with our extensive local knowledge together with the market access, assets and technology of Iskes, will ensure present and future clients will have a solid and sustainable alternative. Our new co-operation will further anchor our footprint in the area."

Rondhuis said: "Sweden and Denmark have a long maritime heritage with trend-setting companies operating since the early days of shipping. We feel privileged that we can be part of the maritime communities in these countries and aim to improve the towage services area further with investments in technology, people and feedback from our clients, partners and stakeholders in general."

## Sea trials for Spain's first SOV

The first service operations vessel (SOV) built in Spain, *Edda Passat*, pictured right, has left dock to undergo its sea trials programme.

Built by Gondan for the Norwegian shipowner Østensjø Rederi, the vessel will operate for Ørsted, at the Race Bank wind farm off the UK coast.

*Edda Passat*, as well as its sister vessel, *Edda Mistral*, are 81m long with a 17m beam. The vessels have the capacity to accommodate up to 40 technicians who will perform maintenance tasks, and a crew of about 20 people.

Both vessels are equipped with an Uptime 23m length heave compensated



W2W gangway, a cutting edge 3D compensated crane and a CTV landing system with bunkering facility. In addition to the gangway, the on-board-fitted 11m daughter craft will allow the safe transfer of maintenance technicians to offshore wind turbines.



# Project team reunited for sister's outfitting



Final outfitting and modifications have been completed at Damen Shiprepair Oranjewerf on a second subsea-support walk-to-work (W2W) vessel for Vroon Offshore Services (VOS). *VOS Stone* was built at Fujian Southeast Shipbuilding in China before going to the Netherlands for completion. A similar project was successfully completed last July at Oranjewerf, involving sister ship *VOS Start*.

The eight-week programme for *VOS Stone* involved a wide range of activities, including installation of a 50-tonne active heave compensated knuckleboom crane, along with taut-wire, RadaScan, and Hipap from Kongsberg for the vessel-positioning system, a boat landing and system for fuelling crew

transfer vessels.

Jeen van der Werf, commercial manager at Oranjewerf, said: "We were very pleased to welcome *VOS Stone* following the very positive experience with *VOS Start*. Based on the experiences gained, and working with the same expert in-house team and group of subcontractors, the target completion date was achieved with no compromises to our very high standards.

"Damen, and Oranjewerf in particular, has a strong and long-standing relationship with the Vroon Group. The yard offers a skilled and experienced workforce, operating from facilities that include a 135m floating dock. *VOS Stone* was the fifth new vessel that Vroon has entrusted to Oranjewerf for final

## ▲ *VOS Stone* at Damen Shiprepair Oranjewerf

outfitting after construction in China. Both companies can be proud of the completed *VOS Stone*, a vessel now able to guarantee fast and efficient execution of complex projects in the offshore renewable and oil & gas industries."

A statement from Vroon's newbuilding department said: "It was a pleasure to be back with our number-five vessel for completion prior to entering the market.

"It was great to see the various teams working together in such a smooth and professional manner. This yard has again reached a high standard when it comes to timely and efficient co-operation between owner and yard."

*VOS Stone* has been purpose-built to support offshore operations in the renewable industry and walk-to-work projects in the oil & gas industry.

The vessel has already been awarded a contract by VBMS, a subsidiary of Royal Boskalis, to support inter-array cabling operations at the Arkona Offshore windfarm, in the Baltic Sea off the coast of Germany, during the first half of this year. Later this year the vessel will undertake operations for E.ON, involving working on commissioning of the wind turbines at the same wind farm.

## Yard group in China support move

Kommer Damen, chairman of the Damen Shipyards Group, opened Damen's China Support Company in Shanghai.

The company will serve to support commercial involvement and development in the region, generating more synergy and opportunities within Damen-affiliated companies, and open up the way to increase co-operation with maritime clients and partners in China.

The company, co-ordinated by managing director John Zhou, will be involved in a range of activities, including commercial activity for Damen newbuild and Damen Marine Components.

Damen area sales manager, Michiel Hendriks, said of the opening of the company: "We felt it was time to have more direct contact with our clients and suppliers in the region."

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# Tug gets new engines and generators

The tug *James T*, previously *PT Thompson*, is back at work after a major refurbishment. *James T*, named after the founder of Campbell Towing, James T Campbell, was built in 1982. The 85.5ft (26m) by 32ft (10m) vessel had been powered by a pair of 1,000hp Cat 3512 engines, but these have now been replaced by a pair of bright red EPA Tier 3-compliant 1,000hp Cummins QSK38 mains.

Both the old and the new engine sets turn Twin Disc MG540 gears with 6.18:1 ratios. The repowered boat will have a pair of four-blade 74x77in (1,880x1,956mm) propellers.

Some of the primary considerations for the selection of power and auxiliaries for *James T* was centred around space required, utilising engine foundations and total cost of operations.

The selected engines meet the primary requirements, in that they fit in the same space, utilise the same marine gear and exceed expectations of fuel consumption.

Mike Fournier of Cummins sales and service, said: "The engines selected use a high pressure common-rail fuel-injection



system which will benefit the owner with improved fuel consumption, and reduced noise and vibration, while meeting Tier 3 requirements. This provides the additional benefit of a much quieter running engine for improved crew comfort."

In addition to the engine room and the wheelhouse, Cummins C-command engine data displays were installed in the galley for ease in monitoring engine performance.

The vessel's generators were replaced at the same time as the main engines. The old pair of 3304 Cats was replaced with a pair of quieter Tier 3 Cummins QSB7DM-110kW ABS packaged units with Stamford Newage UCM274E alternator ends. The owners took the additional step of adding an enclosed Cummins-

▲ One of the two new Cummins QSK38 engines being swung on to *James T*

Photos Mike Fournier/Cummins

Onan hotel generator for even greater crew comfort at dockside.

While they had the vessel torn apart, the owners invested the extra effort to give the tug a real freshening and life extension.

Fournier said: "The pair of QSK38s performed as advertised, both while pushing a barge and under free running conditions. The installation was a first class professional job. All engines were within spec and required parameters for a Cummins install."

Tankage remains the same at 60,000 gallons of diesel, 4,000 gallons of potable water and 650 gallons of lube oil.

Following sea trials, *James T* already has several towing contracts booked, including two dredging contracts for the US Army Corps of Engineers contractor, JE McAmis of Longview, Washington.



◀ The refurbished *James T*

## Research centre to open unprecedented opportunities

**Rolls-Royce has opened a state-of-the-art research facility in Turku, Finland, to develop the technologies the company and its partners require to shape the future of an increasingly autonomous global shipping industry.**

The new Research & Development Centre for Autonomous Ships includes a remote and autonomous experience space aimed at showcasing the ship technologies Rolls-Royce has already introduced, as well as those in the development stage.

Commenting on how the Rolls-Royce R&D centre further strengthens Finland's commitment to developing autonomous transport, Finnish minister of transport and communications, Anne Berner, said: "There is great global interest in autonomous vehicles

and vessels as a future means of transport. The opening of the Rolls-Royce Research & Development Centre for Autonomous Ships here in Turku, a maritime city with a history of technological innovation, will help achieve our goal of digitalising the country's transport sector."

The new R&D Centre enables Rolls-Royce and its partners to carry out projects focused on autonomous navigation, the development of land-based control centres, and the use of artificial intelligence in future remote and autonomous shipping operations.

Speaking at the official opening, Rolls-Royce president marine, Mikael Makinen, said: "I'm proud to say that the R&D centre is now up and running and that all stakeholders, partners and customers will be able see here

what a remote controlled and autonomous maritime future could look like, and work with us to shape the future. The experience space that is part of the centre here in Turku, and a similar one we have in our technology centre in Norway, is aimed at demonstrating the very tangible benefits of what is often considered an intangible technology."

Karno Tenovuo, Rolls-Royce senior vice president, ship intelligence, said: "The centre allows us to more accurately communicate our capabilities, what we have available today and what will be available tomorrow. It will completely focus on the development of solutions capable of smoothing the maritime industry's transition to the digital age. An autonomous maritime ecosystem will open up unprecedented opportunities."

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**Maritime Middle East**  
Dubai, UAE  
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**International WorkBoat Show**  
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[www.workboatshow.com](http://www.workboatshow.com)

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5-7 December 2018  
[maritime.knect365.com/salvage-wreck-removal](http://maritime.knect365.com/salvage-wreck-removal)

## USCG air crew train with tug



**A US Coast Guard (USCG) aircrew from air station Corpus Christi has conducted a training evolution with a Signet Maritime tugboat in Corpus Christi Bay, Texas.**

The USCG MH-65 Dolphin helicopter crew and the crew of the 6,834bhp, 105ft (35m) long by 38ft (11.5m) wide, harbour and ocean-going tug *Signet Polaris* conducted hoist training as part of a new mutual training agreement between the air station and the tugboat operator.

*Signet Polaris* was designed by Robert Allan Ltd of Vancouver and built by Patti Marine Enterprises of Pensacola, Florida, in 2014. The vessel has an 81-tonne bollard pull and is powered by two Caterpillar C175-16, EPA Tier 3 main engines.

The training simulated hoisting an injured or sick person from the deck of a moving

**▲ *Signet Polaris* has been involved in hoist rescue training with USCG air crews**

vessel on to a helicopter for transport to a higher level of medical care.

Cmdr Marcus Canady, USCG air operations officer at Corpus Christi, said: "Today's evolution was a significant step forward in improving our training capabilities. We thank Signet Maritime Corporation for their co-operation and look forward to many more opportunities for our aviation crews to hone their search and rescue skills and continue to serve South Texas. A tugboat is a versatile platform, which can simulate hoisting from many different types of vessels."

In the future, training with the tugboats will be expanded to incorporate HC-144 airplanes from Corpus Christi.

## Confidence in oil & gas doubles

**Senior oil & gas sector professionals expect a step change in the industry's capex, opex and R&D spending levels this year, as new research from DNV GL confirms confidence in the industry has doubled.**

After three tough years, confidence in industry growth has risen globally from 32 per cent in 2017 to 63 per cent this year. Two thirds of respondents say their company will maintain or increase capital spending in 2018, compared to just more than a third last year.

*Confidence and Control: the outlook for the oil & gas industry in 2018* is DNV GL's eighth annual report providing a snapshot of industry confidence, priorities and concerns for the year ahead. It reveals an imminent turnaround in spending on R&D and innovation after three years of cuts and freezes. More than a third of 813 senior sector players surveyed expect to increase spending on R&D and innovation

in 2018, the highest level recorded in four years. Digitalisation (37 per cent) and cyber security (36 per cent) will form the principal areas of R&D investment focus this year.

Liv Hovem, CEO, DNV GL – oil & gas, said: "Our research indicates that the oil & gas industry is becoming more confident that its successful focus on cutting costs and building new efficiencies into the value chain will last. A new optimism is now emerging, driven from a common understanding that cost levels are under control and operators can make reasonable margins from an oil price that is expected to stay lower for much longer."

"The winners in our industry this year are those who can continue to make a clear shift from an expansion mind-set to a margin mind-set, and recognise the importance of implementing new models and technologies to improve operational efficiency."



# Milestone move shows faith in O&G sector

**Gulf Navigation (GulfNav) is in discussion to acquire a majority stake in Singapore-based Atlantic Navigation, the integrated offshore supply operation group engaged in providing logistic services, ship repair, fabrication and other marine services.**

GulfNav operates out of the UAE serving primarily customers in the Middle East and India. The company is in discussion with major oil companies in the Gulf region to provide key project solution and offshore services.

Atlantic currently operates a fleet of 25 vessels comprising AHTs, AHTSs, jack-up accommodation barges, offshore cargo barges, tugs, OSVs and lift boats. Out of this fleet, 17 are wholly-owned, two are jointly owned and six are cross chartered or managed by the group.

In addition, Atlantic has seven new OSVs on order which are being built to fulfil part of contracts awarded by a Middle East national oil company (NOC) for the charter of a total of 10 OSVs, comprising AHTSs and utility vessels. The duration of the charter is five years plus a two-year option with a potential contract value of US\$236m. Atlantic also owns a 50 per cent share in a consortium formed to undertake a US\$45m deconstruction project with a Middle East NOC. The project is the first of its kind and entails demolition and removal of offshore and onshore structures in an abandoned oilfield in Abu Dhabi. Atlantic has the first right of refusal in providing the entire marine

spread required for the project.

Khamis Juma Buamim, group CEO of Gulf Navigation Holdings, said: "This investment marks a major milestone in Gulf Navigation's strategy to grow our offering to our customers in the regional offshore oil & gas sector.

"At the same time it gives Gulf Navigation a significant position in the Gulf Co-operation Council regional OSV oil & gas market. During the discussions our two companies

have got to know one another well and our teams enjoy working together – an essential key to success."

Wong Siew Cheong, executive chairman and CEO of Atlantic, said: "GulfNav will provide us with, on one hand, new strategic and financial resources for our growth plans to enable us to widen our services to our clients and, on the other, broader opportunities for our talents. We thank GulfNav for their trust and confidence in our group."

## RESPONDING IMMEDIATELY TO SAVE VESSELS, CARGO AND HABITAT.



### In brief

Greece-based tug operator Gigilinis Shipping is renewing its fleet to meet market demands with the purchase of three harbour tugs. *Endeavour G*, an ASD tug built in 2005, with FiFi1 notation and a 62.5-tonne bollard pull (BP), and *Momentum G*, a 1999-built tractor tug with FiFi1 and a 46.5-tonne BP, have been operating in Thessaloniki port since January. *Animal G*, a twin screw tug built in 1988 with a BP of 25 tonnes, has been operating at Kavala port since February.

Baltic Exchange has formed a panellists' group to develop a new LNG Index comprising several routes for the gas-fuelled shipping market.

Construction of an LNG facility is now under way at the Port of Gothenburg, Sweden. It will become fully operational this year.

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# Tugboat design 'legend' dies peacefully at home aged 93

Engineer, shipbuilder and naval architect Frank Basile has died peacefully at the age of 93 at home surrounded by his children. His legacy continues with more than 600 vessels of his design currently serving the marine industry all over the world.

A native of New Orleans and long-time resident of Houma, Louisiana, Basile founded what was to become Entech Designs in the 1980s having earlier set up the Houma-based shipyard Modern Marine Power.

Basile's protégé, naval architect Kimia Jalili, who took over as president of the Kenner, Louisiana-headquartered Entech business in 2014, said: "Despite the loss, there is some comfort and solace to know that Frank lived a long and fruitful life filled with achievement. To quote a friend: he was a legend and made a great impression on this world."

Basile, a renowned fisherman, served as a naval officer during World War II and attended submarine training school in New London, Connecticut.

He graduated from Tulane University, New Orleans, in 1947 with a BSc in mechanical engineering.

His practical experience in shipbuilding began immediately as an engineer in the repair division at Avondale Shipyard just outside New Orleans, where he acquired in-depth knowledge of American Bureau of Shipping and US Coast Guard regulations.

Entech, which gets its name from a combination of 'engineer' and 'technology',

► Entech founder president Frank Basile



and Basile have gained many awards, including the prestigious Outstanding Design of the Year by *WorkBoat* magazine on numerous occasions.

Entech Designs' vessels include, among other commercial boats, tugboats, ATB tugs, towboats and OSVs.

Despite the wide range of vessels in Entech's portfolio, Basile was quoted in a 2007 interview as saying: "I just love tugboats. If I could do just tugs, I'd be in hog heaven."

Basile was preceded in death by his wife Beti, his sister Marian Breffeith, and his brother JT Basile. He is survived by his three children, Renee Lloyd, Andree Basile and Frank H Basile.

A memorial to celebrate his life was held at St Anthony of Padua Catholic Church in Houma with donations in lieu of flowers to Basile's favourite charity, Food for the Poor.

## French operator to invest in 'smart fleet' after selling 41 OSVs

Offshore operator Bourbon has told investors that it plans to sell 41 older vessels in its fleet and then invest in connectivity for 132 OSVs in a 'smart fleet'.

The France-based company says it is restructuring to adjust to overcapacity in a market where just 55 per cent of the entire global fleet is utilised and a third of the world's OSVs are stacked. It has called its response to this: 'Bourboninmotion'.

The firm's preliminary financial statements indicate a net loss for 2017 of US\$740m, despite efforts to control costs that have seen its opex down by 30 per cent and its capex down by almost 90 per cent since 2014. Its plan is to reduce opex by a further 25 per cent.

Bourbon plans to achieve much of this with a four-person-per-vessel reduction in manning across its planned smart fleet. Its aim is to replace one officer with automated dynamic positioning (DP) technology, one junior officer through what it calls 'on board process simplification', and one more officer and one crew member through the use of condition-based, predictive maintenance. DP automation technology is being developed in partnership with a marine electronics firm, and is already being tested (*see page 70*). The company sees these developments as stepping stones towards vessel autonomy.

Bourbon Corporation's CEO, Gaël Bodénès, said: "As the market cycle has bottomed out, Bourbon must focus more than ever on operational excellence, fleet utilisation rates, cost reduction programme and free cash flow preservation.

"However, we need to go even further, because market overcapacity is driving prices down sustainably and we believe that tomorrow will look very different from yesterday."

## Charity reaches 200

Seafarers' charity Sailors' Society has published a book, aptly titled *200*, to mark its 200th anniversary.

A quality, coffee-table-style book, it features 200 stories from the sea, taken from the society's archives.

Its fascinating tales range from desperate times at London docks following the Napoleonic Wars to the missionary eaten by cannibals, through two world wars, *HMS Victory*, *Titanic* and the tunes that were played on its centre piano by none other than The Beatles.

The book will be available to purchase from late April.

To pre-order one of 200 limited edition hardback copies, with commemorative sleeve and a certificate of authenticity, email [press@sailors-society.org](mailto:press@sailors-society.org)

## Operator upgrades accreditation

Offshore energy support vessel operator, Seacat Services, has attained a fresh set of ISO accreditations, following independent assessment by certification body DNV GL.

Seacat is one of the first operators in the offshore wind sector to achieve the updated ISO9001: 2015 quality management and ISO14001: 2015 environmental management standards,

affirming its commitment to maintain the highest possible levels of service for wind farm developers, operators and contractors. With crew and technician safety remaining a top priority, Seacat Services has also renewed its OHSAS 18001 health and safety certification.

As the offshore wind industry has matured, independently-assessed ISO and OHSAS accreditation is starting to become a must-have for support vessel operators as an indicator of quality and safety.

However, while the final deadline for upgrading to the new standards falls in September, it is estimated that 90 per cent of accredited firms across all industries – including offshore wind – are yet to make this transition.

◀ Seacat Intrepid



# R&D at core of firm's 50 years of success with marine pumps

As it approaches its 50th anniversary, Italian marine equipment designer and manufacturer Gianneschi Pumps and Blowers has renewed its Gigetta pump to increase its performance and range.

Founded in 1969 by Luigi Gianneschi and based at Capezzano Pianore in Tuscany, Gianneschi provides pumps, water pressure systems, blowers, fire dampers and boilers for commercial, military and leisure vessels.

The heart of the Gigetta pump has a two-stage dual impellers system which allows it to combine the centrifugal impeller characteristics, such as high dynamic fluid efficiency, with a special helical impeller profile, designed for quick priming. Its precision components are made of bronze and stainless steel to ensure best resistance to corrosion.

Gianneschi recently opened a new production centre, complete with a new road named after its founder. Its facility now covers a total area of 8,000m<sup>2</sup> and uses

► A Gigetta pump from Gianneschi Pumps and Blowers which is about to celebrate its 50th anniversary



state-of-the-art tools such as an automatic laser cutting machine, automated welding machines and painting machine.

As well as pumps designed for varying applications and vessel types, the company offers blowers for use on workboats designed to obtain large quantities of airflow at low pressures and can also provide variable pitch blades in order to meet customer needs. Gianneschi also delivers a large range of approved stainless steel fire dampers.

The company says that its technical department is constantly researching and developing innovative and technologically advanced solutions for a perfect match to the marine environment. The proximity of its half century anniversary means that its team is studying a new range of products.

## Firm acquires young towboat fleet

US-based Kirby Corporation has signed an agreement to acquire fellow Houston-based operator Higman Marine and its affiliated companies for approximately US\$419m in cash. The purchase will be financed through additional borrowings.

Higman's marine transportation fleet consists of 159 inland tank barges with 4.8m barrels of capacity, and 75 inland towboats. Higman's fleet moves petrochemicals, refined petroleum products, crude oil, natural gas condensate and black oil on the Mississippi River System and Gulf Intracoastal Waterway for large midstream and global integrated oil companies.

David Grzebinski, Kirby's president and CEO, said: "The acquisition of Higman and its young fleet of well-maintained inland tank barges and towboats is an excellent fit with Kirby's operations."

"Higman's inland fleet of 30,000-bbl tank barges, approximately 80 per cent of which are clean and 20 per cent heated black oil vessels, has an average age of seven years, and is one of the younger fleets in the industry."

"The low average age of these vessels means that the addition of Higman's towboats to Kirby's horsepower profile will allow us to avoid significant future capital outlays for new towboats."

## In brief

Wärtsilä has opened a global customer support centre which it says strengthens its customer service and handling of customer enquiries. In addition to existing support channels, it responds to all enquiries regarding any products and solutions belonging to the Wärtsilä family, such as spare parts, field services, technical support and online services.

Alphatron Marine has opened a second office in France on the Cote d'Azur. It already has an office in Le Havre. Marcell Ebell will be responsible for the new office and for the service and distribution of company products in south east of France.

Five Greenpeace activists were arrested after breaking into Port Taranaki, New Zealand, and boarding the OSV *Mermaid Searcher* in protest against oil & gas exploration.

MacGregor has completed its acquisition of Rapp Marine Group for an enterprise value of approximately €16m.

## Emergency attachment and tow system designed to be faster and safer

An oceangoing ship disabled at sea poses immediate problems for the crew, cargo and rescue vessels involved. Near-shore disablement also brings increased risk of grounding and environmental impact.

Attaching towlines in such circumstances is an exercise in seamanship and safety, often performed in conditions that put both vessels and crews at extreme risk. Existing emergency tow systems rely on a single attachment point, which can put deck hardware under stresses it was not designed for, particularly in foul weather. This can cause failures that further endanger crews and vessels.

In response to a request from the Alaska Maritime Prevention & Response Network, Glosten, a full-service marine consultancy, recently developed a unique emergency vessel attachment and towing system (EVATS™) with support from Samson Rope Technologies. EVATS is designed to overcome some of the most dangerous aspects of rescue towing, allowing faster deployment, safer operations for vessel crews, and a more secure connection.

The system is also an effective means of attaching the network's large vessel para-sea anchor or other ship-arresting device to the bow of a disabled vessel.

