

14th Volume, No. 47**1963** – **"50 years tugboatman" - 2013**Dated 18 August 2013BUYING, SALES, NEW BUILDING, RENAMING AND OTHER TUGS TOWING & OFFSHORE INDUSTRY NEWS

TUGS & TOWING NEWS

TUG DELIVERED "LOVE BOAT" TO TURKISH BREAKERS

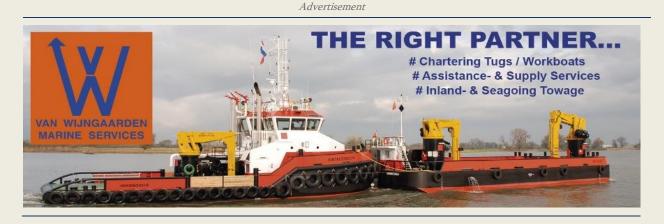


ps, became later as the "*Love Boat*" in a TV series and was finally sold to the Seahawk North America Inc, Boston, in 2013. On July 27 the final voyage to Alagria started. *(Source: Vesseltracker)*

After a lay-up of three years the cruise ship "*Pacific*", (IMO: 7018563) was delivered at Cemsan Shipbreakers on Aug 6 by the "**Izmir Bull**". The ship was built as "*Sea Venture*" in 1971 at Rheinstahl

Works Emden for the Norwegia n Cruiseshi





SEA TRAILS AND DELIVERY TUGBOAT RB-398

The state trials of the tugboat **RB-398** (building No 936, project 90600) has successfully finished. The preparation for ferry trip to the basing site (Black Sea Fleet) is in progress. The tugboat is intended for towing and berthing operations in harbor, roadsteads and coastal areas which comply with R3 navigation area, refloating of ships and vessels, fire fighting operations at floating and shore objects, oil and petroleum content products, cargo transportation, ice breaking and erosion operations. After the sea trails the State Commission has accepted the tugboat "RB-398", building No 936, project 90600. At the nearest time the ferry trip will be carried out by inland waterways to the area of operation Novorossiysk. *Technical information* Length max 25,4 m; Width max 8,8 m;



Draught 4,2 m; Speed 11,8 knots; Bollard pull 23 t. Classificaion KM Arc4 R3 Aut3 Tug by shipping. Russian Maritime Register of Propulsion system Z-drives US 155, Rolls-Royce, FPP into nozzles. Powerplant 2x746 kW at 1800 r/min, Caterpillar C32. Deck equipment: ·bow electro-hydraulic anchor-towing-mooring winch Fluidmecanica providing 10 t of bollard pull and 847 kN of brake holding force; .600 kN towing hook SWL with quick release device; The tugboat is equipped with cargo crane PC 2300, Palfinger with lifting capacity of 150 kilos at the

boom of 5m. In order to fulfill fire-fighting operations the tugboat is equipped with external fire fighting system made by FFS (capacity is 800 m3/h, 2 water monitors, water curtains system). *(Source: Pella)*

TROUBLED TUGS RETURN TO UNCERTAIN FUTURE

Shetland Islands Council's two troubled £7 million tugs **Solan** and **Bonxie** are being brought back into service having been tied up for almost two years following a collision with a tanker in the oil port of Sullom Voe. However the council will be considering whether the tugs have a future in Shetland in light of new developments at the oil terminal they service. The tugs were mothballed when crews refused to board them after the **Solan** lost power and struck the 76,000 tonne tanker Loch Rannoch in December 2011, less than a year after they were first launched.