EVATS achieves these performance goals by connecting to multiple attachment points on a ship's bow, distributing line loads and affording the system near universal compatibility with ships' mooring gear arrangements.

Additionally, a strobing buoy, multiple line floats, and a pilot anchor attached to the retrieving line allow the hawser to be recovered from the surface of the water at a much safer distance from the disabled ship.

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# Mega-ships make towage experts think again about navigation

**The seemingly ever-increasing size of ships has become a major headache for many ports, with 64 per cent of container vessels built last year larger than 12,000 TEU. Janny Kok reports on how more manoeuvrable tugs can help**

The worst nightmare of port managers, shipping lines and logistics service providers may well feature ships losing rudder control on fairways into ports, even blocking the fairway altogether. Vessels ran aground in exactly this scenario on the Western Scheldt twice last year. These incidents made the Dutch towage sector and maritime know-how institutes think again about further solutions for smooth navigation – even on narrow fairways.

Nautical service providers, port managers and research and development institutes, such as Netherlands-based MARIN and Deltares, are busy identifying solutions for the optimal use of existing infrastructure by the ever larger vessels that use it. Container carriers, and the latest generation of tankers in particular, have become so big that they pose a challenge. Simulation centres contribute to research and offer solutions of their own. Deltares' fast time simulation SHIPMA is just one example of simulating the reality of navigating in narrow waters into a port.

Now that the first of the two Carousel RAVE tugs (CRTs) has been delivered to Multiship (*Delivery report, page 33*), Novatug MD, Julian Oggel, explains more about the CRT design. He is convinced that the CRT is a viable option to reduce the need for large-scale investments in port infrastructure. Oggel underlines the findings of Deltares about the impact of inadequate infrastructure on port access, and also how



hard (and expensive) it is to adjust existing infrastructure to accommodate ever larger vessels.

Last year about 64 per cent of container ships built or on order were larger than 12,000 TEU. Spokesmen for Ports Australia and Shipping Australia were quoted as saying that Sydney and Brisbane container terminals could only take ships of 9,500 TEU and 12,000 TEU respectively. A beam of 43m is the limit to call at the Port of Melbourne, meaning the container ships of today cannot navigate Melbourne's Yarra River.

Oggel rightfully observes: "The existing infrastructure of a lot of ports was built before the large ships of today were built or even considered. Expanding that infrastructure to fit those ships now, if physically possible at all, is very expensive, time-consuming and environmentally challenging. Further limitations as to the navigation in and around ports should naturally also be minimised. More control over towed vessels opens the potential to reduce or even remove weather and tide restrictions."

To his mind and all at Novatug, the CRT with its enhanced control has the potential to extend the life and capabilities of existing infrastructure.

Oggel said: "We believe the CRT is not just a tug, it is floating infrastructure. It was conceived after extensive trials of Novatug with this technology using a prototype on real tug jobs, scale models as well as computer simulations. With the new CRT just delivered we will

▲ Tugboats assist the 14,000 TEU container ship **Jupiter**, grounded on the Netherlands' Western Scheldt

be able to realise this exciting potential to the full."

The CRT's specifications are quite impressive: some 100 tons braking force at eight knots and 140 tons at 10 knots. The installed power is then used only to keep the CRT in position to neutralise any steering moment. Engine power is in any case very limited given the line force. Steering is even more effective, with 160 tons of steering force at 10 knots with less than 3,000kW of engine power, again only to keep the CRT in position and neutralise braking force.

Overall, the dynamic properties of the CRT also meet the general need for speed in the transport industry to ensure an efficient and smooth logistical process.

Oggel said: "The important message is that while the CRT is not the cheapest tug, it is extremely good value compared to the cost of enlarging the port infrastructure by dredging and widening access fairways, docks and the like."

Meanwhile, Kotug highlighted its own patented tugboat concept, Rotor<sup>®</sup>tug, which has been redeveloped together with Robert Allan Ltd. The design has been proven to be safe for the crew and provides effective steering and braking forces.

A company spokeswoman said: "This redundancy is one of the reasons as to why Rotortug is preferred by maritime pilots and port authorities, particularly in ports with a long and narrow fairway."

"An example of this is Port Hedland in Australia, one of the ports that prefers the Kotug tugboat design."

The Rotterdam-based towage company added that ATD and ASD tugboats also prove their utility, particularly in European ports.



◀ **Multiratug 32**, the first Novatug Carousel RAVE tug delivered to Dutch operator, Multiship



# People in the news

**Aberdeen Harbour Board** has appointed Michelle Handforth as its new chief executive. She has 20 years of board and leadership experience in global, multi-site businesses, and was recruited to succeed Colin Parker as the chief executive.



Tomas Michelsson

**Evac Group** has appointed Tomas Michelsson as president, offshore and merchant vessel business. Michelsson, based in Espoo, Finland, reports to Tomi Gardemeister, president and CEO of Evac Group.

Panagiotis Laskaridis is the new president of **ECSA (European Community Shipowners' Associations)**. He is a member of the board of the Union of Greek Shipowners and CEO of Laskaridis Shipping Company and Lavinia Corporation.



Guy Platten

The board of the **International Chamber of Shipping (ICS)** has announced the appointment of Guy Platten as secretary general, succeeding Peter Hinchcliffe. Platten is currently CEO at the UK Chamber of Shipping, and will take up the role at ICS in mid-2018. Simon Bennett, currently director of policy and external relations, is promoted to a new position as deputy secretary general.

The Brazilian terminal **DP World Santos** has a new CEO, Dallas Hampton, an Australian executive with degrees in business administration, logistics and occupational safety, and with wide experience in the ports and logistics sectors. Ernst Schulze, who served as CEO for nearly six years, is stepping down to assume another opportunity at the DP World group.



Siiri Duddington

International law firm **Hill Dickinson** has appointed partner Siiri Duddington to join its expanding shipping team. Formerly a partner at Campbell Johnston Clark, Duddington, has extensive experience in commercial contracts, shipbuilding and rig disputes. She will be based in the firm's London office, joining former colleague Julian Clark, who was appointed Hill Dickinson's global head of shipping last year.



Frank Coles

Frank Coles, CEO of **Transas**, has won the prestigious inaugural SMART4SEA Leadership Award, recognising his outstanding contribution to transformative thinking in the maritime industry. The 2018 awards focused on the initiatives and individuals who foster 'Smart Excellence & Sustainable Shipping'. The first ever Leadership Award is a special celebration of

the individual whose entire career, spanning 40 years, is considered as demonstrating leadership towards smarter shipping.

Bryceon Sumner joined Seattle-based **Foss Maritime** as CFO. In his new role, Sumner will oversee all aspects of the organisation's financial function and performance with an eye toward the company's long-range strategic goals. Sumner brings to the role years of experience as a leader in creating smart, straightforward financial strategies for a number of organisations ranging from education technology and real estate to architecture and financial services.



Bryceon Sumner

A new chairman and two vice chairs have been appointed to the **London International Shipping Week 2019** steering group. John Hulmes, chairman of Mersey Maritime, will take over from Jeremy Penn as chairman of the group, while Mark Jackson, CEO of the Baltic Exchange, and Denis Petropoulos, director of Braemar, will each assume the new role of vice chair.

Global marine and engineering consultancy **LOC** has appointed a new master mariner in Singapore. Redza Wahid has more than four decades of experience in the marine industry, including 20 years as a marine surveyor. Before joining LOC Wahid was managing a team of marine surveyors as operations manager, and has vast experience in surveys, inspections and vessel assurance.



Redza Wahid

Omur Izgili has taken over as **Viking's** country director for Turkey, Greece, Bulgaria, Romania and Lebanon. He succeeds Yasin Kasa, who has been appointed senior commercial director for Viking Asia, based in Singapore. Izgili joined Viking's Istanbul office in 2014 as finance manager.

Cintha Lopes has joined **Simwave**, the maritime simulation centre in Rotterdam, as simulator operator. Before joining Simwave she worked in maritime training roles for the Brazilian Navy and for Kongsberg. She started her career as a navigation officer at Norsul Shipping Company, and has also worked for Maersk and at IMCA (International Maritime Contractors Association).



Cintha Lopes

Hege Skryseth, executive vice president of **Kongsberg** and president, **Kongsberg Digital**, was named the Smart Ship Awards' Digital Changemaker of the Year (2017) for her role as an ambassador for maritime digital development.

# Second CSV ordered as sister starts trials

**Acta Marine, which has an offshore walk to work vessel under construction at Ulstein Verft, has now ordered another one, a SX195-design DP2 walk-to-work construction support vessel (CSV) for the offshore industry.**

Rob Boer, managing director at Acta Marine, said: "Our first CSV, *Acta Auriga*, at Ulstein Verft will go for sea trials shortly, and we are very pleased with the progress of this project. Returning to Ulstein Verft with an order for a new sister vessel is a strong signal of the importance of the yard's track record in quality and delivery precision, which is very important to us as ship owner and to our clients.

"We are quite convinced that the Acta SX195 vessels will create higher efficiency in offshore logistics operations and thus reduce the overall cost of constructing windfarms."

Gunvor Ulstein, CEO at Ulstein Group, said: "Acta Marine is firmly positioned in the renewable and offshore oil & gas markets. They challenged us in designing a highly flexible and compact vessel, with high capacities for long-term operations in the field, and this vessel is soon to be completed.

"We are looking forward to co-operating with Acta Marine again to bring forward another highly successful walk-to-work

construction support vessel."

The SX195 type designed, 93.4m-long and 18m-wide vessel is optimised for offshore wind. It has a large, centrally positioned SMST-provided W2W motion compensated gangway and elevator tower for personnel and cargo transfers, as well as a 3D-compensated SMST crane capable of 6-ton cargo lifts. The optimised on-board logistics include large storage capacities – of which half is under roof in a controlled environment – and stepless approach to the offshore installations. The vessel is equipped with a fuel-efficient drive system.

In addition, a helideck will be fitted. With all main equipment and operations in the aft ship, the vessel will naturally operate astern while in-field. Keeping the X-STERN® towards the weather, there will be no slamming, noise or vibrations caused by the waves. The crew will get complete rest between shifts.

Boer said: "Acta Marine is stepping up its activities in offshore wind. These ship designs are flexible and attractive for work within areas such as operation & maintenance (O&M) or construction support, especially in

challenging weather and sea conditions."

The vessels are capable of year-round, North Sea offshore operations in up to 3m significant wave heights. The safe transfer of service crews, cargo and spare parts, the in-field flexibility and high comfort are highly valued by the charterers. The flexibility of these vessels improves productivity when servicing offshore wind farms. The vessel is scheduled for delivery in the second quarter of next year.

Acta Marine was recently awarded a two-year charter for vessel number one, *Acta Auriga*, for O&M operations at BARD Offshore 1, Germany.

## Contracts reflect more activity in North Sea

**Norway-headquartered OSV operator SolstadFarstad has secured three contracts for its PSVs, highlighting increased activity in the UK sector of the North Sea.**

TAQA Bratani Ltd has signed a contract for the PSV *Far Spica* for the duration of its mobile drilling campaign in the UK sector, expected to be around 18 months starting in the first quarter of this year.

AGR Well Management has awarded SOFF a contract for the PSV *Normand Aurora* from March and Fairfield Betula has extended its current contract for PSV *Far Symphony* by six months.

Jon Are Gummedal, executive vice president, AHTS/PSV international, at SOFF, said: "For SolstadFarstad, the UK sector of the North Sea is of high strategic importance. We are pleased to see increased activity in the sector."

## Inland waterway deal

Damen Shipyards Group and the Dutch shipbuilders, Concordia Group, have signed a joint venture agreement to co-operate in the construction and trade of inland waterway vessels, operating as Concordia Damen Shipbuilding.

▼ *Acta Auriga* under construction at Ulstein Verft



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# Three more PSVs get hybrid power upgrade

Kongsberg has received an order to deliver unique 'full picture' technology upgrades for a further three PSVs owned by Mantenimiento Express Marítimo SAPI de CV (Mexmar), Seacor Marine's joint venture in Mexico.

The contract follows the September 2017 contract for the same ground-breaking upgrade package on the PSV *Seacor Maya*, which was an important step taken by Mexmar towards meeting the increasing industry demand to reduce the environmental footprint of offshore operations.

Under the new contract, Norway-headquartered Kongsberg will deliver and install a state-of-the-art hybrid power and DP upgrade designed to significantly enhance energy efficiency on board *Seacor Azteca*, *Seacor Warrior* and *Seacor Viking*. With *Seacor Maya*'s conversion

started in January, and the follow-up vessel conversions expected to be completed by July, Mexmar will soon be the only PSV owner in the Americas able to help its clients meet strict new environmental regulations for decreasing CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub> emissions.

While delivering environmental benefits for Mexmar charter clients, Kongsberg's hybrid power and DP solution adds safety and efficiency beyond conventional energy storage, in addition to enabling tangible operational cost savings through reduced fuel consumption. As a single supplier for the upgrades, Kongsberg's responsibility includes the supply and full integration of the energy storage system with a custom designed energy control system (ECS), and the existing dynamic positioning (K-Pos DP-22) and integrated automation system (K-Chief 700 IAS), both of which will be

upgraded as part of the contract.

Tim Clerc, manager of engineering at Seacor Marine, said: "With the reduction of environmental impact fast becoming a key criterion for our clients, it's important that we are able to meet the changing needs in the market. We will soon have four vessels operating on the most advanced hybrid powertrain available, offering capabilities and efficiency not available on any other PSVs operating in the Americas."

Corvus Energy has been selected by Seacor and Kongsberg as the supplier of lithium ion-based energy storage systems (ESS) for all four of the PSVs being retrofitted with a state-of-the-art hybrid power system. The Orca Energy ESS from Corvus will supply electrical power to the PSVs' propulsion and dynamic positioning system's electrical network to enable safe, environmentally-friendly and lower cost operations.

Typical vessel operations will utilise the batteries to provide spinning reserve during critical vessel operations such as dynamic positioning, as well as to provide support for peak shaving, enabling the diesel engines to operate more efficiently. Utilising battery power from the Orca ESS will not only reduce the environmental footprint of the offshore operations, but will also significantly reduce operational costs, including fuel and maintenance on the engines.

Clerc said: "We are confident in the energy saving and safety elements of the Corvus Orca ESS for *Seacor Maya* and are keen to start migration of more of our vessels to this unique, environmentally-friendly and highly efficient power solution."

Halvard Hauso, senior vice president of sales at Corvus Energy, said: "Corvus is proud to be a key partner in Seacor's commitment to the environment and their goal of sustainable and energy efficient operations. As the leading manufacturer of energy storage systems for maritime applications, Corvus continues to lead the industry with 100-plus projects utilising a Corvus ESS, now totalling over 75MWh and 1.5m operating hours."



*Seacor Maya*, the first of four PSVs operating in North America to get the technology upgrade

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# Firm orders its first LNG-powered tugboat

Japan-based Mitsui OSK Lines (MOL) has signed a deal for the construction of an LNG-fuelled tugboat with Kanagawa Dockyard, Japan. Construction was due to start in February with the vessel scheduled for delivery next year.

This vessel will be MOL's first tug powered by LNG-fuelled engines – produced by Yanmar – and the first LNG tug in Japan to conform to the IGF code.

It will also be Japan's first LNG-fuelled tugboat with its fuel tank mounted on the exposed deck at the stern of the vessel,

to enhance convenience in bunkering, maintenance, and inspection.

The tugboat will be operated by the Nihon Tug-Boat Company of Japan and deployed in Osaka Bay.

LNG fuel will be supplied by Osaka Gas using a truck-to-ship system. MOL and Osaka Gas will establish the LNG fuel supply system for vessels, the first in Osaka Bay, and will co-operate in an LNG fuel supply development project conducted by the Port and Harbour Bureau of Osaka Prefectural Government at Sakai-senboku Port.

MOL will also move ahead with research on practical use of an LNG fuel supply system with a detachable, portable LNG fuel tank, by adapting this design to the tugboat.

The company has already conducted research relating to LNG fuel. This has included, among other things, a joint study of an LNG-fuelled Capesize bulk carrier, an approval in principle (AIP) for the future design of a series of LNG-powered 20,000 TEU-class containerships, and another AIP for the design of an LNG-powered coal carrier vessel.

# Operator wins multi-year UK waters deal for charter of two of its PSVs

Vroon Offshore Services has been awarded a multi-year charter for two of its fleet of PX-121-type PSVs to support Total E&P UK (TEPUK) operations on the UK continental shelf (UKCS).

The company's PX-121-type PSVs have been successfully trading in the UKCS since their delivery in 2015 and 2016, supporting a number of North Sea clients in both the spot market and on term contracts. The first vessel was due to begin duties with TEPUK in February, with the second due to commence

operations in September. Both contracts are for a firm period of three years, with options.

The two chartered vessels, which are still to be nominated, form part of a series of six PX-121 type PSVs constructed for Vroon at the COSCO Guangdong Shipyard in China.

They feature an Ulstein-patented X-Bow design that ensures smoother vessel movements, optimal fuel efficiency and maximum comfort on board. The final vessel in the series, *VOS Patriot*, is scheduled for delivery later this year.



▲ *VOS Pace*, one of Vroon's fleet of six PX-121-type PSVs

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## Tug designed to limit ecological footprint

Uzmar Shipyard of Turkey has signed a contract with Saam Smit Canada (SST Canada), a joint venture partnership between Boskalis of the Netherlands and Saam SA of Chile, for the construction of a new Robert Allan Ltd-designed RASTar 3200-W for SST Canada's operations in British Columbia.

The state-of-the-art tug will be capable of safely performing all ship-handling roles, including berthing, unberthing, and escort duties, including in heavier weather conditions. The tug will also be fully

▼ A file image of a RASTar 3200-W

equipped for terminal standby roles with a FiFi1 external fire-fighting system, and a towing equipment package suitable for rescue towing missions.

The new tug has been designed to meet a stringent set of performance requirements that were carefully identified and verified by multiple real-time full mission bridge simulations in collaboration with British Columbia Coast Pilots, Pacific Maritime Institute, Towing Solutions Inc, Lantec Marine Inc, Robert Allan Ltd and SST Canada. These requirements include a bollard pull of 80-plus tonnes and indirect escort forces of up to 120 tonnes at 10 knots.

The new 499grt RASTar 3200-W has an LOA of 32m, moulded beam of 13.2m, least moulded depth of 5.5m and a capacity of 199m<sup>3</sup> of fuel and 40m<sup>3</sup> of fresh water, characteristics that will make it the largest and most capable escort-rated, multi-mission tug in both SST Canada's fleet and the entire west coast of Canada.

As a custom design for SST Canada's operations, the forward fendering system has been designed to be 'extra-soft' in order to reduce contact pressures on vessels that the tug may assist. A folding mast on the wheelhouse top will reduce the possibility of contact with other assisted vessels with large bow flares, such as container ships. Also important to SST Canada's operations is the integration of numerous safety features for future operations at gas terminals proposed on the coast of British Columbia, including a gas detection and alarm system, explosion-proof deck equipment, remotely controlled ventilation and other isolation controls.

The tug will also be the first in Canada to feature an IMO Tier III emissions-compliant propulsion and exhaust system. As a result, it is also expected to become one of the most emissions-friendly vessels of its type in the world when it enters service. Additional Cleanship and Green Passport notations from Bureau Veritas also help the vessel stand out with superior environmental performance and reduced ecological footprint. The tug's full classification notation will be: BV 1 ✱ Hull, • Mach, Escort Tug, Fire-Fighting 1 Waterspraying, AUT-UMS, In Water Survey, Cleanship and Green Passport.

Production design of the tug is already well underway at Uzmar and targeted to be complete within 15 months, with delivery to British Columbia shortly thereafter.

## Third order for popular workhorse

Robert Allan Ltd has agreed a contract with Peruvian tug operator Tramarsa for a new RAMParts 2400-W tug.

The vessel will be built by Jiangsu Wuxi Shipyard in China and is to be called *Lima*, continuing a Tramarsa tradition of naming tugs with indigenous words. Lima was an ancient civilization, established well before

the better-known Inca empire, and is also the name of Peru's capital city.

The new tug is an evolution of the previous RAMParts 2400-W tugs *Chincha* and *Tupaq* which are the Quechua words for 'north' and 'rich' respectively. These tugs were also built by Jiangsu Wuxi for Tramarsa and are currently operating in Callao port, Peru.

*Lima* will have a 24.4m LOA, excluding fenders, a moulded breadth of 11.25m and draft of just under 4.5m. The vessel will have ABS class notifications A1, ©, Towing Vessel, UWILD, Unrestricted Navigation ABCU, FiFi1 and ✱ AMS.

It will be powered by two 2,240kW main engines and be designed to achieve a bollard pull of 75 tonnes.

◀ *Chincha* will soon be getting a new sister

## Smart tugs for China

Robert Allan Ltd has been awarded two tug design contracts for Tianjin Port in China. Sanlin Shipyard in Shanghai will build two ASD 35/50 tugs and Jiangsu Zhenjiang Shipyard will build two ASD 40/40 tugs.

The current port fleet includes five Robert Allan Ltd-designed tugs, in three unique designs, and it is due to the success of these vessels that the port has returned to the Vancouver, Canada-based company for new designs for their ongoing fleet renewal programme.

All the new tugs will be designed and constructed to comply with China Classification Society (CCS) requirements for intelligent ship (i-Ship) notation and will be equipped with smart-sailing, smart-hull, smart-engine room, smart-efficiency management and smart-control centre systems. It is understood that these tugs will be the first vessels with i-Ship notation.





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# Carrousel idea comes full circle for safer, easier towing

Leading towage and salvage specialist Multiraship has taken delivery of the first of two innovative Carrousel RAVE tugs (CRTs) which, it is claimed, will make it easier, safer and more environmentally friendly to work with seagoing vessels at much higher speeds than conventional tugs without the risk of capsizing under a tow-load.

The initial vessel, named *Multratug 32*, was delivered by shipyard Damen Maaskant in Stellendam in the Netherlands and will operate under lease to Multiraship. It measures 32m overall, with a beam of 13.3m and a maximum draft of 6.3m. Propelled by two Voith cycloidal thruster units unconventionally arranged in-line longitudinally, power is provided by a pair of ABC main engines.

The contract for the vessels was agreed between Novatug, an innovation arm of the group to which Multiraship also belongs, and Damen's specialist propulsion subsidiary, Van der Velden Barkemeyer, in November 2015. German shipyard Theodor Buschmann in Hamburg assembled the hulls, which were then moved to Stellendam for fitting-out.

Julian Oggel, managing director of Novatug, said: "The whole CRT concept was driven by safety considerations. In principle, capsizing is impossible when towing with the carrousel, which facilitates the safe execution of manoeuvres that would be very high-risk with traditional tugs.

"The carrousel system consists of a base structure surrounded by a steel ring that can rotate freely through 360 degrees in the horizontal plane. It carries a towing winch that can tilt vertically 45 degrees so that the winch can always be aligned with the towing line, providing optimal control. As a result, we can work with large seagoing vessels at much greater speeds than can be achieved by conventional tugs, and that means that the

vessels themselves are easier to steer. This is a major step forward for both efficiency and safety."

The RAVE (Robert Allan Voith Escort) tug is a new concept for a highly manoeuvrable, high-performance escort and ship-handling tug, jointly developed by Robert Allan Ltd and Voith Turbo Marine. The unique characteristic of the RAVE concept is the longitudinal alignment of the two VSP drives, in contrast to the more conventional transverse 'tractor' configuration.

By offering precise and improved force generation characteristics, the RAVE design is essential for the demands of indirect escort towing, and critically important for working in confined harbour and channel areas. It uses the variable pitch characteristics and the X/Y-logic of two Voith Schneider propellers for optimum power allocation and precise manoeuvring.

Pepijn Nuijten, managing director of Multiraship Towage & Salvage, said: "We are delighted with the CRT, which not only represents a major improvement in crew safety but also means that we can continue to lead the way in the provision of services for our customers. Thanks to the ingenious design of the tug, which effectively maximises the use of the kinetic energy available in the towed vessel rather than the tug's own engine power only, the same towing force can be achieved at much lower levels of fuel consumption than with a conventional tug.

"The savings amount to at least 25 per cent on an average operation involving a seagoing vessel. We have been using sustainable Eco2Fuel+ diesel from De Pooter Oil since trials began, resulting in emissions of soot and particulate matter being reduced by a further 16.5 per cent, and a reduction in carbon emissions of 44.7 per cent compared with regular diesel."

*Multratug 32* is powered by a pair of ABC



main engines, each developing 2,650kW at 1,000 rev/min. These drive Voith Schneider type 32R5EC/250 cycloidal propulsors configured in-line from bow to stern. Each main engine also drives a Jason fire-fighting pump of 1,350m³/hr, which in turn feed two 1,200m³/hr water/foam monitors, from the same supplier, and a waterspray system to achieve Bureau Veritas FiFi1 notation. The vessel is also fitted with three Volvo D5A 70kW auxiliary engines.

For the first time, two innovative technologies have been combined in a single vessel. The RAVE concept employing the longitudinal alignment of two VSP drives has been coupled with the equally distinctive carrousel towing system. This features a special winch developed by Machinefabriek Luyt in Den Oever.

Doing away with fixed towing points, the carrousel instead mounts the winch on a freely rotating steel ring seated around the base of the tug's circular superstructure. This not only allows the tug to turn completely freely while maintaining tension on the towing line, but also permits the tug to use the lateral resistance of the hull as a powerful braking mechanism. As a result, a carrousel tug can brake and steer a moving tow faster and more effectively than a conventional vessel and is impossible to capsize.

Other significant benefits include a reduction in fuel consumption of around 25 per cent and less engine wear as a consequence of the tug not having to use its





engines for all braking manoeuvres. This, combined with the power and precision of the RAVE design, delivers an exceptionally capable and safe tug.

The shape of the superstructure has

caused, of necessity, a fresh look at the accommodation layout. On main deck there are two generous single cabins, each for captain and chief engineer, which share an interconnecting shower and WC. The galley and mess are also on this level alongside a separate smoking room and an additional WC and changing room. Below deck at one end of the engine room is an unusually large fitted workshop and a switchboard room while at the other are two twin berth cabins and a sanitary space.

Remotely controlled, the winch uses an independent hydraulic power pack which drives a two speed double drum with a 200 tonne brake load and has capacity for 140m of 60mm diameter Dyneema rope. Other items of deck machinery include a DMT capstan, Karmøy towing pins at the bow and Smith Berger towing pins at the stern. It also

carries a Palfinger deck crane.

The bridge is extremely well equipped with four Alphabridge consoles fitted with an Alpha seapilot and Alphasat gyro. JRC is another main supplier, with both radars and two ECDIS systems along with the DGPS, echosounder, MF/HF; Sailor supplied three VHF's.

The vessel, which is protected by International paints and Trelleborg fenders, of cylindrical, D and W type, has a maximum free-running speed of 14.1 knots and a cruising speed of 11 knots. The dynamic BP steering is estimated at 140-160 tonnes at 8-10 knots.

Damen is currently building a second, identical CRT for Novatug. Delivery is expected in May 2018 and the vessel has already been reserved for Multiraship. Novatug also plans to market smaller versions of the CRT.

**Andy Smith**

## New-build G Class PSV arrivals reach seven



**Swire Pacific Offshore (SPO), headquartered in Singapore, is substantially through a 10-vessel new build programme with the successful delivery by Japan Marine United Corporation of vessel number seven in its G Class. Named Pacific Griffon, this DP, fire-fighting PSV was handed over early this year.**

Measuring 84.65m overall with a beam of 18m and a maximum draft of 6.43m, the vessel is powered by a diesel electric system comprising two Yanmar 6EY26LW engines, each of 1,720kW, and two Yanmar 6E engines, each of 680kW. This 4,800kW (6,434hp) system powers two 2,000kW Rolls-Royce Contaz 15 azimuth thrusters for main propulsion plus a trio of 730kW Brunvoll CPP tunnel thrusters all mounted forward. In addition, there is a 125kW Doosan powered emergency generator.

Fitted with 14 single cabins, 13 twin-berth cabins and two four-person cabins, giving 48 berths in total, the vessel has a well-equipped galley, mess room with separate TV lounge, a hospital (with one bed) and a gymnasium. Every cabin enjoys the benefit of en suite facilities. The wheelhouse features split

U-shaped consoles both fore and aft plus numerous other desk positions for GMDSS and two DP work stations.

The DP system itself is a GE Energy DPS21 duplex and has five separate reference systems available. The bulk of the comprehensive array of electronic navigational and communication items are from Furuno, with the exception of the Tokyo Keiki-supplied compasses (three gyros, and one magnetic) and the Sailor Fleet 500 broadband.

A timber-sheathed deck area of 810m<sup>2</sup> is available and is capable of carrying 1,750 tonnes of cargo. The ship's fuel capacity is 306m<sup>3</sup> but can be increased by 591m<sup>3</sup> by utilising NLS tanks. Similarly, cargo fuel capacity is 797m<sup>3</sup> with capacity for an additional 172m<sup>3</sup> by utilising NLS tanks. The potable water capacity is 684m<sup>3</sup> while 318m<sup>3</sup> of dry bulk, 190m<sup>3</sup> of base oil, 762m<sup>3</sup> of mud and 1,753m<sup>3</sup> of ballast/drill water can also be accommodated.

The deck machinery has been supplied by Rolls-Royce and comprises two 20-tonne tugger winches, each with 250m of 22mm wire and a portable controller, two 10-tonne

capstans with warping head and drum capacity for 100m of 18mm wire, and two combined mooring winches/anchor windlasses. Also fitted is a 5 tonnes @ 14m radius knuckleboom crane.

An external fire-fighting system has been supplied by FFS to comply with DNV's FiFi1 notation. A 3,700m<sup>3</sup>/hr electric motor driven pump feeds two 1,200m<sup>3</sup>/hr monitors and the drenching system. The vessel is also OilRec ready, requiring only the installation of pumps and some additional piping. Dispersant from a 10.9m<sup>3</sup> tank can be deployed from spray booms on both sides.

The Japan Marine United Corporation (JMU), which is building all of SPO's initial order of 10 G Class PSVs, was formed through the January 2013 merger of Universal Shipbuilding Corporation and IHI Marine United, both leading companies in the shipbuilding industry in Japan. By synergising the strengths of both companies in terms of design, development and technological capabilities in shipbuilding, JMU aims to establish itself as a world-class shipbuilding company that is anchored with a strong Japanese alliance.

**AS**



# Italian yard returns to tugs with Algeria deal

Cantiere Navale Vittoria, located near Venice, Italy, has just completed *Cap de Fer*, an ASD tug for the Entreprise Portuaire de Skikda in Algeria. Designed by Marine Engineering Services, the vessel has been built to the requirements of Bureau Veritas with FiFi1 notation and measures 26m LOA with a beam of 10m and a draft of 3.85m.

Won against considerable international competition, the project signals a return to commercial tug construction for this yard, which has concentrated in recent years on

paramilitary and military vessels.

Power is provided by a pair of ABC diesel engines, each developing 1,326kW at 1,000 rev/min. These drive Schottel type SRP 1012 FP Rudderpropellers mounted aft. In addition, there are two Deutz 113kVA generator sets plus a harbour generator of the same size and type. The builder advises that the bollard pull attained is 30 tonnes and that the service speed is 12 knots.

The external fire-fighting system by Jason comprises a main engine driven pump feeding two 600m<sup>3</sup>/hr water/foam monitors

and the water spray system.

Living quarters are provided for a crew of eight in five cabins with the captain and chief engineer accommodated in single cabins. There is the usual galley and mess room. Up above is a well-equipped wheelhouse with a comprehensive kit of navigational and communication electronics with Furuno dominating as the main supplier.

Rolls-Royce supplied the main winch mounted forward. Aft is a Mampaey towing hook with an SWL of 1,000kN. The deck is capable of accepting loads of 3 tonnes/m<sup>2</sup>. Tanks are available for 40m<sup>3</sup> of ballast water, 158m<sup>3</sup> of diesel oil, 33m<sup>3</sup> of fresh water, 14m<sup>3</sup> foam and 11m<sup>3</sup> of dispersant.

The contract for the new tug was awarded by the Algerian transport ministry in 2016. *Cap de Fer* will provide towage and harbour services in the port of Skikda in the north east of the country.

Vittoria Shipyard was created in 1927 and works in all sectors of naval construction, having produced more than 800 boats, including cargo boats, fishing vessels, tankers, dredgers, ferry boats and passenger ships. In addition to this Algerian contract, CN Vittoria has another tug under construction, won against considerable competition in a public tender process. This vessel of 60 tonnes BP and measuring 32m LOA is destined for Russia. AS



## Growing wind sector drives move for SOV advancement

Expansion of the Belgian offshore wind powered generation scene continues as MHI Vestas Offshore Wind and Esvagt announce the inauguration of the market's newest state-of-the-art service operation vessel (SOV). Named *Esvagt Mercator*, the new vessel will support 50 turbines at Nobelwind, Belgium's newest offshore wind farm, and 55 turbines at Belwind 1.

MHI Vestas's CEO, Flemming Ougaard, said: "With the inauguration of *Esvagt Mercator*, we are deepening our commitment to the Belgian offshore wind market and our expertise in the operations and maintenance business. The collaboration with Esvagt in the design of such an advanced service operation vessel has been outstanding. We look forward to utilising all this ship has to offer in maintaining the turbines at Nobelwind and Belwind 1."

The 10-year lease agreement deepens the



relationship between the two companies in the region and will provide the latest in SOV technology. A vessel such as *Esvagt Mercator* is a key driver in increasing service efficiency and turbine availability – essential issues for the burgeoning offshore wind industry.

"Esvagt is proud to continue our partnership with MHI Vestas in developing the most efficient and safe solutions in the offshore

wind industry. As two market leaders, we are joined in our commitment to being innovative and bringing efficient service solutions to offshore wind farms," said Søren Karas, chief commercial officer at Esvagt.

The brand new ship, designed for highest efficiency including low fuel consumption, will operate from the Port of Oostende. It will be a home for 36 people for up to two weeks at sea. It is equipped with three safe

## TUG & OSV DELIVERIES

transfer boats (STBs) designed for safe and efficient transfer of personnel from *Esvagt Mercator* to the turbine. MHI Vestas has an operations and maintenance base in Oostende with 65 people in permanent employment.

Measuring 58.5m overall with a beam of 16.6m and a maximum draft of 5.5m, the vessel features a clear deck area of 260m<sup>2</sup> with capacity to store nine 20ft containers. There is an additional below deck cargo storage area of 140m<sup>2</sup>.

The generous accommodation layout comprises 36 single cabins all with en suite shower and WC, wi-fi and TV, galley and mess room (for 32 persons), two dayrooms, a conference room, a cinema/games room and a fitness room. In addition, there are two customer offices, an outside recreational area and two changing rooms.

The new vessel, a Havyard HD831 SOV

design, was built at Cemre Shipyard in Turkey in collaboration with Havyard Design & Solutions.

The diesel electric system was provided in its entirety by Norwegian Electric Systems (part of the Havyard Group) and its scope encompasses a pair of 1,000kW electric motors for main propulsion, a pair of 1,000kW electric motors to drive the tunnel thrusters together with a number of electric transformers and a blackout safety system and remote assistance system.

Propulsion, giving a maximum speed of 12 knots, is by Steerprop thrusters augmented by Brunvoll transverse thrusters. A Kongsberg DP system is integrated within the nav/com package provided by Raytheon Anschutz.

Each of Esvagt's SOVs is designed according to the customer's needs and specifications. It has serviced MHI Vestas

Offshore Wind in the Belwind 1 offshore wind turbine farm with *Esvagt Supporter* for six years. "The new *Esvagt Mercator* has been optimised to suit the exact requirements in this specific park," said Kristian Ole Jakobsen, chief operating officer.

This SOV is significantly smaller than the other SOVs already in operation, and it is equipped differently too. For example, transfers to the offshore wind turbines will be solely performed using STBs. The vessel is equipped with two STB 7s and one larger STB 12 – both furnished by Esvagt.

Esvagt is a dedicated provider of safety and support at sea, and in 2010, it brought the dedicated offshore wind SOV to the market. The company was founded in 1981 and today has a fleet of more than 40 vessels and approximately 900 employees on and offshore. **AS**



## New tractor design heads for New Zealand

The tug *Kinaki* is the first of the Sanmar Deliçay series and the lead vessel built to the innovative Robert Allan Limited TRAKtor-Z 2500 SX (Sanmar eXclusive) design which has considerable technical input from the Turkish builder's own engineers and naval architects.

It is in true tractor configuration, with forward mounted Z-drives designed for maximum efficiency and safety in harbour, ship-handling and towing duties. This arrangement is thought by many experts around the world to be the preferred configuration for harbour tugs.

Built by Sanmar in Turkey to ABS class and New Zealand flag requirements, this notable vessel is being shipped by heavy lift vessel to the owner, Port Taranaki Ltd, located on the west coast of North Island, New Zealand.

The flexibility of this brand new design allows for a series of options to be added or deducted based on individual owner requirements. There is even a triple-engined Rotor® tug version. The more 'standard' Deliçay series can be supplied with either 60 or 70 tonnes bollard pull – *Kinaki* is equipped with the lower power option at 60 tonnes to meet Port Taranaki's particular requirements. A 70 tonne bollard pull version of this same



model is very close to completion at the yard, enabling any interested operator to take advantage of an exceptionally prompt delivery.

Measuring 25.3m overall with a beam of 12m and maximum draft of 6.1m, the

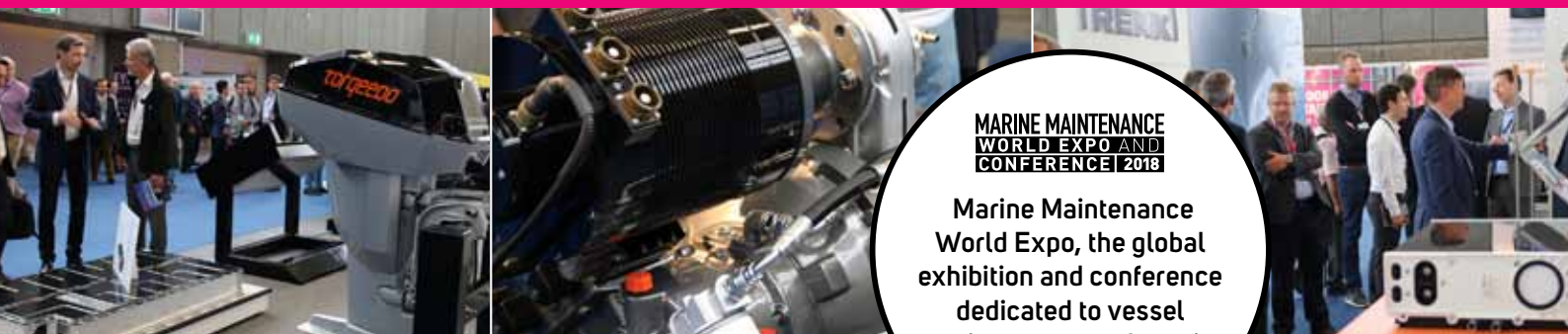
first of the new series is powered by a pair of 3512C IMO Tier II Caterpillar engines, each developing 1,902kW at 1,800 rev/min. These turn Rolls-Royce Z-drive azimuthing thrusters with 2,500mm diameter propellers to give a trials performance of 62 tonnes



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bollard pull ahead and a free-running speed of 11 knots. A main engine driven external fire-fighting system from FFS, of 1,400m<sup>3</sup>/hr output with a single water/foam monitor mounted on the aft of the bridge deck, is fitted but a full, dual monitor system to FiFi1 notation can be incorporated if required. Twin Caterpillar C4.4 generator sets are installed.

Although this is a compact tug, the wide experience of both Robert Allan Ltd and Sanmar has given the vessel an air of spaciousness throughout the fully air-conditioned accommodation, which comprises three twin berth cabins, all with en suite facilities, separate galley and mess (with seating for the entire crew plus guests). Entry to the deck house is via a wet gear hanging area with head compartment. Down below there is a workshop with bench.

The attention to detail is particularly obvious in the wheelhouse where most components can be raised and lowered to suit the operator's convenience. This applies to the Furuno radar screens, engine control consoles and CCTV monitors. Adjustable

'sliders' enable the controls to be positioned for maximum operational comfort.

This vanguard of the series also has a highly effective deck machinery fit-out. This comprises a double drum aft towing winch by DMT with a 187-tonne brake capacity. Each drum carries 150m of 60mm Dyneema fibre rope for maximum strength at minimum weight, along with a 15m pennant. There are two vertical capstans supplied by Data Hidrolik, and a Palfinger boom type deck crane is also fitted.

The fendering arrangement aboard this first vessel is exactly to this customer's rather special requirements. Sanmar's standard fender scheme (as being employed on the second example of this series) comprises W-fender, fore and aft, and replacing the side tyre fenders with D-fendering.

Port Taranaki is at the centre of New Zealand's petrochemical industry and is primarily an export port for methanol and other petrochemical products as well as import of dry bulk product supporting the local agricultural sector. Until the arrival of

**Kinaki**, its tug complement comprised three tractors.

Grant Squire, Port Taranaki Ltd's marine engineer, who is overseeing the project, said: "Sanmar and Robert Allan have delivered us a high quality vessel with excellent performance which will integrate well into our existing fleet of tractor tugs." **AS**



**Harvey Blue-Sea** is the second of a pair of Jones Act compliant, multi-purpose support vessels (MPSVs) built by the Eastern Shipbuilding Group at its Panama City, Florida, yard for Harvey Gulf International. The first vessel, **Harvey Sub-Sea**, was delivered in the third quarter of last year.

Commenting on the delivery of the first of the sisters, Shane Guidry, chairman and CEO of Harvey Gulf, pointed out that the vessels have the size, crane capacity, deck space, accommodation, equipment and station-keeping capability equivalent to, or better than, foreign competitors.

He said: "The **Harvey Sub-Sea** can perform a broad spectrum of subsea installations and removals, inspection, repair and floatel services. It can be equipped to lay umbilicals and cables and perform well-intervention and hydrate remediation operations. If there is a MPSV job needed in the Gulf, she can do it."

Each vessel measures 340ft overall x 73ft x 29ft (103.7m by 22.3m by 8.9m) and is equipped with a 250-ton knuckleboom, heave-compensated National Oil Well Varco crane with 4,000ft (1,220m) of wire. The crane's winch is below deck, expanding its lifting capacity and enabling potential loads of 107 tonnes to be delivered to water depths of 12,000ft (3,658m).

The diesel electric propulsion system has a quartet of Wärtsilä 6L32 diesel engines with a total rating of 12,680kW at its heart. These power a pair of Schottel type SRP 3030 FPP azimuthing thrusters with nozzles. In addition there are three STT5 tunnel thrusters from the same manufacturer.

There are 87 air-conditioned and heated cabins to accommodate 150 people in total, comprising 24 single units and 63 twin berth units. In addition to the usual galley and mess room there are two lounges, three gyms, a

## State-of-the-art MPSV duo fit to match foreign competitors



conference room, two cinemas, a hospital and numerous other rooms dedicated to ROV operations. The moon pool measures 24ft by 24ft (7.3m by 7.3m).

The bridge is well equipped with Raytheon Anschutz synopsis multifunctional workstations (CREC) at both the forward and aft consoles, with chart radar, Navmanager, Nav Data Manager c/w Alarm Manager, X-Band transceiver, S-Band transceiver, weather facsimile FAX-408, and gyrocompass. In addition there is a JRC NCR-333 Navtex, EPIRB, SART, and portable VHF. There is a Sailor deck stand 150W MF/HF GMDSS radio System, with Inmarsat Mini-C. The DP system is a Kongsberg KPos 21 DPS-2. Furthermore, the bridge is equipped with acoustic flooring.

**Harvey Blue-Sea** has a clear deck area of 12,435ft<sup>2</sup> (1,155m<sup>2</sup>) capable of carrying 2,642 tonnes of deck cargo, a Sikorsky S61N rated helicopter deck of 22m diameter and a North Pacific stores crane (1.5 tonnes @ 3m). Other


cargo carrying capacities include 1,061m<sup>3</sup> of fuel, 440m<sup>3</sup> of fresh water and 3,518m<sup>3</sup> of drill/rig water.

Harvey Gulf International Marine, founded in 1955, is a privately owned and operated company specialising in providing fast supply, offshore supply and multi-purpose support vessels for deepwater operations. In addition to its New Orleans headquarters, the company has offices in Houston, Galliano and Anchorage. **AS**

## More power produced

An article published in *IT&O January/February 2017*, and again in the *IT&O Annual Review 2017*, stated that the two MaK type 8M25C engines on the Pella Shipyards-built tug, SB 737, each produced 1,815hp (totalling 3,630hp). In fact, they each produce 3,630hp. We apologise for the error.

## Deliveries in brief


 The first of two new ATB units has entered service with US marine transport company, Harley Marine, following successful trials carried out in the Gulf of Mexico by builder **Conrad Shipyard**.

The 80,000bbl oceangoing barge, **Edward Itta**, and its accompanying tug, **OneCure**, got straight down to work on the delivery voyage by picking up a load along the Gulf Coast and taking it through the Panama Canal to a port on the West Coast before heading north to the unit's assigned work location in Alaskan waters.

**OneCure** is a 116ft by 36ft (36m x 11m) tug powered by two GE 6L250 EPA Tier 4-compliant diesel engines each delivering 4,560hp at 900 rev/min and driving four-bladed 93in (2,325mm) propellers. Auxiliary power comes from twin John Deere 99kW 6068TFM engines.

Both vessel names have a close personal connection to Harley Marine chairman and CEO, Harley Franco. **OneCure** honours his lifelong friends Larry and Sherry Benaroya of the Benaroya Research Foundation for their efforts in fighting diabetes in the Pacific Northwest. The barge is named after Edward Itta, an American Inupiat politician, activist and whaling captain who died of cancer in 2016.

Conrad Shipyard, in Morgan City in Louisiana, has previously delivered 22 vessels to Harley Marine Services, and currently has three ocean tugs under construction.

 Danish offshore operator Maersk Supply Service has taken delivery of **Maersk Mover**, the third in a series of six identical Starfish-class AHTS vessels. Built by **Kleven Verft** in Norway to a Salt 200 design by Salt Ship Design, the Starfish series are state-of-the-art vessels built for deep water anchor-handling and oilfield operations.


The fuel-efficient and flexible hybrid propulsion system includes five Wärtsilä medium speed engines, with total output of more than 23,000hp, driving three bow tunnel and two stern tunnel thrusters plus two controlled pitch main propellers –



giving a bollard pull of 253 tonnes.

The comprehensive deck machinery equipment includes a 450-ton drum anchor handling winch, 500-ton double drum towing winches, two 170-ton secondary winches and a 200-ton anchor recovery frame.

Other features of the versatile 95m by 25m **Maersk Mover** and its siblings include 924m<sup>2</sup> of deck space – 102m<sup>2</sup> of that covered – with a capacity of 2,500 tonnes and a deck strength of 10 tonnes/m<sup>2</sup>; an ROV and covered garage; accommodation for 52 personnel, and significant tank capacities for extended endurance at sea and tasks such as oil recovery. The class 2 dynamic positioning system is supplied by Kongsberg. The first two vessels in the series, **Maersk Master** and **Maersk Mariner**, were delivered last year and were recently signed up for a contract with Quadrant Energy in Western Australia (see page 50). Both vessels will support Quadrant Energy's Phoenix South and Van Gogh drilling campaign which will initially cover three wells for a duration of 150 to 200 days, supporting Transocean's semi-submersible rig, **DD1**, with supply and anchor-handling duties.

 Alabama shipyard, **Master Marine**, has completed the latest in a series of four Subchapter M-compliant river tow boats as part of a fleet upgrade for inland operator Waterfront Services. **Tom Torretti** is a 67ft by 28ft (20.6m by 8.6m) vessel that will operate on the Ohio and Mississippi rivers.


The boat is powered by a pair of Mitsubishi 803hp Tier 3 diesel engines supplied by Laborde Products, which also provided the electrical power in the shape of two Northern Lights 65kW Tier 3 generators. A pair of Sound Propeller Services four-blade stainless steel propellers provide the thrust through two J&S Machine Works propeller shafts.

All boats in the series are set up with

10,400 gallons (47m<sup>3</sup>) of fuel, 4,359 gallons (20m<sup>3</sup>) of potable water and 9,500 gallons (43m<sup>3</sup>) of ballast water along with providing a maximum 7ft 9in (2.3m) working draft.

Waterfront Services is based in Cairo, Illinois, where the Ohio and Mississippi rivers converge. The company's wide range of river harbour services includes tug shifting and switching and towing among other activities.



 **Damen** has delivered a customised version of its versatile ASD 2310 tug as the first of two new vessels to be based in French Guiana.

**Papillon** is a 33-tonne bollard pull tug operated by De Boer Remorquage, a subsidiary company of Dutch Dredging and Iskes Towage & Salvage, which has a 12-year contract with Grand Port Maritime de Guyane in the ports of Cayenne and Korou in France's South American department.

The 23m by 10.5m tug's primary function is the assistance of vessels entering and leaving the ports, but it also carries out survey activities, small transports and emergency assistance such as fire-fighting.





Built under French flag rules, the vessel was designed to meet the requirements of end client, Grand Port Maritime de Guyane, which contributed to the design.

Main engine power comes from two Mitsubishi S12R-MPTAWs each delivering 1,414hp at 1,650 rev/min. These are linked to Veth VZ-100A azimuth thrusters driving 1,800mm diameter propellers in VOB50 nozzles. This propulsion combination gives *Papillon* an ahead speed of 12 knots, a bollard pull ahead of 33.5 tonnes and astern of 29.6 tonnes.

Fully insulated and air-conditioned accommodation for a crew of four to six people includes three cabins – one above the main deck and two below – plus galley/mess and sanitary facilities.

Joining the ASD 2310 later this year will be a WID 2915 hybrid tug which Damen is currently configuring for dredging capabilities.



Turkish shipyard **Sanmar** has delivered two more ASD tugs to Italian operators, bringing to 12 the number of tugs it has supplied to Italy since 2010.

*Vivara*, the sixth and latest example of the relatively new Sirapinar class, has entered service with Rimorchiatori Napoletani joining identical sister *Marechiaro* in Naples port. The 22m tug is a Ramparts 2200SX, designed exclusively for Sanmar by Robert Allan Ltd, built to RINA class and Italian flag requirements.

Power comes from a pair of 1,500kW Caterpillar engines turning azimuthing Schottel Rudderpropellers to give 50.2 tonnes of bollard pull ahead and a free-running speed of 12.6 knots.

The Sirapinar class is a slightly smaller version of Sanmar's still-successful Bogaçay class, otherwise known as the Ramparts 2400SX – another exclusive Robert Allan Ltd design for the shipyard. It is one of these, named *Citta di Salerno* (pictured above), that has been delivered further down Italy's west coast to Rimorchiatori Salerno to ensure the towage operator can continue to meet the needs of the ever-increasing size of ships calling at Salerno harbour.

The 24.4m vessel is powered by two Caterpillar 3512C main engines driving Rolls-Royce US205 FP Z-drives mounted aft – a configuration that gives a bollard pull of 60 tonnes.



ALP Maritime has completed the line-up of its Future-class AHTS fleet with the delivery of *ALP Keeper* from **Niigata Shipbuilding & Repair** in Japan. The 89m by 21m vessel is currently undergoing further outfitting in South Korea, after which it will join its fellow football-themed tugs, *ALP Defender*, *ALP Striker* and *ALP Sweeper*.

Each of the quartet is a SX157 design developed by Ulstein Design & Solutions in close collaboration with Dutch marine services company ALP Maritime, a subsidiary of Teekay Offshore Partners.

*ALP Keeper* is powered by four MaK 9M32C main engines each delivering 4,500kW at 600 rev/min and driving tunnel thrusters – two bow thrusters and two stern thrusters – and turning two 5,000mm diameter controlled pitch propellers in nozzles. This propulsion system gives the vessel a maximum speed of 19 knots, service speed of 12.6 knots and 302 tonnes of bollard pull.

The Rolls-Royce SL400-3T towing winch has a brake holding load of 675 tonnes. Two gog winches and a tugger winch are also from Rolls-Royce.

In addition to its towing duties, the vessel has 550m<sup>2</sup> of cargo deck area with a maximum load of 10 tonnes/m<sup>2</sup>.

Accommodation for 35 personnel includes 25 single cabins and five double cabins, while there is also a single-berth hospital.

Russian company TOS Bunkering has taken delivery of the first three of a quartet of Damen ASD 2310 tugs in the Black Sea port of Novorossiysk.

*Delovoy 1*, *Delovoy 2* and *Delovoy 3* are being used for towing, mooring, transferring pilots, fire-fighting, crane capacity and a wide range of additional harbour tasks at the grain and container terminals.

All three tugs are 22.7m long with a 10.43 beam, depth of 4.5m and a draft aft of 4.7m. They are powered by two Caterpillar 3512C engines each generating 1,500kW at 1,600 rev/min. Propulsion comes from two Rolls-Royce US205 azimuthing thrusters linked to 2,200mm diameter propellers.

Resulting bollard pull is almost 52 tonnes ahead and 49 tonnes astern, while maximum speed is given as 12.6 knots.

Auxiliary power is also by Caterpillar in the form of two C4.4T gen sets.

Air-conditioned accommodation for up to seven crew includes a two-berth cabin for the captain and single-berth cabin for the chief engineer above the main deck, along with a galley/mess. Below deck are two double-crew cabins, sanitary facilities and switchboard room.

A hydraulically-driven 130-ton brake anchor/towing winch has a split drum with an 18-ton pull at 11m/min, while the capstan winch is electrically driven. Other deck equipment includes a Heila crane and Mampaey towing hook.

The three sister tugs are Russian flagged and have Russian Maritime Register of Shipping classification, with *Delovoy 3* having additional FF3WS fire-fighting classification, as will the fourth vessel, *Delovoy 4*, currently under construction and due for delivery by the end of this year.

TOS Bunkering is part of DeloPorts, one of the largest terminal operators in the Black Sea Region.



The operator of a US chain of gas stations and convenience stores has taken delivery of its first articulated tug barge (ATB) unit to ship fuel to support its growing presence in Florida.

Wawa Inc currently operates more than 750 outlets down the US East Coast – with more than 550 of these selling fuel as the company sells around 2 per cent of all the gasoline in the country. The firm's main current expansion is in Florida, where it has around 140 sites and plans to open 25-30 new stores a year for the next few years.

The fuel for many of these will be supplied by the ATB combination built by **Fincantieri Bay Shipbuilding** in Sturgeon Bay, Wisconsin. The unit comprises the 185,000-bbl barge named *1964* – the year the first Wawa outlet opened – pushed by the 8,000hp tug, *Millville*.

John Oliver



# When a broker calls in the lawyers

Regular columnist Simon Tatham takes a look at some of the problems tug owners can face getting paid under TOWCON when a job has been subject to delay – or worse



► Simon Tatham

**It would be difficult to attempt to list a set of comprehensive guidelines to avoid problems getting paid under TOWCON, when a voyage has not gone according to plan.**

A good broker should keep the parties talking, ensure most differences are resolved and that the tug gets paid. When therefore the first call comes in from a gentleman of that profession you know that he will already have lost much of the hair on his head and is verging on despair. He may even be reaching the point whereby one or other party, or both, are being so difficult that they deserve nothing better than to be cast into the hands of the lawyers. Usually at this point the broker makes one further and heroic attempt to knock heads together, telling the parties that a solicitor has been lined up and that if they do not behave this kindly intermediary will soon wash his hands of the matter.

Cases that can go legal very quickly include where the tow cannot be accomplished and the flotilla has had to return to port, or where the tow takes on water and the tug is obliged to seek refuge for repairs, involving delay and expense, and a late arrival at destination.

Seen from the hirer's perspective, their budget for the tow is now greatly exceeded while delivery dates are leading to commercial problems with the end user, who may also be threatening to withhold the money intended to cover the tow. The operations team that planned the voyage is in deep trouble and looking for scapegoats. The finger gets pointed at the tug, and payments are withheld.

So, assuming for these purposes there is a good claim, what to do?

At this point a tug owner might wish that he had insisted on financial security. If that is on offer during fixture negotiations, care does

need to be taken to ensure that any guarantee is worth the paper it is written on. There is, for example, no standard parent company guarantee wording. We have seen attempts to limit its scope and application, for example guarantees that expire automatically at the end of the voyage. If the right to financial security has been waived, with box 36 ignored and a line put through clause 12, as it so often is, the tug owner is left to secure his claim by other means.

One option, if available, is to exercise the possessory lien granted under clause 28 while claiming a delay rate. This is a subject I have covered before and which can be very effective but, equally, is not without its limitations in practice. However, it prompts a reminder to tug owners to remember the good reasons always to press in negotiations for the highest delay rate they can get.

Also not to be overlooked is the setting of a good rate of interest under box 35. Interest at 5 per cent per annum may be much higher than today's deposit rates, but is hardly going to incentivise a hirer to make quick payment. It is only going to be effective if it hurts, and I would suggest that pain only really begins at around one per cent a month. However, I can hear the broking community complaining that we lawyers do not live in the real world.

Moving on quickly therefore, the tug owner may look for security for his claim by arrest or attachment, including pursuant to clause 34. However, that depends upon whether such right is available in the courts where the tow ends up and, if so, whether the tow is a ship as defined under the Arrest Convention 1952/1999, and a good many tows fall outside that definition. There may be no right at all if the tow is not owned by the hirer named in box 4 and although clause 29 seeks to bind the undisclosed owner to the

terms of the contract, this may be a source of unwelcome argument before the local courts. Last, but not least in this connection, if the tow is heading for the scrapyard it may have very little value, while in many jurisdictions counter-security may be required as a condition of arrest, an additional cash call that could be tied up for the duration of the underlying arbitration proceedings.

If the tow has actually sunk, a claim for unpaid lump sum instalments and other charges may arise together with a claim in damages for unearned instalments based upon a breach of the hirer's undertaking to exercise due diligence to make the tow tow-worthy. There will be no tow to lien or arrest, but there may be scope for seeking from court a freezing order or injunction over the hull insurance proceeds before they reach the pockets of the hirer. In the London market that is certainly possible, although it needs to be done quickly and involves a not insignificant investment in legal fees.

However, frequently the problem is that this type of insurance is on voyage terms and subject to towage warranty survey compliance and other conditions. All too often a close examination of the hirer's compliance with the policy will allow insurers to question or avoid cover.

When it comes to contract drafting and pricing, the above issues highlight some of the potential limitations facing the tug owner when the hirer decides it does not wish to pay. *Simon Tatham is a partner of Tatham Macinnes LLP and founder member of the TugAdvise.com service. He has more than 30 years' experience of shipping law.*

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# Sunken tug raised from bottom of Amazon

**David Pockett, founder member, former CEO and now a consultant to LOC Group, managed the tendering process and attended throughout the complex salvage operation to recover the tug *Bertolini CXX* and the bodies of its nine crew from the bottom of the Amazon, as representative of West of England P&I Club and owners. Here he provides an exclusive first-hand account of the challenging project successfully carried out with due regard to the extremely sensitive nature of the task**



► David Pockett

It was a dreadful tragedy. A collision in the early morning hours of 2 August 2017 on the Amazon river, near the little town of Obidos, between a container ship and pusher tug/barge convoy resulting in the tug, *Bertolini CXX* (279 tonnes deadweight), sinking with the loss of nine lives. The river conditions were at their most challenging at the time with the prevailing current up to 6 knots, virtually zero underwater visibility and the tug was found nearly 60m down.

Owner Transportes Bertolini Ltda and its third party insurance interests, West of England P&I, responded immediately to locate the tug and also to see if there might be any contractors in Brazil with proposals and the means to try to recover the bodies.

Widespread enquiries drew a blank other than the customary wild cards who went to great lengths to extol their virtues and abilities of being able to mount diving operations. Sadly, this was cruelly misleading for the families of those missing and built up false hopes. Enquiries of first class international salvage contractors regarding diving operations confirmed what was already assumed. Diving to recover bodies from the tug on the riverbed was not an option.

It was clear there was an urgent need for

a realistic approach having due regard to the practicalities involved in recovering the bodies. Despite those who believed diving was an option, safety and common sense had to prevail for fear of increasing the death toll. There were even those who favoured lassoing the tug and pulling it to the river bank – from 60m water depth! Perhaps well intended, but not realistic. Sensible solutions had to be found elsewhere and more importantly, authorities and family interests needed to be persuaded that although time consuming, using a professional, experienced salvage contractor with the necessary resources had the best chance of success in removing the tug to enable the search and recovery of the bodies.

In the event, a wreck removal order was issued to recover the tug. This would enable the bodies still within the hull to hopefully be found and delivered back to their families to afford them some closure.

At a presentation to the relevant authorities and family members in Santarem on 16 August, it was explained that the best opportunity to recover the tug was to have an international tender inviting proposals from the world's leading salvage contractors. This would tap into the best brains in the industry and prompt solutions using the

most appropriate resources for what was an extremely challenging task.

Understandably, family members, already suffering from agonising grief, were caused yet more distress upon hearing that the tender process would take at least three weeks with a contractor not being on site until late October/early November. However, it was the most sensible avenue to follow. Common sense did prevail and the proposed course of action gained growing support.

West of England P&I initiated a tender process for the recovery of the tug. Given the seasonal river conditions, it appeared from the minimal statistics available that the current velocity would be less during the last quarter of the year and in particular November. The tender had this very much in mind.

The tender process was intense and comprehensive and involved further multi-beam surveys of the tug as it was not clear if it was overturned or upright, although the final survey before a contractor was selected favoured it being overturned and well buried in the sand (which turned out to be the case in fact). The majority of the tenders were based on diverless solutions to recover the tug – the risks using divers being considered unacceptable.

The successful tender, submitted by Smit Americas, proposed using a giant 600-tonne capacity salvage debris grab (HDW 1), with jaw diameter of nearly 11m suspended in the hooks of the 1,200-tonne floating sheerleg *Taklift 7*, as the prime tool. The grab would attach around the hull of the tug, upright or overturned, and then lift it from the riverbed. A jetting system would be fitted to the grab to assist in its penetration. Other tenders were well considered, but it was decided that Smit's method would have the best chance of success.

The recommended tender was advised to the maritime authorities on 4 September and the technical proposal was formally presented to the marine and other authorities in Brazil shortly after. It received prompt approval. The proposal was also presented



◄ The giant grab suspended from Taklift 7





▲ The tug being landed on the barge after being lifted from the river bed and, above left, laying out sorbent materials inside the protective boom

to family interests. A contract was promptly concluded. *Taklift 7* was to be mobilised from its home base in Rotterdam; the giant grab was to be loaded on to a support barge and in tandem, the convoy would be towed across the Atlantic to the Amazon. A salvage team was selected under the designated salvage master, Chris Bos, who had previous relevant experience using the grab.

After a period of waiting on weather, the convoy departed Rotterdam on 8 October under the tow of the tug *Smit Nicobar*. It arrived in Macapa at the mouth of the Amazon 29 days later for inward clearance. In the meantime, an advanced salvage team had been mobilised, including surveyors to perform another multi-beam survey and set up the riverbed imagery equipment. Another multi-beam survey performed before the arrival of *Taklift 7* under Boskalis supervision effectively concurred with the results of the final survey during the tender period, namely that the tug was very probably upside down in the river bed.

On 14 November, *Taklift 7* was moored to a four-point mooring over the pusher tug. The giant grab had been lifted from the barge in Macapa and installed in the hooks of the sheerleg. Tests had also been carried out in the water. By the time the sheerleg arrived on location, the grab was set ready to go.

A net was provided to effectively provide a shroud over the tug to prevent any fall-out during lifting operations. However, the current at the sinking location proved too strong to install the net initially, although this was just as well since in the overturned condition, it would have been a hindrance. The net was installed in shallower water at the parbuckling location after the tug had been turned upright and before the final lift and transfer to the barge.

A floating dock had been well prepared by Bertolini to receive the tug and this, together with a support barge, was on location shortly after the arrival of *Taklift 7*. It had been hoped that the tug might be temporarily repaired and refloated from the dock. However, as events unfolded, the perceived damaged condition of the vessel prompted a change from the dock to the support barge as the receiving

craft and it was prepared accordingly.

There were very small quantities of diesel, lube and hydraulic oil on board the tug in various tanks at the time of sinking. An oil spill responder, Hidroclean, was mobilised with the floating dock and barge and remained throughout the operation. Prior to this, given the dynamic nature of the Amazon and despite the small quantities of oils involved, advice had been sought from the International Tanker Owners Pollution Federation (ITOPF) as to appropriate oil spill response planning and resources.

*“Professionalism, experience and perseverance won the day. This was an operation that demanded close teamwork, a proper understanding and full support from all key parties throughout”*

Oil-tight barriers were provided at the perimeters of both the floating dock and barge as an added precaution against any oil pollution. The Hidroclean team was proactive throughout, monitoring the river for oil release, laying out booms and applying sorbent materials as and when required. In fact, pollution was negligible and the occasional minimal releases soon dissipated in the prevailing high temperatures.

An echoscope (highest definition real-time 3D imaging sonar) was mounted at the side of *Taklift 7* as the primary survey tool to identify the tug and guide the grab. This proved invaluable throughout. In particular, the images provided soon added to the confidence that the tug was upside down and not upright. It was also clear that the tug had a significant trim by the stern which would cause problems in achieving a proper grip by the grab around the hull.

Current readings over the casualty during November showed velocities ranging from about 2.3 to 2.9 knots proving that this was indeed the best time to execute a wreck removal operation.

The grab was lowered on 16 November.

A grip was achieved, via guidance from the echoscope, towards the forward end of the tug, unfortunately not in the position which had been intended (in way of the engine room bulkhead) due to the aspect of the tug in the riverbed. At the forward position, the grab was in the best location to be able to effect tension and lift. Moving it further aft was not a safe option due to the trim and inevitable greater structural damage and more importantly, running the risk of disrupting the bodies remaining on board. It was always a fine balancing act and one which Smit had uppermost in mind.

A lifting load was slowly built up to 800 tonnes. No movement was observed in the tug. The load was maintained. Removal of sand by jetting from the grab was not very effective and sand quickly backfilled over the tug. Tension was, however, maintained for long periods and, intermittently, efforts were made to clear sand from the hull and sides of the tug using the grab, but without any significant change.

The lack of any movement in the tug quite understandably prompted alarm and questions. Sadly, there were those who were quick to criticise the salvage contractor and tendering process. Failure to take account of the river conditions, failure to allow for burial and failure to bring the right equipment were some of the allegations made – all of which were unfounded, ill-considered and unfair.

The proposal had been presented in detail to all parties and was approved. Smit had conducted a transparent operation from the outset; all parties were welcomed on board *Taklift 7* and were free to observe and witness the operations first hand, observe the images of the overturned tug on the riverbed, see the loads in the hooks and operations generally. However, it was good that professionalism, experience and perseverance won the day. This was an operation that demanded close teamwork, a proper understanding and full support from all key parties throughout.

Finally, it was during the evening of

27 November that the suction forces were overcome and the tug broke free from the riverbed. Ironically, a conference call had taken place between Smit and West of England an hour or so earlier that day to discuss how best to proceed if the tug could not be lifted.

However, at a regular meeting between Smit, owners' interests and authorities after the conference call, it was advised that Smit would continue to maintain the lifting load but there was no guarantee of success. Dredging had been considered but dismissed on practical grounds let alone time for mobilising and losing seasonal condition advantages. Other forms of dredging were also considered and were being sourced although similar disadvantages existed. There was also a risk of the tug sinking further if dredging was performed. The location could not have been worse for a task of this nature – namely to raise a tug, significantly buried, without causing further damage and enable the safe recovery of bodies.

On 28 November the tug was lifted from the river bed and taken a short distance downriver in the hooks of *Taklift 7* to a shallow water location close to the river bank where current velocity was suitable for parbuckling and diving operations.

The giant grab was removed two days later and slings arranged for parbuckling which took place on 1 December without problem. Slings for final lifting were repositioned for a safe lift. The tug was lifted and transferred to the waiting barge on 5 December after being drained as much as possible. Arrangements had been made for family members to observe proceedings from the nearby riverbank.

► **Bertolini CXX almost above water**

The weight of the tug was 570 tonnes at the time of redelivery to owners. Pollution was negligible, but an oil spill high level response was maintained during the whole operation.

There was significant structural damage from the grab where it had been attached around the hull at the forward end, but thankfully, well clear of the locations of the missing persons. The decision not to try to move the grab any further aft was entirely justified given the trim and structural integrity of the tug. The grab could quite easily have caused yet more serious damage and breached areas where bodies were found. The accuracy and sensitive handling of the grab was a prime feature of the body recovery success. The emergency services promptly set about searching for and recovering the bodies on the afternoon of 5 December and throughout the following day in a most professional, sensitive and efficient manner. It was comforting at least, to know that the bodies of all nine missing crew members were recovered and the actions of the giant grab had not impacted upon this at all.

The period of time from the date of sinking to the time of tug redelivery and body recovery was just over four months. Given the location of sinking and the extreme



conditions prevailing, coupled with the need to engage the services of an international salvage contractor and mobilise from northern Europe with the appropriate resources, the timescale was quite remarkable.

However, even more impressive was the professionalism of Smit and the perseverance under very difficult conditions to recover the tug in one piece in a most sensitive manner and without affecting the location of the bodies of missing crew members.

While tragic beyond comprehension, all nine bodies of the missing persons were recovered. It is this which gives some comfort and will hopefully bring some closure to the families and loved ones of those who perished. Faced with both political and public pressure, which often follows such a tragic event, this was certainly a success story for the salvage industry under the stewardship of a strong and committed team working closely together in pursuit of a common goal – the return of the missing persons.

## Bulk carrier collision led to 68-day salvage operation

When bulk carrier *Sinica Graeca* was involved in a collision in the Singapore Straits last August en route from Indonesia to India with 50,000 tonnes of coal on board, the incident resulted in a 100m<sup>2</sup> hole on the vessel's starboard side that caused fuel oil and more than 4,200 tonnes of the cargo coal to spill into the sea.

The resulting 68-day salvage operation, spearheaded by Greece-headquartered Tsavlis Salvage, saw the oil spill contained and cleared, and the stricken vessel – escorted by harbour tug *POSH Husky* – moved to

reserve anchorage in Singapore before the remaining 45,000-plus tonnes of coal were taken off by barges and transferred to another bulk carrier, *America Graeca*. Finally, *Sinica Graeca* was safely moored alongside a floating dock at the Pax Ocean shipyard.

In addition to a salvage team from Greece and the Netherlands, Tsavlis worked with agents and local subcontractors throughout the operation.

Three other incidents handled by the company in the last quarter of 2017 also involved bulk carriers. In December, AHT

*Salvanguard* towed *Delfa*, laden with 50,000 tonnes of wheat, to safety in Sri Lanka after it experienced camshaft problems as a cyclone was developing.

Later in the month, capesize bulk carrier *Maria A Angelicoussis*, fully laden with iron ore, became disabled 15 miles off the Taiwan east coast. The vessel was attended by tug *Salvage Ace* and towed to Taiwan's southern port city of Kaohsiung. *Salvage Ace* was back in action two days later when maize-carrying *Iolcos Genesis* suffered engine failure and was towed to the same location.



## AUVs used in new search for missing airliner

Ocean Infinity, the technology company specialising in collecting high resolution geophysical seabed data, is searching for the missing Malaysian Airlines flight MH370 after being given the go-ahead by the government of Malaysia.

The 90-day project, undertaken by the company's multi-purpose vessel *Seabed Constructor*, is focusing on an area identified

by the Australian Transport Safety Bureau.

Ocean Infinity can use up to eight autonomous underwater vehicles (AUVs), capable of operating in water depths from 5m to 6,000m. The AUVs are 'free flying', which means they will not be tethered to the offshore vessel during operations. The ability to operate untethered independent missions allows the AUVs to go deeper and collect higher quality data, making this technology ideal for the search.

◀ **Ocean Infinity's Seabed Constructor**



# Innovative hot tap recovers fuel from wreck

A Miko Marine Moskito hot tap tool and oil recovery system extracted 400 tonnes of heavy fuel oil from the tanks of the sunken general cargo vessel *Thorco Cloud*.

The wreck lies in two sections 1,730m apart and 70m down in the middle of the eastbound traffic lane of the Singapore Strait following a collision in December 2015. The heavy oil in the fuel tanks and in trapped compartments was seen as a major pollution hazard.

Both the bow and stern sections contained fuel tanks that required emptying so *Thorco Cloud*'s owner, Marship GmbH, supported by the P&I insurance company Standard Club, contracted Jaya Salvage Indonesia as the salvage company last year. Bumi Subsea provided ROVs and the dynamically positioned *Surf Allamanda*, owned by Bourbon Offshore. This served as the work platform during the salvage of the trapped fuel by using the new hot tap tool developed in Norway by Miko Marine.

Thousands of sunken ships along the coast of Norway represent pollution dangers from the fuel trapped inside their hulls. This prompted the Norwegian Coastal Administration to invite Miko Marine to devise a method for removing it.

The result was a unique tapping machine, known as the Moskito, that uses magnets to attach itself to the wreck before drilling through the hull plating and into the relevant tank. A ball valve and hose is connected to the drill bit and barrel of the Moskito and this prevents oil escaping through the drilled hole while the valve is closed during drilling. A hose for discharging the oil is connected to the drill's valve before or after the hot tap operation has been completed.

Attaching the Moskito to the vessel by magnets makes the drilling operation unique and this is further enhanced by its ability to create a leak-proof connection between the drill bit, the ball valve, the hose connector and the hull in a single operation. This is all controlled from a laptop on the surface and without the need for divers. An ROV or divers are only used for the positioning and recovery of the Moskito from the hull of the casualty or for making hose connections.

A high-resolution sonar scan of the



▲ The Miko Marine Moskito is prepared on board *Surf Allamanda* and, right, lowered down to the wreck of *Thorco Cloud*

*Thorco Cloud* wreck enabled the recovery team to work with naval architects' plans and calculate the precise location of each tank and the optimum locations for inlet and outlet holes. ROV surveys then made close visual inspections to identify locations for penetration by using references to hull openings, visible frame numbers or other identification points on the hull sections.

Once each penetration point had been identified, an ROV was used to clean and mark the area where the hot tap tool was to be located. The Moskito was then positioned on the penetration point by ROV and strongly attached to the hull with its electromagnets, activated by the Miko team on *Surf Allamanda*. The Moskito operator then started the drill, which can penetrate steel plating up to 25mm thick.

Once the puncture had been made, the cut disc fell into the tank and the operator sealed the drill bit and its barrel in place. The Moskito was then removed by the ROV for the next hull penetration, leaving just the drill bit with its ball valve and hose connection in situ. A hose leading to a nearby submersible pump was then locked on to the drill unit by the ROV. The Miko team started the pump and the recovered oil was lifted to the surface through a hose and into one of the ISO tanks on the deck of *Surf Allamanda*. Flow was carefully monitored to minimise water intake and 12 tanks on *Thorco Cloud* were



tapped, enabling all accessible heavy fuel oil to be recovered at a rate of 10-15m<sup>3</sup>/hr.

Speaking after the completion of the project, Nicolai Michelsen, managing director of Miko Marine, said he was pleased that his company's invention has now been confirmed as a valuable solution to a difficult problem. He said: "There is an extraordinary number of ships around the coasts of Europe and elsewhere that were sunk during World War II and many still have tanks containing heavy fuel oil. After 70 years they are now starting to decay and cause unexpected deposits of oil on nearby coastlines.

"After much research and development work, I am pleased to say that our success with *Thorco Cloud* has demonstrated that the Moskito system can provide a cost-effective way for governments and coastal authorities to remove pollution threats to their coastal communities."



◀ Oil is pumped from *Thorco Cloud* 70m down in the Singapore Strait

# Quiet times make way for a slow recovery

**As the international maritime industry begins to show signs of recovery, Western Australia-based consultant Kent Stewart takes a look at what the immediate future holds for Australian owners and operators**

Like everywhere else in the world, the Australian shipping industry – particularly the offshore oil industry – is slowly showing signs of clawing its way back to recovery. The Australian offshore industry has felt the double whammy of the completion of seven major construction projects at about the same time as the world's oil prices took a nose-dive.

Harbour towage, likewise, is undergoing a period of stabilisation, with only a small number of new build projects planned, while the bigger players wrestle for control of contracts in ports around the country.

For such a small population, Australia sets quite a few world records.

Port Hedland is the biggest bulk port in the world. It finished last financial year (2016/17) exporting a shade under half a billion tonnes of iron ore. By the end of 2019 it is expected that Port Hedland will be home to some 27 tugs, nine of which are proposed for the new Fortescue Metals Group's iron ore export facility, yet to start up.

On the east coast, Newcastle holds the record as the world's largest coal exporting port (161m tonnes in 2016), topped up by exports out of Hay Point/Dalrymple Bay in Queensland, making Australia the largest exporter of coal in the world.

Added to these records, its production of LNG is set to make Australia the largest exporter of natural gas in the world by 2019.

And of course, all these ports need tugs – mostly in the 70-100 tonnes bollard pull range.

Svitzer's aggressive approach has been rewarded with the bulk of tug operations in ports all around Australia. Smit Lamnalco's acquisition of PB Towage has handed a lion's sized chunk of harbour towage to the Boskalis-owned tug company. And elsewhere, companies such as Rivotow hold the very lucrative 18-tug contract in Port Hedland, while KT Maritime (a joint venture between Kotug and Teekay) is taking up some prime contracts.

A number of employee-managed operations are having success, in particular Westug in a few of the key Western Australian ports.

Mackenzie Marine, one of the few remaining family-owned companies in Australia, is picking off ports such as Bunbury and remains tenaciously holding on



▲ Tugs operating in the east coast port of Newcastle, which holds the record as the world's largest coal exporting port; inset, Kent Stewart

to its home port of Esperance. Meanwhile, its joint venture with Pacific Tug (another family-owned company) in Queensland is operating in a number of smaller ports in that state and in New South Wales. The Stannard family-owned Coastal Tug and Barge (CTB) remains firmly entrenched in Darwin and South Australia.

*"Harbour towage is undergoing a period of stabilisation, with only a small number of new build projects planned, while the bigger players wrestle for control of contracts in ports around the country"*

By 2019 approximately 80 tugs will be servicing the big export ports of Port Hedland, Dampier and Cape Lambert (iron ore), Newcastle and the twin Queensland ports of Hay Point and Dalrymple Bay (coal), and the Pilbara region, Darwin and Gladstone (LNG). With close on 160 tugs gainfully employed across the country, Australia could possibly have the highest number of tugs per head of population in the world. Yet another record.

New building is relatively quiet, with most ports currently sporting ASDs, Rotor® tugs and a few Voiths. However, our spies tell us that there are two Damen tugs under construction for the new bauxite project in Weipa in far

north Queensland. Then there are nine 80-85 tonne bollard pull tugs planned for FMG in Port Hedland, the first due in October this year. We also understand that KT Maritime has a 100-tonne bollard pull Rotortug under construction for a Conoco Phillips project. That's about it for new construction.

The giant Gorgon LNG project is now complete, with four hybrid tugs set to handle tankers at the Barrow Island terminal, while the other Chevron project, the on-shore Wheatstone facility, has a further three hybrids in service.

Offshore, all eyes are on the start-up of the massive Shell Prelude floating LNG plant, and KT Maritime has three 100-tonne bollard pull Rotortugs planned for ship handling, supply and offtake work.

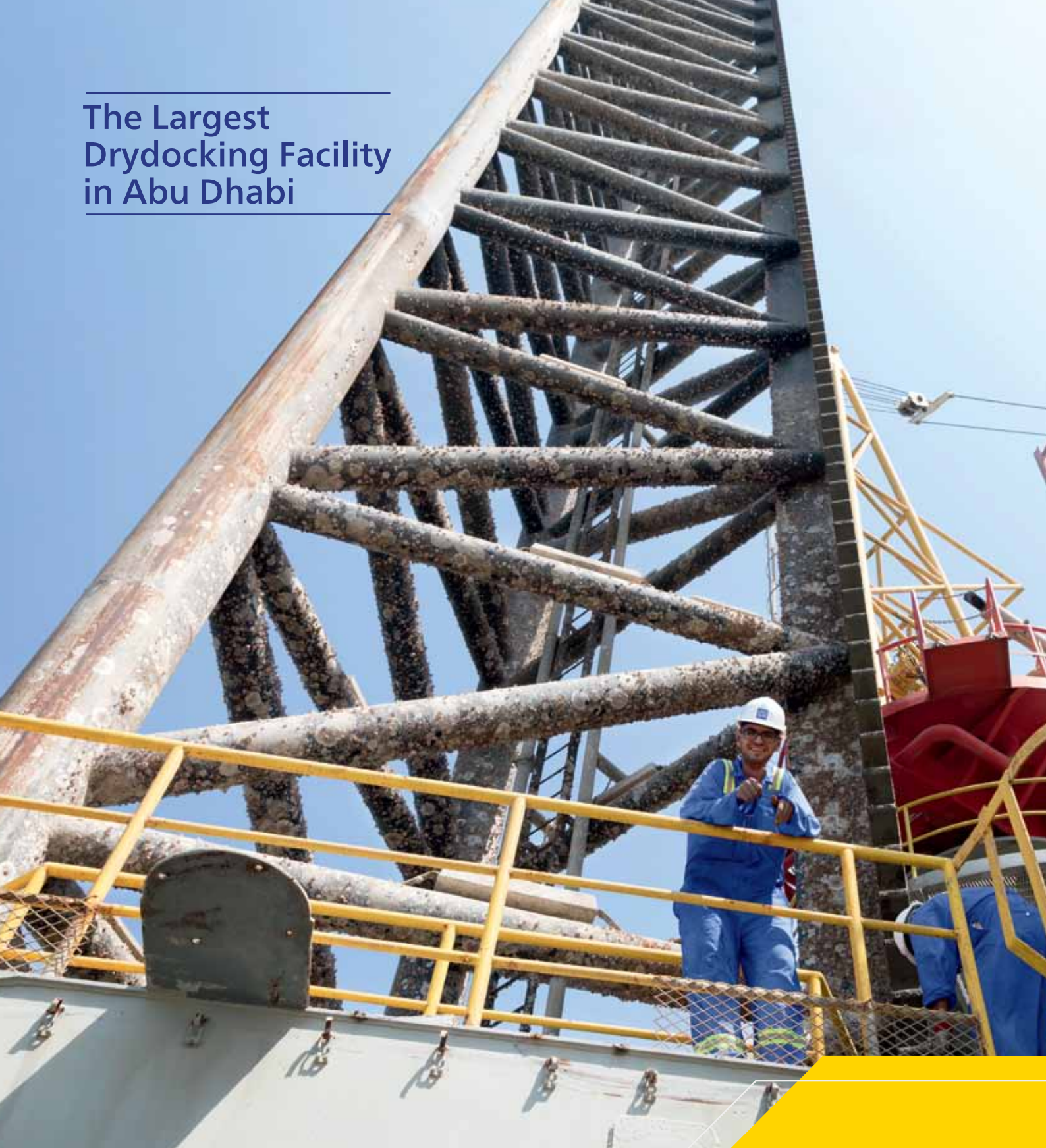
In Queensland the three LNG projects in the port of Gladstone are accounting for between 10 and 12 tugs, which we believe will be operated by Smit Lamnalco. Similarly, in Darwin a mix of six Svitzer and CTB tugs will handle all the LNG exports plus general shipping.

In the offshore oilfields, very little activity is evident on the back of low oil prices, but slow improvements to about US\$70 a barrel might see a little activity on the exploration side of the equation.

At the time of writing (and to the best of our knowledge) Bass Strait has no exploration taking place, but a 100-day programme for Cooper Energy should see the mobile offshore drilling unit (MODU) *Ocean Monarch* (currently parked off Fremantle) inject some life into the wild waters of the Southern Ocean. Two SolstadFarstad AHTSs will support this rig, but we speculate the



## The Largest Drydocking Facility in Abu Dhabi



ADSB owns and operates two state-of-the-art drydocking facilities. Each year, an average of 300+ vessels are drydocked and serviced. The new floating drydock in Mina Zayed and the Synchro Lift in Mussafah are fully equipped to meet clients' needs with high quality services and competitive rates.



budget priced rates for both the rig and the PSVs are what is driving this work as much as the client's curiosity about new deposits.

On the west coast and in the Timor Sea region we only know of a short exploration programme for Quadrant Energy and some work for Conoco Phillips in the Baya Undan field, both of which will require a few AHTSs each. This will be the lowest number of rigs working on the Australian coast in more than 20 years.

It is worth noting that two Australian companies have survived the collapse of the offshore oil industry. Mermaid Marine and

► **Tugboat RT Rotation working at Port Hedland, Western Australia**

Bhagwan Marine have weathered the 'perfect storm' and look like surviving when all about them are failing.

The FPSOs off North West Cape and in the Timor Sea continue to provide work for a couple of offtake/supply tugs. The only other bit of spot work we are aware of was a disabled ship tow from Port Hedland to Singapore by Swire Pacific Offshore.

So, all up, quiet times down under – but watch this space.



## Course packs a powerful safety message

The maritime industry, by necessity, requires organisations and maritime professionals to be compliant with a vast array of laws and regulations. Concern about a lack of HSEQ (health, safety, environment quality assurance) knowledge has led two Western Australia-based training specialists to develop an e-learning package aimed particularly at the towage, fishing, ferries and small craft sectors.

Traditionally, particularly in the small craft sector of the maritime industry, many coxswains, masters, superintendents and operational managers are recruited from the fishing industry, white-boat industry or off the deck. As a consequence, there is likely to be a lack of formal training and understanding of



the laws, regulations, acts, conventions and rules pertaining to HSEQ. Companies and professionals unable to fully comply with the required regulations, and present actual proof of compliance, are therefore legally exposed in a world that is more and more being driven

by legislation and litigation.

In an effort to address this issue, SeaWays Consultants and Marine Certification Solutions have combined their extensive industry experience and knowledge to develop a package of 24 online e-learning lessons covering 74 topics that masters, superintendents and marine managers should know, in order to be compliant and to manage their legal exposure within the maritime industry. These in-depth lessons, delivered through the two companies' e-learning platform, not only provide the required knowledge and proof of learning but also provide a cost-effective solution that can be accessed any time, anywhere.

Capt Arie Nygh, MD of SeaWays Consultants, said: "How can you ensure compliance if you do not know what you have to be compliant with? I sincerely believe one of the most profound messages I can offer colleagues is the importance of these online e-learning lessons on HSEQ and the need to have proof of compliance."

Marine Certification Solutions MD Jeff Hinrichsen said: "I believe that for any organisation involved in the maritime industry, it is crucial to provide extensive training to employees regarding HSEQ, thus supporting them in their job."

Nygh added: "Around 90 per cent of the course knowledge content is internationally generic, with 10 per cent specific to a region of operation. With this in mind we have developed our first lesson package to be relevant to the Australian market and over the course of the coming months will engage local HSEQ experts to assist us in making the content specific to a particular region. This process has commenced for Canada and the UK and will be followed shortly for Europe and the US. By year's end we should have full global coverage."

"We hope that this online training facility will highlight the importance of being compliant with HSEQ regulations and help maritime professionals to develop their knowledge and skills in this area."

For more information, visit the HSEQ e-learning website at <https://schoolways.thinkific.com/>

### Anchor-handlers join well-drilling project



▲ **Maersk Master** is one of two new anchor-handlers on contract with Quadrant Energy

**Maersk Supply Service's first two Starfish-class anchor-handling vessels, Maersk Master and Maersk Mariner, begin a contract with Quadrant Energy in Western Australia in March.**

Both vessels will support Quadrant's Phoenix South and Van Gogh drilling campaign, initially covering three wells for a period of 150 to 200 days. They will be supporting Transocean's semi-submersible rig *DDI* with supply and anchor-handling duties throughout the campaign.

David Lofthouse, head of commercial

Asia-Pacific at Maersk, said: "Quadrant Energy is an important customer. We are excited about having our two new-built Starfish vessels operating together on this programme. This is a unique opportunity to demonstrate their state-of-the-art capabilities, such as minimised environmental footprint, high safety standards and on board comfort."

**Maersk Master** previously worked in the North Sea on a decommissioning project; **Maersk Mariner** came to Australia in August 2017 to work for another customer.



# Fire-fighter takes training around the globe

Following a well-received paper delivered at *ITS 2014* in Hamburg, Tom Guldner, president of US-based Marine Firefighting Inc, was invited to Western Australia to provide specialised training to the tugboat crews of towage and marine service provider RiverWijs

Australia is expected to become the world's biggest natural gas exporter by 2019, as huge projects near completion. One of its biggest producers is Woodside LNG, which operates natural gas fields off the northwest coast. The gas is sent via 180km of underwater pipeline to land-based facilities where most of it is converted into liquid – reducing its volume to about 1/600th of its gaseous state – and loaded on to LNG carriers for transport all over the globe.

RiverWijs, a subsidiary of Riverside Marine, provides escort services to LNG ships loading at the Woodside LNG facilities in Western Australia. The company's general manager, Greg Jamieson, was in the audience for my *ITS 2014* paper on the specific challenges of working with the powerful fire-fighting equipment found on FiFi1-classed tugboats, with particular reference to LNG incidents. Keen to ensure that his boat crews were being protected by providing them with the most up-to-date FiFi1 training, he invited me to deliver two weeks of training that would also include the properties of LNG and operations at an LNG emergency.

RiverWijs's operations on Australia's west coast are centered on the Port of Bunbury in the south, Perth in the mid-west, and the Port of Dampier in the north. While Bunbury has no LNG presence in its port, I was asked to provide general fire-fighting training for the RiverWijs crews working there, along with local fire-fighters from the Bunbury Fire Brigade.

This involved the safe operation of the external fire-fighting equipment found on the Bunbury boats. Although not FiFi1 classed, these boats did have a fire-fighting pump and monitor that could be used to fight a fire on another vessel. While not as powerful as the FiFi1 boats, their monitor stream could still injure people and damage property if not used correctly.

The training dealt with safely using the fire-fighting equipment on a fire on another vessel, as well as dealing with a fire on their own boat. We covered basic fire-fighting training, such as the properties of fire, the fire tetrahedron, types of extinguishing agents and types of extinguishers, and discussed which extinguishing agents should be used on each type of fire.



▲ Tom Guldner, far right, and Greg Jamieson of RiverWijs, third left, with the Bunbury tug crews and local fire-fighters

The Bunbury boats had CO<sub>2</sub> systems protecting their engine rooms and machinery spaces so I also discussed the proper procedures required for an effective CO<sub>2</sub> operation. Many times these procedures are taken for granted and then, when the time comes, they are not followed properly. During our tour of the boat we were also able to point out to the local fire-fighters many of the features which were important to the boat's fire pumps as well as the CO<sub>2</sub> system.

After the classroom portion of the training we all went out on one of the tugs to operate the fire monitors and review the safety measures discussed in class.

My next stop was a brief visit to Perth, where I outlined to Woodside LNG executives the training I was about to deliver to the RiverWijs tug crews operating at the Woodside LNG terminals in Dampier. Then it was on to Dampier for the second half of the training programme.

The classes were set up so that all tug crews would receive two days of training. Due to the crew schedules they might not all be able to attend the two consecutive days, but anyone that missed a day could make it up by attending when that day was repeated.

Day one dealt with LNG awareness. We discussed the properties of the product, its hazards, and how to safely deal with an LNG emergency. The class was told that LNG was not the dangerous 'atom bomb' that many detractors claim, but neither is it as hazard free as many LNG supporters state. There are some dangers; however, they are known dangers and have been dealt with successfully in the marine environment for many years. We discussed how the marine transport and transfer of LNG has one of the most enviable safety records in the shipping industry and how my training was designed to keep that record going.

During a tour of the Woodside LNG facilities, the class was shown the hazards and the methods used to control them in

an emergency and to limit any consequent damage.

As I was training the tug crews involved in the marine transfer of LNG, the class was shown many of the safety features and fire-fighting equipment on the marine loading platform that I had already discussed in the classroom. One important feature was the power emergency release coupling (PERC). In an emergency, this coupling will automatically and/or manually close valves to stop the flow of LNG and cause the coupling to separate into two pieces and retract the loading arm away from the ship.

The tug crews appreciated this information, and were reassured by the knowledge that there were many safety features built into the facility which would prevent an accident or limit the severity of any emergency should one arise. In the event of an emergency, the likelihood is that it would be handled by the facility and ships' personnel using the auto shutdown procedures and the fixed fire-fighting equipment.

Also on our tour, I was able to point out many of the other safety features and fire-fighting equipment in place on the loading dock. Most of these features are common to all LNG facilities whether they are importing or exporting the LNG. The crews were taught that water could not extinguish an LNG fire and that it might actually make the fire more intense. Dry chemical is the extinguishing agent of choice if the fire is to be extinguished. However, in many cases, it is better to allow the LNG to burn off and just protect the surrounding exposures.

At the end of the two days of training the crews were more comfortable with their job of escorting these large ships loaded with LNG. Knowledge of the hazards and the procedures in place to control those hazards, or safely handle any emergency that might arise, made this mystery liquid gas a little less mystifying. They also felt more comfortable about operating the powerful fire-fighting equipment on their own boats.

• Tom Guldner is presenting a paper on *LNG – Safety and Fire-fighting* at *ITS 2018* in Marseille, taking place from 25-29 June.

# Record-breaking tug bound for Timor Sea operations

The world's biggest Rotor®tug, ART 100-46 *RT Raven*, built at the Albwardy Damen yard in Sharjah, UAE, will be operated by Perth-based KT Maritime Services Australia, a joint venture partnership between Kotug International and Teekay Shipping Australia.

The vessel's naming ceremony was attended by the pioneer of the Rotortug design, Ton Kooren, along with Kotug CEO Ard-Jan Kooren. Representing Damen was CCO Arnout Damen and MD of Damen Shipyards Hardinxveld, Jos van Woerkum.

The infield support vessel (ISV) *RT Raven* is built to a Robert Allan Ltd design. It is a customised 46m long, DP2, 100-tonne bollard pull Rotortug for offshore support, designed and outfitted for operations in the Timor Sea, including tanker berthing and operations support.

Kooren said: "This is a very significant contract for KT Maritime as we work towards further establishing ourselves as a reputable service provider to the oil & gas segment."

Lars Seistrup, MD of Albwardy Damen, added: "This is a special vessel in many ways. It is the biggest Rotortug ever built; it is also



▲ The world's biggest Rotortug, ART 100-46 *RT Raven*, will work for Perth-based KT Maritime

one of the most powerful tugs ever built in the UAE. We are very pleased with the end result which is the consequence of close co-operation and teamwork with the client."

Van Woerkum said: "The *RT Raven* is the sixth Robert Allan Rotortug design which is sold, managed, engineered and purchased by our yard in Hardinxveld. For Kotug it is the third Rotortug delivered by Damen Shipyards Hardinxveld, after the ART 80-32 *RT Evolution* and the *RT Emotion*, and we are very proud of this achievement."

## Service deal

Heila Cranes has entered into a service partner agreement with IKAD Engineering in Australia, extending service provided to its customers in the region

Henk Gennissen, general commercial manager at Heila, said: "In Australia, we are strengthening our network of service partners with IKAD Engineering. IKAD is a healthy company with a good reputation and operates according to the same high level of service standards as Heila. The company will be responsible for carrying out overhauls, repairs, spare parts and service on Heila marine and offshore cranes."

IKAD Engineering's MD, Ivan Donjerkovich, added: "We are pleased that we are going to work with Heila. They supply high quality cranes and strive towards high quality and fast service, just like us."

"We are venturing more and more into the oil & gas industry with the design and manufacture of our new products and company IKAD Subsea. Heila Cranes is a good fit into this industry as well."

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# Delivery firm has grown into a global player

**Capt Brendan Cooley, CEO of Australia-headquartered vessel delivery company IMS, says his team sharing the organisation's values is the key factor in its success**

**Capt Brendan Cooley puts the fact that he has never wanted to do anything else apart from work in the maritime industry down to his father being a shark fisherman during the 1980s and '90s operating the most successful fishing boat on the coast of Western Australia.**

Boys wanting to follow in their father's footsteps are not unusual, but what is perhaps surprising is that practically every time that his father took him out to sea Cooley was violently ill. "I used to go out and help as much as I could on weekends and school holidays. More often than not I got violently seasick, but pestered dad to go out again the next day, often with the same results."

Thankfully, this is not a problem that has followed Cooley into adult life.

He said: "Working on the ocean was always my passion, buoyed by my father's similar interests and entrepreneurial ambitions. Having the privilege of turning my passion into my life career, with unwavering support from Dad, provided a foundation for success."

Cooley was born in Augusta, a small country town in Western Australia with a population of around 1,000, in the Margaret River wine region, and lived there until he was 15. He has happy memories of his childhood. "We had a lot of freedom as kids and knew many of the locals. Riding bikes around to friends' houses and always playing outside. Hanging around with mates, fishing or crabbing and spending time with my grandparents are my fondest memories."

Cooley had, and still has, a thirst for knowledge. He said: "I went to Augusta Primary School, Margaret River High School and Fremantle Maritime College, where I

completed my qualifications as Master. I am currently enrolled at Curtin Business School in Perth and have just passed the halfway mark of an MBA. I particularly enjoyed the navigation and stability modules at maritime college and I will major in leadership for the MBA – I really enjoy the units that are focused on leadership and learning theory about working within teams and fostering other people's skill and abilities."

Cooley's family moved to Perth, where he still has a home, and his first job was as a deckhand on Rottneest Island Ferries. He said: "I got the job through the local volunteer sea rescue group, of which I was a member at the time. I met a Water Police officer who was a part-time master for this ferry company. This is where I first met Kim Cleggett, the founder and proprietor of IMS, who became a mentor and very good friend. After six years, I was promoted to become the youngest captain ever to command Western Australia's flagship Rottneest ferry."

*"Treat your staff well, and everything else will fall into place... This builds loyalty among the staff, who are rewarded when the company is successful and stick together during the tough times"*

However, it was a very different kind of vessel that was to tempt Cooley away from his beloved Australia. At Cleggett's suggestion, he relocated to the South of France, the playground of the super-rich and the super-famous, where from 2001 to 2008 he captained super-yachts. "It was my responsibility to manage the operation of these world class vessels, valued in excess of US\$100m."

Cooley returned to Australia from France in 2008 where he joined IMS, the company he now leads as managing director. The company was expanding and it was around the time of this business success that Cooley's outlook on life and how to live it changed. In 2011 he started running and has since completed several marathons. It was during a long run that led Cooley to the idea of launching the IMS Run Crew. Many of those attending ITS 2016 in Boston and Tugology 2017 in Rotterdam joined IMS's early morning Run Crew with different length routes to cater for

► Capt Brendan Cooley after being presented with his 40U40 business and community award in 2015



different levels of ability. The club will be encouraging delegates and exhibitors to strap on their running shoes again at ITS 2018 in Marseille in June.

Cooley says that running, greater fitness and the benefits of wellbeing increased his confidence and motivation to succeed. He enrolled for a graduate certificate in business in 2012 and graduated early in 2014 with a high distinction, following on last year to start his MBA.

He said: "The business began performing well during this same period. Combined with better health, I became highly motivated and better educated – empowered with techniques, strategies and proven framework to effectively drive growth. The marketing strategy we developed included focus on key industry sectors and coming out from behind the facade of emails, meeting clients and prospective clients face to face."

"Kim and I shared similar values and together we enhanced the culture of the company by employing like-minded people. These values and beliefs are now embodied within the business and have become a major component to the success of the organisation."



◄ Cooley with wife-to-be Marina Cvetkova at Tugology '17 in Rotterdam and, right, in his younger days on the ferry Osprey V





Treat your staff well, and everything else will fall into place. It's a legacy that Kim passed on when he handed over the management of IMS. We were always well looked after under his leadership, treated with respect, dignity and rewarded for efforts. This has built loyalty among the staff who are rewarded when the company is successful and stick together during the tough times, which come and go like any other business."

Cooley will marry his fiancée, Marina Cvetkova, in June, following a three-year 8,000-mile trans-global romance. With more than a hint of a wry smile, he puts finding his soul-mate down to the classified advertisement Global Directory section in *IT&O*, something regarded as a first for the magazine.

Cooley explains: "Marina is from Lithuania and works for maritime crew supplier Novikontas. In 2013, IMS received an email from Lina Drukeiniene introducing their company to ours. She had seen our classified advertisement next to theirs in *International Tug & OSV*. Marina and I first met in that year, but we were not officially an item, as they say, until 2015. We were engaged on 8 August last year and will be married in June, just before *ITS 2018 Marseille*."

Cooley met his first wife, Melanie, when they were both teenagers and she was still at school. They married young and went on to have two children, Lachlan, now 13, and Ava, now 11, but drifted apart and divorced amicably, remaining friends.

As well as running, which he does almost every day, Cooley enjoys mountain biking with friends which he describes as: "Great fun and a good chance to catch up with mates and make room for a beer or two with them afterwards." However, despite these outdoor activities, he says he is not a great sports fan: "Unless Australia beats England in the Ashes, or rugby, or World Cup soccer..."

Cooley's charitable and community involvement has included being a volunteer board member at Western Australia's Cancer Wellness Campus; participating in the Saint Vinnies CEO Sleepout to highlight the plight of – and raise money for – rough sleepers; introducing an industry-first carbon offset programme, and being a member and then chair of his children's primary school board.

In 2015 he won a prestigious 40U40 award which recognises leaders under the age of 40 who have made a significant contribution to their organisation and the community.

Asked who he would choose if he could invite one famous person to dinner, either from the past or present, he opted for Alan Joyce, CEO of Australia's national airline Qantas, who recently turned the company around in the face of adversity and fierce competition from competing airlines that have foreign funding.

He said: "It would be great to listen

► Cooley leads the early morning Run Crew at ITS 2016 Boston. The crew will be up and running again at ITS 2018 Marseille in June



▲ Cooley taking part in the 2016 Riga marathon and, left, during his time captaining superyachts

to his story of how they strategised and implemented such a significant turn-around and what 'value-adds' are considered the most important. Airlines have significant data on the habits of their clients, and although there are many differences, I also think there would be many take-aways from a meaningful conversation that could be implemented by any business in the right context."

*"The majority of people that I know who work in the maritime sector genuinely love the industry. Many of us worked at sea first, where your fellow crew quickly become like family, and some lifetime friends"*

What Cooley loves most about the industry he works in is: "The fact that the majority of people that I know who work in the maritime sector genuinely love the industry. Many of us worked at sea first, where your fellow crew members quickly become like family, and some lifetime friends. Whether it is appreciating the design and beauty of vessels from tugs to superyachts, we all have a common interest."

Asked what the major challenges were in

his professional life, Cooley said: "I have been managing director for a little under one year, but was chief operating officer for a period of six years prior. The biggest challenges are usually human factors. Ensuring that up to nearly 200 crew we engage each year share the same vision as our core team.

"Looking ahead, the short-term challenge is to keep focus on our core competence and make sure the company performs its best for each contract, whether it is for ship delivery, training or other management projects. Long term is to ensure we adapt to the market and listen to our clients' changing needs and ensure long-term sustainability of the company."

Cooley said what gives him most pleasure in his present role is meeting clients, established or prospective, and listening to their story. Also, he enjoys working with a truly fantastic team.

He said: "Every person knows their job, but will never see another person in the company struggle alone – there is always someone nearby to help them."

Cooley's business tip is: "Tempus fugit – time flies; think big, lead with confidence and always work to continuously improve yourself and the business – because you can be certain your competitors are."



# Battery power boost to help PSVs into work

Six new PSVs currently laid up in China are to receive battery-powered energy systems from Rolls-Royce to reduce fuel consumption and enhance the safety and redundancy of the vessels' systems and so increase their chances of securing work in the offshore energy sector.

They are among eight PSVs bought by SeaCosco Offshore, a newly-formed joint venture between Seacor Marine in the US and affiliates of China's COSCO Shipping Group, which owns the Cosco Guangdong shipyard where the vessels were built and are stored.

After acquiring the PSVs, Marshall Islands-registered SeaCosco then awarded the contract to Rolls-Royce Marine for the battery-powered energy systems for six of the vessels – with options for the other two.

The six vessels to be converted are Rolls-Royce UT771 WP designs, incorporating the characteristic wave piercing bow. The new energy system includes the energy storage container system, an upgrade of the existing Rolls-Royce ship design engineering package to match the new features, an upgrade of the dynamic positioning and ACON control systems, and Rolls-Royce's new energy monitoring system, which will provide a complete overview of energy usage on board. The other two PSVs are Rolls-Royce UT771 CD designs.

All the vessels will be operated by



Louisiana-headquartered Seacor Marine, which will add them to its current fleet. President, CEO and director John Gellert said: "The acquired vessels will modernise our operating fleet and expand our offerings to our customers. Combining a proven and advanced design, best in category accommodations, and the innovative Rolls-Royce battery system, these vessels will be highly marketable across all major offshore energy regions worldwide."

Asbjørn Skaro, director digital and systems – commercial marine at Rolls-Royce, said: "These are advanced and modern ships, and we strongly believe that the new energy

▲ A Rolls-Royce UT 771 WP-design PSV

system on board will make them stand out from the crowd in the market. They will receive an upgrade that benefits both the environment and the economic efficiency of the ships."

SeaCosco will take title to seven of the PSVs this year, and the remaining one in 2019. Following that, Cosco Guangdong shipyard will store, at its cost, the vessels for periods ranging from six to 18 months. The storage period can be shortened by mutual agreement. The vessels were ordered in 2013 and 2014.

## New thrusters win launch order for two Chinese tugs

Kawasaki Heavy Industries (KHI) has announced the first order for its newly developed azimuth thrusters which will see them installed on tugs in China's Port of Tianjin assisting large ships.

Four units of KHI's E-series Rexpeller azimuth thrusters have been ordered by China Communications Import & Export

Corporation for delivery to Tianjin Lingang Tug Co for new vessels currently being built and due to enter service in the second half of this year.

With this latest version of the Rexpeller, KHI says it has achieved a 7 per cent reduction in energy consumption compared to the conventional series by developing a

high-performance and compact propeller duct (Kort nozzle) and optimising the lower gear case base, based on the latest fluid analysis.

Other advantages of the E-series include easier onboard maintenance by reworking the structure of the integrated hydraulic clutch, and reduced environmental impact thanks to the use of a high-quality fluororubber propeller shaft seal which ensures high reliability and reduced risk of ocean pollution via oil leakages.

KHI introduced the first Rexpeller in 1983 and has delivered around 1,000 units. It can be freely rotated 360 degrees horizontally to generate thrust in any direction and thus functions as a propulsor and rudder. Its manoeuvrability has seen it installed on tugs as well as supply boats, drillships and cable layers.

The latest E-series variant has input power of 1,471kW and a 2,200mm diameter propeller.

The Port of Tianjin is the largest port in northern China and is the main maritime gateway to Beijing. It handles more than 600m tonnes of cargo and 13m TEU in containers each year, ranking it in the top 10 ports in the world. Latest figures also indicate more than 110,000 cruise passengers.

## Propulsion workshop gains seal of approval

Propulsion repair and maintenance company AEGIR-Marine's new workshop has gained Approved Workshop status from classification society DNV GL – the first brand-world to achieve this.

Obtaining an Approved Workshop statement involves demonstrating the quality of maintenance on propulsion systems, workplace routing, a safe working environment, dealing with hazardous substances, and risk management to ensure the quality and a high uptime of the equipment based on elements of international standards ISO 9001, 14001 and 18001.

AEGIR Marine, located in Wijk bij Duurstede in the central Netherlands, approached DNV GL for the approval process after working with the organisation to obtain its ISO 9001 certification for quality management systems.

With its new workshop – opened last year – the company joins the ranks of the major players in the field. The new facility allows the overhaul of ship components up to 50 tonnes, while the height under the new crane is 12.5m.

Additionally, AEGIR-Marine is able to perform spin tests at the new location – running and simulating propeller and thruster speeds in real time.





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*Jamie Hulme - Vessel Manager, MMA Offshore Vessel Operations PTY LTD*

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# Confident company targets offshore market

**Deck machinery designer, manufacturer and supplier, Romica, has identified the offshore market as a key target for expansion with ample opportunity to deliver winch and lift solutions for a wide range of vessels, including OSVs, PSVs, AHTSs and dive support vessels**

Founded in 2003, UK-headquartered Romica specialises in the design and manufacture of lift equipment and winches for use within the marine, renewables, ports and terminals, oil & gas and oceanographic sectors. It provides a round-the-clock build, repair and maintenance service worldwide, with agents in South Korea, Taiwan, India and Spain.

It has recently invested in its UK team with three new senior managers to strengthen services specifically in the marine and offshore industry.

Based in Beverley, near Hull on England's North Sea coast, Romica has gained recognition and success in the offshore sector as a trusted partner designing and manufacturing custom made winch solutions.

Collaboration is at the heart of the company's operation and its bespoke offering has provided a sharp competitive edge in a global market. In recent months it has been redoubling efforts to drive exports after its Romania-based manufacturing partner acquired accreditation with classification society, DNV GL.

Romica works in partnership with TIE Services International SRL, based in Satu Mare, Romania. TIE is a British-owned, Romanian-registered company with a 7,000m<sup>2</sup> fabrication facility. The factory has two fabrication, machining and assembly lines, which are equipped with 12.5-tonne cranes, along with shot blasting and paint facilities.

Romica owner Bob Turner says that the fabrication service forms the backbone of the business and the DNV GL accreditation sends a strong message to the offshore industry about the calibre of Romica's winches. It also adds to the Romanian facility's long-standing certification for welding and fabrication including TUV ISO 9001, ISO 14001-2009 and TUV DIN EN ISO 3834-2.

To develop its position, the company has



recently extended its factory to accommodate a larger machine shop, which has a new horizontal borer machining centre with the capability to machine large components with minimal handling. Romica's established Romanian manufacturing hub draws on a large maritime engineering skills base enabling it to take on a broad variety of work.

It recently signed an agreement with UK-based James Fisher Offshore to provide a total of 14 winches of various sizes at 50 tonnes, 30 tonnes and 15 tonnes line pull. The systems were delivered to support Fisher Offshore's expansion of rental operations within the Asia Pacific region from its base in Labuan, Malaysia.

James Fisher Offshore, a specialist in lifting, deck machinery, subsea tooling and excavation, is targeting growth in new markets with a prime emphasis on providing fully engineered solutions to respond to evolving industry requirements. It is working closely with Romica as it has recognised the increasing global demand for providing an integrated offering of winching and hoisting within the subsea support sector.

Turner says the project demonstrates Romica's desire to work as part of its clients' team, and instead of providing an off-the-shelf-product, aiming to listen to what the client wants in order to deliver a bespoke solution.

Another project, with Shanghai Zhenhua Heavy Industries, involved complex work to support the overboard deployment and recovery of diver tools supporting subsea work. This saw Romica designing and manufacturing a triple drum winch and tooling deployment



▲ Romica owner Bob Turner and, above left, one of the winches supplied as part of the James Fisher Offshore contract

A-frame system. The equipment was fitted to a multi-purpose saturation diving support/offshore construction vessel for Sealion Shipping Ltd, on behalf of Toisa Ltd.

The offshore lift specialist supplied fully framed winch systems, A-frame and hydraulic power units mounted on common skids, combined with technical support, documentation, spares and certification. The package further included two constant tension winches and a 1-tonne general purpose winch unit. The complete package worked to support diving operations delivering service hoses and lines as well as tooling baskets.

Romica's marine lift and winch equipment is typically used for marine site surveys and seismic surveys in the oil & gas, offshore and oceanographic markets.

It is a specialist in the design of umbilical handling winches and it offers a comprehensive range of handling equipment solutions such as AUVs, ROVs, sound source arrays, seismic recordings and deep-towed survey systems.

All are designed in compliance with the latest specific marine classification society and health and safety requirements.

Turner says that through innovation, experience and customer service, the company is able to offer combinations of winch, A-frame and launch systems suitable for a number of seabed sampling and benthic measurement devices.

Its range of products includes a proven deep water traction winch design, which includes wire monitoring and measurement of the outboard and storage tensions, and a range of winches fitted with right-angle level wind, which offers the client better use of deck space.



◀ Romica umbilical winches supplied to the UK's National Oceanography Centre



## In brief

Liberia's then President Ellen Johnson-Sirleaf officially opened the Liberia Maritime Training Institute (LMTI) in Marshall City on 5 January. Managed by the Liberian International Ship & Corporate Registry (LISCR), LMTI has undergone a massive renovation and facility modernisation programme over the past two years, resulting in the creation of a new campus and state-of-the-art facilities. There are currently 24 full-time cadet-students studying mechanical and electrical engineering on campus at LMTI.

More than 400 extra cadets will be trained in maritime roles in the UK every year thanks to a £15m funding boost announced in February. The investment, which will double the support for young people to £30m a year, will be offered through Support for Maritime Training (SMarT), enabling the annual intake of cadets to rise from 750 to 1,200.

Recognising the value of gaining sea-time experience and developing shiphandling skills, The Nautical Institute has launched the *Shiphandling Logbook*. It aims to provide users with an essential tool to help them manage the development of their shiphandling skills and take advantage of training opportunities, and includes a complete list of manoeuvres and understanding required under STCW. The *Shiphandling Logbook* is available from [pubs.admin@nautinst.org](mailto:pubs.admin@nautinst.org)

Massachusetts Maritime Academy has announced the launch of its third graduate degree, an MSc in Maritime Business Management (MSMB). Building on the success of the MSc degrees in facilities management and emergency management, the MSMB degree was created to meet a need for deeper knowledge and understanding of complex maritime businesses and supply chains locally, regionally and globally.

Palfinger Marine is to supply four freefall lifeboat systems to a floating production storage and offloading (FPSO) vessel serving the Johan Castberg oil field in the Barents Sea. Palfinger's contract comprises four FF1200 freefall lifeboats with RA 1200 davits. Delivery is scheduled for the first half of 2019.

## Sim offers flexible training



**A state-of-the-art simulator park in Rotterdam has introduced the flexibility to enable maritime companies and ship owners to conduct training on their own terms.**

Earlier this year, Simwave BV and Kongsberg Digital completed the site acceptance test (SAT) of one of the largest, most advanced maritime simulation suites ever delivered – and the brand new Simwave Maritime Centre of Excellence in Barendrecht, Rotterdam, is now fully operational. Following the SAT, all technical aspects of the delivery, a unique new floor projection system and a complete integrated engine room, are performing above expectations.

Simwave's training facility covers more than 5,000m<sup>2</sup> across two floors containing state-of-the-art Kongsberg simulators, meeting rooms, offices and welfare facilities. The next step in the Simwave project is to develop a hotel facility on the top floor of the building for customers and trainees, enabling training to take place 24/7: a key differentiator in Simwave's unique approach to maritime training.

Simwave's innovative take on maritime training allows client companies of any size to train in the integrated simulator park, with

▲ *The K-Sim Navigation class A ship's bridge simulator installed at Simwave is fully operational*

their own instructors, Simwave instructors or external instructors – all tailored to customers' needs. The first training courses have already been successfully accomplished and the response has been positive.

Simwave MD Marcel Kind said: "The first reactions from clients and participants have been overwhelming.

"We have a team of educational and maritime specialists from around the world on hand and this dream team, our partnership with Kongsberg Digital and our long-term vision on how to improve the learning experience in the maritime sector enable us to bring new customer benefits to the training value chain."

Tone-Merete Hansen, senior vice president, maritime simulation, Kongsberg Digital, added: "The partnership between Kongsberg Digital and Simwave brings possibilities for further development and allows Simwave to meet its full potential as the training centre of choice for the maritime industry.

"We are looking forward to continuing our co-operation with Simwave in Rotterdam, and at new Simwave facilities planned for in the future."

## Energy storage passes safety test

**EST-Floattech's Green Orca Energy High Energy Storage system has been approved by the Norwegian Maritime Authority (NMA) by passing the demanding Propagation Test Type 1 with a fully passive protection system.**

Norway is currently at the forefront of the use of maritime battery systems. The NMA builds on the Norwegian maritime industry's advantage in this area to further develop the technology safely, and to set the standard for maritime battery systems.

EST-Floattech's Safe by Design principle served as the foundation for the approval and design of the battery module. Even in the unlikely event of cell thermal runaway, any potential hazards will remain limited

to the battery module itself. EST-Floattech is convinced that in order to offer the maximum level of safety, thermal runaway protection should not be dependent on a battery management system, cooling system or external fire extinguisher, but should rather be an intrinsic element of the design itself.

Everything in the module is geared towards preventing a thermal runaway or thermal event from occurring in the first place by means of electronic safety measures. However, in a worst-case scenario, the battery design is so robust that it is capable of dealing with a thermal runaway of one of the cells, or even a chain reaction resulting in a thermal runaway of other cells in the battery, without the use of any active system.

## West Coast operator to get first hybrid tug

Jensen Maritime, Crowley Maritime Corp's Seattle-based naval architecture and marine engineering firm, has been selected to provide the design for Baydelta Maritime's new 100ft (30.5m) Z-drive hybrid tugboat. It will use Rolls-Royce hybrid technology and represents the first installation of a hybrid system for Nichols Brothers Boat Builders (NBBB), and the first hybrid tug designed by Jensen to enter the construction phase.

Bryan Nichols, director, business development, for Jensen Maritime, said: "Jensen is proud to have been chosen as the design firm on this project, and we look forward to seeing the vessel through from concept to completion. We are pleased to be working with long-standing partners Baydelta and Nichols Brothers on this historic build. Our work reflects our commitment to innovative, environmentally friendly design combined with powerful, high-quality performance. This tug will meet the industry's demand for strong, yet nimble vessels with the quality design that customers expect from Jensen."

Scheduled for delivery in the first quarter of 2019, the tug will feature the same ship assist and tanker escort capabilities of existing Valor class harbour tugs, but with multiple operational modes. The Rolls-Royce hybrid system allows for the vessel to operate direct-diesel, diesel-electric or fully electric while assisting the large containerships and tankers that operate in US West Coast ports.

The concept will save fuel and reduce emissions, while supplying Baydelta with the same power and vessel characteristics needed for their operations. The flexibility provided



by the drive system will allow loitering and transit at up to 7-8 knots in electric-only mode, then a bollard pull of 90 tonnes in combined diesel-electric mode.

The tug will be powered by two Caterpillar C3516C Tier 3 diesel engines, each rated at 1,995kW at 1,600 rev/min, supplied by Peterson Power of Portland, Oregon, and by two Rolls-Royce-supplied 424kW electric motors. The Z-drive system, two Rolls-Royce 255FP units, can accept power from the diesel engines, electric motors and from both power sources.

The electric motors are powered by three CAT C9.3 generators with 300kW each, which are 480V three-phase at 1,800 rev/

▲ An artist's view of Jensen's hybrid tug

min, and one harbour generator, a C7.1 150kW 480V, three-phase at 1,800 rev/min. All four generators will be supplied by Peterson Power.

The tug will have eight berths, and major equipment on board will include a Rapp Marine electric hawser winch and a single drum tow winch. The tug is designed to carry up to 71,000 gallons (323m<sup>3</sup>) of fuel and 4,300 gallons (19.5m<sup>3</sup>) of fresh water. It will have a large pilot house providing all-around visibility, a deckhouse with an open feel, a large mess and lounge area, and accommodation for an eight-person crew.

## Tug's hull form designed to optimise energy saving

Offshore Ship Designers (OSD) has launched a new tug design as part of its expanding portfolio of fuel-efficient vessels. The 390gt Azistern 2870 harbour tug has a hard chine hull form which optimises energy-saving during transit and results in a very low wash, an invaluable attribute in crowded ports and harbours.

The vessel has a bollard pull of 70 tonnes and a maximum speed of 12 knots. Providing

accommodation for six persons, it has a 28.3m LOA and a breadth of 11.5m.

The Azistern 2870 combines compact vessel length with high bollard pull. It has been designed with multiple deck equipment options, the installation of which is dependent on specific end-user preference. Options can include a double drum forward towing winch with integrated horizontal anchor windlass and mooring warping heads, or a forward towing winch with separate vertical anchor windlass/capstan units. A double drum aft winch can be included in a semi-sheltered position, and the towing hook comes with

multiple positioning options. The vessel can also be fitted with a stern roller, deck crane, and fire-fighting monitors, and the design accommodates the possible installation of a bow-thruster unit.

The tug has been designed with fully MLC-compliant crew cabins which include a number of en suite washrooms. There is semi-sheltered accommodation access and ample space for storage of loose deck equipment. The vessel also features semi-sheltered engine room intake louvres and fully enclosed dedicated deck store lockers and rope store lockers, ideal for operation in cold-weather regions.

Technical manager at Netherlands-headquartered OSD, Herm Jan de Vries, said: "The Azistern 2870 is the very latest addition to our Azistern family. Like its sisters, it is a highly flexible vessel which offers operators the innovative options they need in today's challenging market conditions. The basic design is on the shelves, which results in a short delivery time for clients."



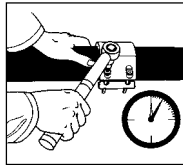
◀ An artist's image of the new Azistern 2870 design from Netherlands-headquartered Offshore Ship Designers



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## Crewless fire-fighter a step-change design

To address the evolving safety and security needs of modern ports, Vancouver-based naval architects and marine engineers Robert Allan Ltd and international marine technology specialist Kongsberg Maritime are collaborating on the development of a radically new remotely-operated fireboat that will allow first responders to attack dangerous port fires more aggressively and safely than ever before.

The uncrewed RALamander fireboat will offer in-close fire-fighting and 'eye in the fire' capability that keeps marine fire-fighting professionals out of harm's way. Fires involving containers, petrochemicals, shore-side structures or vessels can be attacked more quickly in situations where toxic smoke or explosion risk may delay or even prevent manned assets from responding effectively. RALamander can serve as a force multiplier with conventional fire-fighting assets, or be deployed on its own.

The Kongsberg Maritime control and communications system will feature a robust high-bandwidth, low latency wireless link to a semi-portable RALamander operator console that can be located on a manned fireboat, or other vessel of opportunity such as a tug or pilot boat. In common with other Kongsberg autonomous control systems, the versatile architecture of RALamander's control system will leave the door open to a range of autonomy levels, which are configurable



or future-upgradable to suit the operator's or port's evolving needs.

The first in the series, the 20m-long RALamander 2000, will be equipped with FiFi1 capability with a total pumping capacity of 2,400m<sup>3</sup>/hr with optional foam. A retractable mast can bring one of the three monitors to a high point of attack for shipboard or dock fires.

A range of auto functions is planned for fire-fighting, including dynamic positioning, water spray target holding, and 'line protection' where RALamander automatically moves back and forth along a line while directing protective spray cover on shore structures or vessels threatened by a fire.

A low-profile design also makes it possible

▲ An artist's view of the RALamander 2000 being designed by Robert Allan Ltd in a joint project with Kongsberg Maritime

to attack under-wharf and marina fires remotely. If a burning vessel poses a threat to its surroundings, RALamander can be used to tow it a safe distance by means of its grapnel emergency towing (GET) system.

RALamander's versatility may also offer new ways to maintain and operate a port fire-fighting asset. Since RALamander can be operated from a safe stand-off distance during an incident, commercial entities such as tug or pilot boat operators may be in a better position to offer fire protection services to a port since personnel are less exposed to risks.

## New design software build contains strategic updates

Engineering and technology group Sener has upgraded the Foran System with important new enhancements following its Shipyard 4.0 Digitalization Strategy. The latest Foran build, incorporating these changes, launched to the market towards the end of last year.

The shipbuilding industry demands ever more technological capacity and integration, and the new Foran release incorporates improvements across the software's different design packages.

The surface ship model, managed as a collection of NURBS patches, is now internally represented by a shell in accordance with the new geometrical kernel of Foran. There are new surface validation tools, aligned with the demands of the structure discipline, and new functions for automatically identifying and resolving tolerance issues.

The naval architecture package has been enhanced with tools for reading the previous 'classic' intact and damage stability definition files, making it possible to reuse legacy projects on the new platform, and includes new stability criteria, more flexibility for configuring reports, and different visualisation and user interface improvements.

Among the new capabilities in the hull structure package, worthy of mention are optimisation of structure standards, and improvements in the nesting processes through the incorporation of a new scrap management function to allow more rational reuse of nesting remnants.

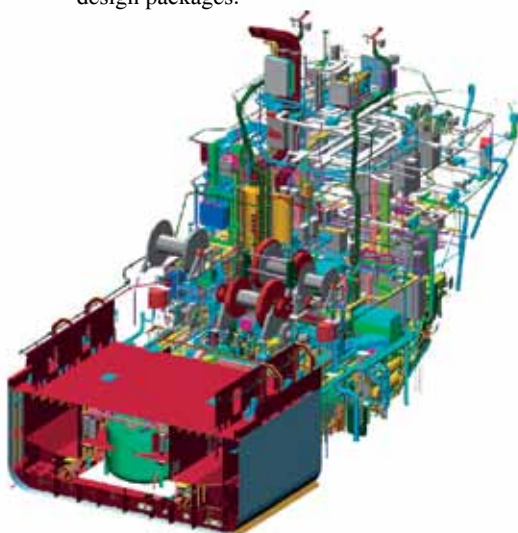
In addition, the application includes new lead-in/lead-out possibilities and a new function for the manual definition of the cutting start point of each part. Due to the

open strategy employed in Foran, imported structure parts in DXF format can now be used by the Foran build strategy application and nested accordingly. Sener can now also deliver NC cutting post-processors able to cut bevels automatically by multiple runs of a single torch.

In the machinery and outfitting package, some important enhancements include new possibilities for the automatic identification of supports, and an extension of the HVAC supports function for duct fittings. In addition, other innovations allow the optimisation of automatic drafting tasks in Foran.

The new release has a more flexible definition of model-based security, a relevant aspect in shipbuilding nowadays. Furthermore, the Foran-PLM bidirectional integration has been enriched with the publication of new attributes and with other enhancements to the 'publishing' process (such as from Foran to the PLM tool). The efficiency of this process has also been improved by introducing new internal lock, store and delete mechanisms in the Foran outfitting applications.

The new build, along with the implementation and update procedures and documentation, is available to existing customers through Foran Cloud Service.



◀ A view of internal machinery in Foran



# Virtual reality gives clients more insight

Ship design and shipbuilding technology company NED-Project is building on its experience of delivering ergonomic designs based on close co-operation with the client through the use of building information modelling (BIM) software, 3D scanning and virtual reality (VR) technology.

The idea was first implemented in 2016 during the design of a 32m Flyshooter/Trawler fishing vessel for a private client. The ship owner requested to be consulted regarding the visibility from the wheelhouse as well as arrangement of the social areas and Gdansk, Poland-headquartered NED-Project delivered detailed BIM models which were then used to introduce the client's changes.

Building on that during the early stage of the B860 35T tug design for the Polish Navy, NED-Project began translation of the BIM models into VR environments. Detailed designs of the wheelhouse and engine room were provided to navy officials, creating a platform for discussion on particular



technical solutions with the design team.

This year the company is looking to deliver a complete VR model of icebreakers, currently at the design stage, that will replace outdated vessels. Through the use of VR, it is consulting with the crew manning the existing ships, taking into account their suggestions regarding deck equipment and auxiliary systems arrangement.

Similarly to the use of VR, NED-Project implements detailed 3D scanning methods in its conversion and salvage projects. This technique allows for delivery of a detailed

▲ An ice-breaking ERRV 80 design vessel from Gdansk, Poland-headquartered NED-Project

documentation for shipyards taking on installation projects of whole bilge water treatment and scrubber systems on existing ships, in accordance with the latest IMO ballast water management convention. The company says utilising such an approach allows for streamlining the installation process and quick project turn-around in yards specialising in such conversions.

# Ice-breaking tug designed to work in Russian far east

Russian ship owner Viking Ships Services has been awarded a contract to build and operate a new ice-breaking tug in the Russian far east, winning the international competition with a tender based on an ILS ice-breaking escort tug concept.

The vessel will be built by Jiagsu Dajin Heavy Industries shipyard in Yangzhong, China, and is scheduled to be delivered early next year.

ILS is in the process of providing a basic design for the shipyard.

The vessel will be designed to be able to keep the harbour channel, turning basin and berthing basins free of ice.

An extensive model test programme has been carried out to ascertain the vessel performance in open water and ice conditions.



An artist's view of the ILS ice-breaking tug



# Specialist vessel given prestigious award

Quebec, Canada-based shipbuilder, designer and operator Ocean's engineering teams have been given a prestigious recognition award for an innovative project by the Ordre des Ingénieurs du Québec for their work on the Catatug project.

The tug combines the characteristics

of a traditional tug and a catamaran and is designed to provide power, lightness and performance. Made of aluminium and measuring 16.6m long by 9.46m wide, the tug has a load capacity of 15 tons and 1,430hp.

Built in 2016, the vessel is now in service manoeuvring and mobilising construction barges on the site of the new Champlain Bridge in Quebec.

◀ Ocean's award-winning Catatug

## Promising future for rim-driven thrusters

As part of its continuous quest for improving efficiencies and performance, while reducing emissions as simply as possible, EDDY Tug has been analysing multiple propulsion options.

EDDY tugs are fitted out as standard with diesel-direct/diesel-electric hybrid propulsion, but further electrification is pointing to diesel-electric drive trains (with energy storage system) in the near future.

The company says a number of thruster options, including electric pods, are available, but rim-driven propulsors (RDPs) have a promising future since their characteristics are particularly suited to applications that combine a need for high torque at low speed, sensitive control and rapid changes in pull, direction and speed. Other RDP advantages are high efficiency over the entire speed range, low thermal losses which eliminate the need for separate cooling systems of the submerged motor, and compactness, both under water and inside the hull.

EDDY Tug points out that rim driven thrusters are simple, with far fewer components than geared thrusters, thus have fewer components subject to wear and tear. They are also quieter. The full benefits of RDP technology are seen when considering the potential impact on the entire tug architecture. The first 'open-type' rim-driven



thrusters (far right on the image) are mostly used in bow tunnel thrusters, with a power range of up to 800kW. For tug applications, however, mono-block fixed-pitch propellers with hub (left on the image) of up to 2,600kW are becoming available.

Motor efficiency is very high, 97 per cent at nominal speed, with high efficiency over the entire load range. Rim-driven thrusters have the motor-stator incorporated in the nozzle, while the rotor of the motor is a ring around

▲ EDDY Tug designers have been analysing multiple propulsion options

the propeller blades, in which permanent magnets are housed. Simple bearings in the rotor hub carry all loads. The company adds that by having the propeller directly below the centre of azimuthal rotation, steering torque is very low, requiring only two small electric steering motors inside the hull and allowing for fast turns.

## Design and build contracts for Scottish company

Macduff Ship Design, based in Aberdeenshire, Scotland, is engaged in a number of major contracts with new clients as well as building on existing relationships.

A 16m harbour tug for Shoreham Port Authority, for which Macduff Ship Design provided a full design package, is in progress at Macduff Shipyards, the build having begun in August last year. Delivery of the vessel – which is based on the popular

Eileen McLoughlin design – is due in July this year.

The vessel's equipment includes a Mampaey towing hook with a 150kN capacity, an aft lifting gantry which serves the stern plough dredge, a 7-tonne winch, and a fi-fi monitor. The engines comprise two Doosan V158 models coupled to Twin Disc gearboxes, driving 1,400mm propellers in Kort nozzles. The vessel is expected to achieve more than 10 tonnes of

bollard pull in trials.

Earlier, Macduff signed a contract with Cheoy Lee shipyards in Hong Kong for a 14m line handler. It is designed so that on repeat builds, the hull can be easily adapted for various operational profiles, with propulsion and deck equipment to suit specific requirements. The vessel has a breadth of 5.5m and depth of 2.95m, with a 10-tonne bollard pull from the twin CAT C9.3 engines.



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# Tug designs aimed at West Coast market

There are a large number of small tugs used for river and near coastal work on the West Coast of North America, specifically along the coastline of Washington, British Columbia and Alaska. It is a well-known fact that many of the vessels in this category have reached retirement age or worse and need to be replaced.

Many of these older, but hard-working vessels cannot meet modern stability standards, when either intact or damaged, nor modern tow line stability requirements. A small number have had some sponsons or bustles added to allow safe ongoing operations, but this is usually an expensive refit while the boat still gets older.

For potential new construction, North Vancouver's Capilano Maritime Design Ltd has produced a number of designs ranging in length from 9m to 21m with power ranging from 500bhp (375kW) to 2,200bhp (1,600kW) and with bollard pulls of between seven and 30 tonnes.

These tug designs are conventionally propelled using twin marine diesels driving fixed pitch propellers set in high-efficiency nozzles. Steering is via high lift rudders, integral with each nozzle, and the hulls are flush decked, with twin chines, and relatively long shark fin skegs for enhanced directional stability.

The boats make use of heavy fendering all around, with concentrations at the bow and stern, to allow damage-free barge pushing and towing as well as rigorous yarding work.

Half-pipe fenders are fitted at the waterline and at the bow flares to protect the hull from log and barge contacts.

Internally, there are four transverse watertight bulkheads which divide the hull into a steering gear compartment, stores and main fuel tanks, engine room, and accommodations and forepeak.

Expanded freeboard at the stern, and increased beam, would give the boat the ability to stop a moving barge without the possibility that the aft deck would start to submerge. Bridge design incorporates a

► *The Capilano 21m multi-purpose coastal line hull tug is also equipped for minor ship-docking service. It may be configured with either fixed shafts or azimuthing Z-drives*



galley and crew lounge option for the larger vessels, which provides amenities for near coastal voyages if needed. A standard tow winch with spooling gear, tow pins and stern roller are fitted aft.

Accommodation could vary depending upon vessel size and intended employment, with simple berth/settees suitable for smaller boats while two-berth cabins with full washrooms could be fitted on larger tugs.

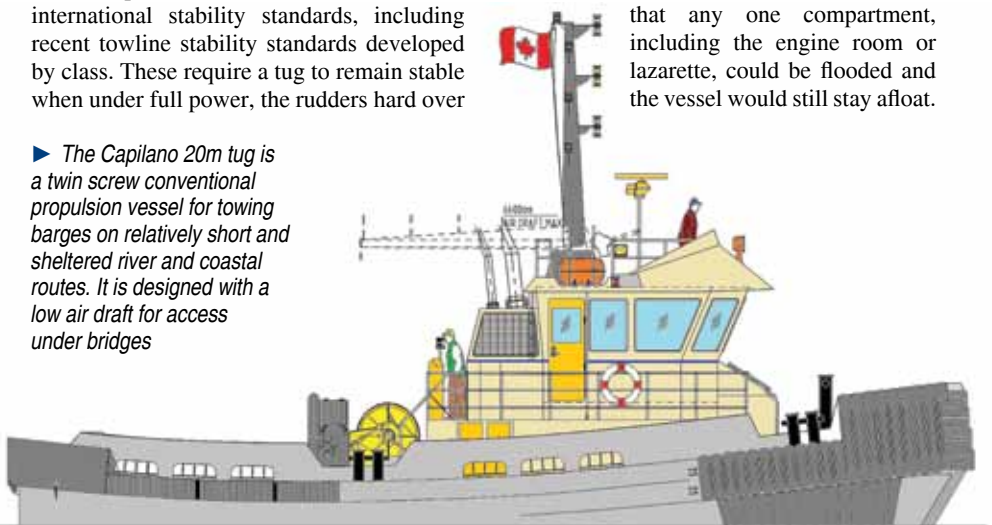
The Capilano series meets and exceeds all international stability standards, including recent towline stability standards developed by class. These require a tug to remain stable when under full power, the rudders hard over

and the towline at 90 degrees over the beam.

The ability of the Capilano designs to meet and exceed these standards while handling barges and other craft in close quarters and in flowing rivers is due mainly to increased beam and freeboard, with length-to-beam ratios of 2.4 to 2.5, utilised along with freeboards suiting vessel length.

In addition, the longer tugs in the series (15m and above) are all one compartment subdivision standard, meaning that any one compartment, including the engine room or lazarette, could be flooded and the vessel would still stay afloat.

► *The Capilano 20m tug is a twin screw conventional propulsion vessel for towing barges on relatively short and sheltered river and coastal routes. It is designed with a low air draft for access under bridges*





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## Operator awarded five vessel contract to support FPSO



ALP Maritime Services' future class PSV ALP Striker

Netherlands-based ALP Maritime Services has been selected by Interoil/Saipem to provide a spread of five vessels to perform tow assistance and oil heading control services for the Kaombo project off the coast of Angola.

ALP's project services include tow-assist operations from South East Asia to West Africa, by two of its 300-tonne bollard pull ALP Future class vessels. On arrival in Angola, the vessels will be joined by three additional vessels from the ALP fleet, which are required to keep the heavy FPSO *Kaombo Norte* accurately stationed during connection

to its mooring lines. On completion of the mooring operation, two of the vessels will continue to support the riser pull-in operation.

Paul Mulder, CEO of ALP, said: "ALP is very proud to have been selected for this tow assist and pull-in operation. It is a strong proof of confidence in our modern and versatile fleet and our ability to provide safe and cost-efficient services to our customers.

"Acting as single service provider from yard to hook-up and installation, ALP is providing a tailor-made solution to our customer with optimum vessel scheduling flexibility."

## Thai yard signs contract to build tugboat for navy

ItalThai Marine of Thailand has signed a contract with the Royal Thai Navy (RTN) for the construction of a sister ship to the very successful RAMParts 3200 tugboat *Panyi 857*.

ItalThai has previously built three tugs designed by Vancouver, Canada-based Robert Allan Ltd for Thai customers, *Panyi 857* in 2016 and a pair of RAMParts 2800s for The Port Authority of Thailand, *Tarua 120* and *Tarua 302* in 2012.

The latest tug will be built to Lloyd's Register notations ✕ 100A1, Tug, ✕ LMC, and FiFi1 with water spray system.

The vessel will have a 32m LOA, 12.4m beam, 5.4m moulded hull and maximum draft of 4.35m. It will have tank capacities of 155m<sup>3</sup> of fuel oil, 50m<sup>3</sup> of potable water and 7m<sup>3</sup> of foam.

Its hull form and all equipment will be the same as *Panyi 857* with an enhanced fendering system to handle the navy's new submarines. The tug will, among other things, assist large navy vessels and submarines in or out of port and support oil recovery and fire-fighting operations.

A large, multi-decked ship, possibly a ferry or cargo ship, sailing on the water. The ship is white with a red stripe along the bottom. The FAR SOUNDER logo is visible on the side of the ship.

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## In brief

The potential for the Borneo shipbuilding and ship repairs industry to expand and develop is highlighted by positive growth seen in exports, according to deputy chief minister, Datuk Amar Awang Tengah Ali Hasan. He said: "Today, Sarawak is capable of building various types of vessels such as OSVs, bulkers, barges, tugboats and passenger boats. These vessels have reached international standards and are being exported to Singapore, Hong Kong, Indonesia, Vietnam, Solomon Islands, Brunei, Papua New Guinea, the Middle East, the Americas and Australia."

Western Marine Shipyard in Bangladesh aims to export small vessels worth US\$250m or more in the next five years fulfilling 25 per cent of the country's target to export US\$1bn worth of vessels during the period, its chairman Saiful Islam told a press conference in Dhaka. He called for government support with long-term and low-cost financing arrangements to help the sector to continue to grow. Western Marine builds a large range of vessels, including tugs.

A maritime technology co-operation centre for Africa is being hosted at Jomo Kenyatta University of Agriculture and Technology in Mombasa, Kenya. Similar IMO and European Union-backed centres have previously been set up in Asia, the Caribbean and Pacific regions.

## Five tugs delivered to Cuba

**Damen Shipyards Gorinchem has delivered five new harbour tugs to Empresa de Navegación Caribe, a subsidiary of Cuban maritime company Grupo Empresarial de Transporte Marítimo Portuario (GEMAR). Prior to the order being placed, all of the vessels were being held in stock and were subsequently delivered within three weeks of the orders being confirmed, steaming across the Atlantic to Havana on their own keels.**

Four of the five vessels were Damen's best-selling Stan Tug 2608 model, 26m long and with a bollard pull of 47 tonnes. The fifth was the larger Damen ASD 2810, with 60 tonnes of bollard pull. All were built at the Damen Song Cam Shipyard in Vietnam before being transported to Damen Shipyards Gorinchem to be held in stock for finishing and rapid delivery.

Three of the five are standard vessels. The 2810 was already equipped with a variety of options including a crane and a fire-fighting system and so was available for immediate delivery, and the last of the Stan Tug 2608s was fitted with an aft winch prior to handover.

Ezequiel Najmias, sales manager Americas at Damen, said: "This has been a highly successful project thanks to the efforts of all the parties involved. In Europe, the Damen tugs department and customer finance worked fast and accurately to meet the needs of the client. Each tug was then delivered by a company crew and on arrival in Cuba was met by a Damen services team. They conducted a detailed inspection following the trans-oceanic voyage and made final adjustments prior to each

going into service. Damen sales Americas was responsible for the administration and for ensuring that the entire process was smooth and trouble-free."

The contract included a comprehensive selection of spares, and all the vessels will be fitted with power converters over the next few months to compensate for the fact that Cuba, like North America, generates power at 60Hz. Damen's build-for-stock vessels are equipped for 50Hz, the standard across around 80 per cent of the rest of the world. Damen also organised export credit insurance from Atradius, the export credit agency of the Netherlands. In order to qualify, the order was placed through Gilmar Project Finance Establishment, a company based in Europe, having a branch duly registered at the Chamber of Commerce of the Republic of Cuba.

The five new tugs have joined around 40 other Damen tugs, tankers and ro-ro ferries operated by GEMAR. They will be based in Havana, but undertake assignments at ports and harbours right around the main and subsidiary islands and cays.



► The Damen-built Stan 2608 tugboat Capricornio

## Opportunities as Iran re-engages with trade partners

**The scale of emerging maritime market opportunities, following Iran's re-engagement with global trade partners, was brought into sharp focus at Iranimex, powered by Europort, which took place on Kish Island, Iran.**

The three-day event attracted 283 exhibitors, from Belgium, China, Germany, Italy, Japan, Norway, South Korea, Sweden, Turkey, the Netherlands and the UAE, as well as local Iran-based companies.

Iranimex has consolidated its position as the largest maritime event within the Middle East region, strengthening its claim to be the 'go-to' event for those actively monitoring, and planning to take advantage of, the significant investments planned by Iranian interests in new ships, port facilities and related technology in the coming years.

Port development was cited as being the main product group of interest, followed by maritime and offshore technology and services and shipbuilding, repair and conversion.

JRC-Alphatron Marine, which specialises in navigation and communication systems for merchant vessels, participated for the second year in succession. The company's global marketing and business development manager, Jeroen Kortsmid, said: "We have in fact already successfully started doing business in Iran, due to our presence at Iranimex in 2016, and were able to build on that platform this year."

First time participant Royal IHC is committed to developing the Iranian market, having signed a co-operation deal with Iran Ship Building and Offshore Industries

Complex Co in 2016 to share engineering knowledge and technology. Murat Katirci, area sales manager, Royal IHC, said: "Iran is an extremely promising market for us, making our presence at Iranimex a logical step. In fact, given the nature of the event we simply have to be here."

Alongside the exhibition, Iranimex hosted the 19th annual marine industry conference, Miciran, which was organised with the co-operation of Iranian universities and other organisations. This provided a forum for the discussion of recent and future developments in marine engineering and naval architecture.

Iranimex 2018 will take place slightly earlier than last year, from 20 to 22 November, again in a free zone area which enables visa-free travel to overseas visitors.

# Partnership focuses on automated future

**A PSV owned and operated by French offshore company Bourbon is taking part in a pilot study to improve real-time verification of the dynamic positioning (DP) operations of the Bourbon fleet.**

The pilot is the first application of a strategic partnership agreement between the Marseille-based company and classification society Bureau Veritas to develop and deploy automation and real time monitoring of fleet applications, developing digital technologies while mitigating cyber risks.

The partnership aims to deliver advanced automation of DP systems to enable improvement of DP operational safety through real-time advisory tools for bridge

operators and remote support for onshore teams; streamlining of onboard organisation leading to potential reduced manning, and a reduction in fuel and DP maintenance costs.

**Bourbon Explorer 508** – one of 20 Bourbon Explorer-class vessels – is a DP2 PSV operating in Trinidad waters and now hosting the pilot developed with marine technology specialist Kongsberg Maritime, already a strategic partner of Bourbon. Certified by Bureau Veritas, the study collects data from the DP system and drives the development of novel decision-making and verification applications for both onboard crew and onshore support teams.

Another element of the wider partnership

project is to address cyber security threats. Airbus company APSYS, which specialises in product security, is working on identifying and mitigating risks linked to data collection and communication between Bourbon's vessels and onshore infrastructure. Based on this risk assessment relying on best practices from APSYS's aerospace experience, Bureau Veritas is able to issue cyber security certification on products and class notations for ships meeting global industry security standards.

The agreement with Bureau Veritas is part of Bourbon's Smart Shipping programme, which seeks to optimise safety and reliability of vessel operations at optimum costs.

Bourbon CEO Gaël Bodénès said: "We have decided to innovate with Bureau Veritas in the way we operate vessels in order to bring a response to this new cycle focused on operational excellence at optimum cost. Streamlining work organisation on board vessels, this project will have a significant positive impact on our operations. In this digital era, we also have a common will to deploy innovative technological solutions offering tangible benefits to our customers."

Jean-François Segretain, technical director with Bureau Veritas Marine & Offshore, said: "At Bureau Veritas, we know the value of strategic partnerships such as this. They are a key to supporting our marine and offshore clients like Bourbon to integrate new technologies while mitigating the risks of our increasingly digital and connected world."

▶ **PSV Bourbon Explorer 508 is hosting the pilot study into real-time DP verification**



## Stamp to screen for class certificates

**Classification society DNV GL issued more than 50,000 electronic class certificates covering more than 6,000 vessels in the first four months since introducing the new service.**

Digitally signed electronic certificates represent almost 80 per cent of all certificates issued by DNV GL since the roll-out in mid-October last year. They are currently accepted by 52 flag states, with more expected to come on board this year.

Knut Orbeck-Nilssen, CEO of DNV GL Maritime, said: "The administrative savings for our customers have been significant, in particular in the ease with which customers always have access to new and updated certificates on the fleet status portal and through email subscription."

## Keeping track of the fleet from afar

**Maritime digital data company ChartCo has unveiled a new web-based tool that enables shore-based customers to access live ship management and tracking data. The UK-based company says its new FleetManager software is easy to use at any time on any popular browser, as well as via smartphones and tablets.**

FleetManager offers a range of environmental, piracy and regulatory overlays that can highlight potential sources of delay or hazard. It can also link with ChartCo's e-navigation platform, PassageManager, enabling shore-based staff to view an active passage plan so that any deviations from the expected track can be interrogated in real time.

Other advantages of the software include helping managers to ensure fleet compliance with the ability to inspect any vessel remotely and to view and instantly audit its navigation

and compliance status.

ChartCo CEO Martin Taylor said: "FleetManager is the latest addition to our growing suite of software solutions designed to help shipping operators manage compliance, cost and efficiency within their fleet."

The basic FleetManager tool is available free of charge to existing ChartCo customers and no installation is needed. Premium versions are available depending on customer requirements.



▶ **FleetManager allows operators and owners to monitor their vessels any time, anywhere**



# Connectivity key to making big data useful

**Better connectivity to the Internet of Things (IoT), intelligent use of big data and more efficient communication through the supply chain are all the way forward for the maritime industry. Florus Wilming, founder and director of Dutch maritime software start-up Onboard, says it is time to step up collaboration**

**A digital evolution is taking place in the maritime industry, and it is building momentum. The technology is there, ready to accelerate with it. So what's keeping this evolution from soaring? Nothing, actually.**

While nanosatellites and cloud technologies are already able to connect vessels and help transfer immense amounts of data from assets all over the world, we have all the opportunities we need to understand how to use this big data intelligently and apply it to business models and more efficient supply chains. But we need to start somewhere.

The first big step is that the digitisation of things needs to happen completely and everywhere. Secondly, industry players need to want to embrace new technologies, by first understanding their true value; or rather, by wanting to explore what more is out there.

The maritime industry is by no means lagging in technological progress. Automation is very much here, and vessels, platforms, ports and terminals are filled with smart sensors. It is the collection of outdated connectivity and multi-faced infrastructures,



▲ **RT Blackbeard and RT Raptor now have clear sight of the fuel used in manoeuvring tankers to the quayside and, left, Florus Wilming of Onboard**

is accessing it to enable the collaboration that will help build a new, connected industry by using what is already in place.

Naturally we were thrilled when the platform won the Duke's Choice Award last year for entrepreneurs working with Java technology in a groundbreaking manner.

Of course, such recognition from our industry peers is welcome, but getting the platform into a working environment highlights how far we have come as a company in a short time. Kotug is the first operator to take advantage of the Onboard platform – installing it in four tugs operated under its Kotug Seabulk Maritime (KSM) joint venture with Seabulk Towing.

The company is currently using our energy efficiency application, which monitors the operation and fuel consumption of a vessel and enables the customer to optimise both. The principle behind the application is being able to make an informed decision: you can't manage what you don't measure.

From its first use, Kotug identified several areas where it could improve fuel efficiency: eliminating inefficient activities by better managing the deployment of available assets; optimising the co-operation with supply partners such as pilots, working better together to save fuel; and accurate activity records providing a transparent breakdown of billable activities to the client.

Our philosophy is not ground-breaking. Humanity has learned to thrive in communities. What is new is the connectivity we can use to achieve a better and more efficient way of collaborating across the vast oceans we navigate.

Rome became the centre of one of the world's biggest empires because of something as fundamental as roads – ways to travel and connect. The IoT is the network that connects everything and everyone, making it dynamic and powerful by the data it collects and the ways it can make it grow. We are not building Rome here, but we are starting to build a collaborative and sustainable ecosystem that will empower each one of us.

both on land and on assets at sea, that create a formidable hurdle for big data to make any sense to anyone.

Following its formation in 2016, Onboard has developed the first IoT platform for the maritime industry which solves this issue by understanding all data and enabling it to join the IoT. It is where connection begins – to the supply chain and all machines, systems and sensors. But connectivity does not end there. The IoT turns connected things into smart objects that can understand large amounts of data and share it. Like a brain that gets new information and creates new connections, the IoT and big data operate in an organic, unified way.

Onboard has come up with an unpretentious yet artful approach to solving connectivity problems and complex infrastructure puzzles. Instead of needing new hardware for each new application and technology that keeps sprouting, thus slowing down potential collaboration, why not unite our forces? The platform is not looking to reinvent the IoT, it



◀ **RT Raptor is one of four Kotug tugs fitted with the Onboard Cloud Solution**

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## In brief

**I**LS Ship Design & Engineering has designed an attachable bow that turns conventional tugs into icebreakers. The Finnish naval architect, which celebrates its 30th anniversary this year, said the bow could convert a typical pusher tug into an icebreaker for inland waterway towage. The company added that the first attachable bow will be built in 2018 for the Finnish Transport Agency.

**T**he US National Oceanic and Atmospheric Administration reports that the Arctic region's average annual air temperature over land in 2017 was the second highest after 2016, with a temperature of 1.6 deg C (2.9 deg F) above the historic average. Maximum winter sea ice, measured in March, was the lowest ever observed, while minimum sea ice, measured in September, was the eighth lowest.

**C**limate change and the resulting warming of Arctic seas have opened the Northern Sea Route (NSR) as an alternative for more trading routes between Europe and Asia Pacific, according to an information paper published by the Oil Companies International Marine Forum (OCIMF). The full paper can be read at [www.ocimf.org](http://www.ocimf.org)

**I**nternational heavy transportation and lifting contractor ALE has lifted the partly completed polar research ship *RRS Sir David Attenborough* from fabrication hall to slipway so construction of the bow can be completed. The ship, weighing 5,000 tonnes, made the 41m journey to the slipway at Cammell Laird's shipyard in Birkenhead, UK.

**T**he US and the Russian Federation have submitted a joint proposal to the IMO to establish a system of two-way routes for ships in and around the Bering Strait. The system would facilitate increasing traffic flows as a result of rising economic activity in the Arctic region.

**T**aking place in Helsinki from 17-20 April, the Arctic Shipping Forum will bring together the sector's best informed experts to provide guidance on how to deliver growth, mitigate risk, and capitalise upon opportunity in Arctic waters.

## Tug to operate on seaway



**The St Lawrence Seaway Development Corporation (SLSDC) has awarded a construction contract to Gulf Island Fabrication for a new Robert Allan Ltd-designed TundRA 3600 Ice Class tug.**

The SLSDC – a US government corporation – operates and maintains the St Lawrence Seaway between Massena, New York, and Lake Ontario. The new tug will be based in Massena, and typical duties will include ice-breaking and ice management services, handling navigation aid buoys, and pushing the SLSDC's buoy and gate lifter barges. The tug is also capable of secondary roles in fire-fighting and pollution response.

The tug design is of relatively shallow draft (4.9m), to be classified by ABS as an Ice Class 1A tug, and incorporates an ice-breaking bow form. With an LOA of 36m, it is powered by a pair of EPA Tier 4 compliant engines with SCR after-treatment, to deliver a bollard pull of about 66 tonnes via controllable pitch Z-drive propulsion units. The vessel is equipped with a heavy

▲ *The new TundRA 3600 Ice Class tug will operate on the St Lawrence Seaway*

duty deck crane, a stern roller, shark jaws, and a tugger winch for ease of handling aids to navigation on the aft working deck. All equipment is rated for operating in the notoriously cold local winter conditions, and the decks feature a heat tracing system to reduce the accumulation of ice and improve the safety of crew operations on deck.

Barge winches and push knees on the forward deck, along with a towing winch within an enclosed house aft allow the tug to handle barges off the bow or the stern, and the elevated wheelhouse provides a commanding view while pushing a barge ahead.

Typical complement will be four to six crew, although there is accommodation for up to 14 for extended buoy run missions.

The tug will be built at Gulf Island's shipyard in Jennings, Louisiana. Production design is well underway, with delivery of the vessel expected in summer 2019.

## Russian OSV is fourth in series



◀ *The ice-breaking OSV Yevgeny Primakov was named in its home port of St Petersburg earlier this year*

**An ice-breaking OSV built for Russia's Sovcomflot (SCF Group) by Arctech Helsinki Shipyard was named in early February in St Petersburg.**

The vessel, *Yevgeny Primakov*, is the fourth in a series of multifunctional icebreakers built by Arctech over the past four years. The Russian Maritime Register of Shipping (RS) has assigned the vessel a high ice class – Icebreaker6.

Designed to operate in the demanding ice conditions of the Sea of Okhotsk, it is designed and equipped to ensure the safe operation of offshore oil & gas production platforms. The vessel will also provide year-round standby

search and rescue support and will be able to respond promptly to potential emergencies, and carry out underwater engineering and repair works where necessary. It has an LOA of 104.4m, maximum beam of 21m, draft of 7.9m and dwt of 3,680 tonnes. The vessel will carry a crew of 26, and also has accommodation for 70 people.

Multifunctional icebreakers are used to transport goods and passengers to offshore production plants, and perform stand-by duties nearby. All the vessels in the series are equipped with oil recovery equipment, and are working on the Sakhalin-1 and Sakhalin-2 projects.

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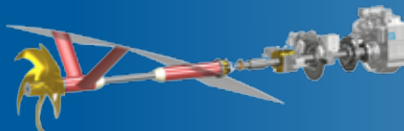
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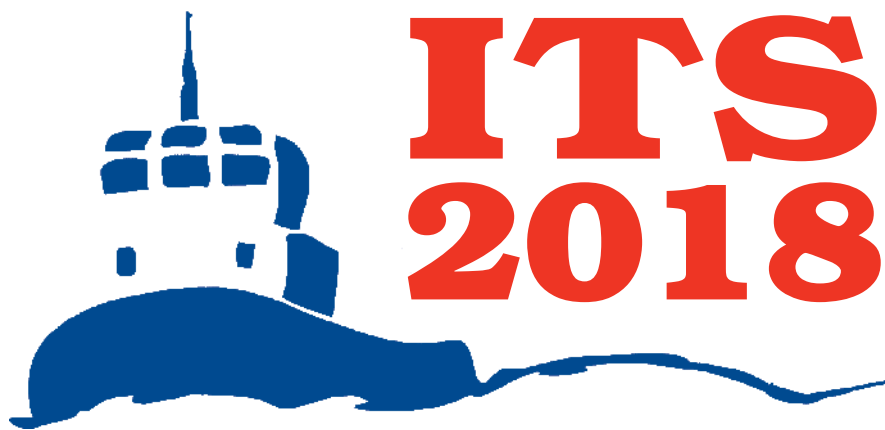
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ITS 2018 Secretariat, The ABR Company Limited  
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Tel: +44 (0)1225 868821 Fax: +44 (0)1225 868831  
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