At the time crews described it as a "nightmare" incident that could have cost lives. Modifications costing £60,000 that were carried out on the two tugs during June and July mean they can now steer in a straight line, but further work and crew training is required before they can start work again. SIC harbourmaster Colin Reeves said the tugs had four fins fitted to the hulls at Leith docks and now steered "as well as you would expect of a Voith tug". "They have improved from being very strange to being normal," he said. Crews are now being familiarised with the modified vessels, but there will have to be training exercises with tankers before they can be brought back into full service. Reeves admitted that the tugs were expensive to run due to their powerful engines consuming a lot of fuel, and that the council was considering whether they had a future in Shetland. He said a project team was being set up to look into the towage requirements of the oil port in light of new developments offshore that mean the Sullom Voe terminal will stay open at least until 2040, 30 years longer than expected. BP's massive new £4.5 billion Clair Ridge development west of Shetland is expected to pipe in a substantial flow of crude through the terminal that will significantly increase tanker traffic at the council-run port. "It may well mean we want to keep (Solan and Bonxie), but we may well decide the extra power isn't necessary and we will look at something smaller, we don't know," Reeves said. Two tugs that are unlikely to have a long term future at the port are Tirrick and Shalder, which are approaching the end of their working life. (Source: Shetland News; Photo: Shetlandtimes)

Advertisement



FSO PALANCA MOORED OFFSHORE ANGOLA



On completion of the towage of the FSO Palanca from Singapore to Angola as reported earlier. AHT **Eraclea** subsequently participated in the positioning operation to connect FSO Palanca to the pre-laid mooring spread. The completion of the hook-up operation brings an end to a six months charter, which includes mobilization from Spain to Singapore, the towage of FSO Palanca to Angola and the

hook-up of the unit offshore Angola. The swift hook-up operation was performed under the lead of STAPEM Offshore. AHT **Eraclea** is prompt available in Pt. Noire Congo. *(Source: APL; Photo: R&F van der Hoek-Lekko)*

LIGER PASSING THE KIELER CANAL

The Craneship Shipyard in Kerch; Ukraine delivered last July the **Liger** (Imo 9677478), a modern tug of 398 grt that is currently on her delivery voyage around Europe to Kaliningrad. She was pictured passing the Kiel Canal on Aug 7th towards the Baltic Sea. The St. Vincent & Grenadines registerd tug has call sign J8B4876. She is classed Russian Maritime Register of Shipping *(Photo: Martin Lochte-Holtgreven ©)*



A NEW KID ON THE BLOCKS



The Balico Fox Marine Services, based out of Paramus,NJ: USA have bought the tug **Buchanan 16** from Buchanan Marine and renamed her **BF Jersey** (Imo 8991798). The tug was built in 1974 by Terrebonne Shipbuilding under number 3. As the Bronx 6 for Bronx Towig Line of New York She has a length of 64 ft a beam of 24 ft and a depth of 9.6 ft. She is a twin screw tug rated 1,600 hp. The grt is 128 tons and

the nrt 87 tons. She had the previous names of **Buchanan 16; Barker Boys; William F Pagendarm** and **William J. McCormack**. *(Source: Harold E. Tartell; Photo as Baker Boys)*

LAUNCHING TUG ARIES

The tug **Aries** (Imo 9663805) was seen launched by the Guangzhou Panyu Lingshan Shipyard Co., Ltd – Guangzhou; China under number LS176. The tug is owned by the Sri Lanka Shipping Company Ltd. – Colombo; Sri Lanka. She is classed Bureau Veritas I Hull Mach Tug-Fire fighting ship 1 -water spraying-Special service Anchor handling BV Nr. 18782S. The **Aries** has a length of 48 mtrs a beam of 12.80 mtrs and a depth of 4.60 mtrs. Her grt is 795 tons and nrt is 238 tons. The two Caterpillar 3516B main engines develops a



total output of 3,132 kW (4,256 hp) and a speed of 12 knots. (Photo: Manjula Vitharana)

MUSEUM TUG EDNA G. GETTING SOME REPAIRS



Two Harbors, Minn. – A big year is in store for Two Harbors' historic tugboat, the **Edna G**. Some repairs, such as the replacement of rotting wood and hull welding, already have been done — but there's more to come. This week, Sea Service, a Superior-based company, installed new mooring lines on the **Edna G**. According to Ed Montgomery of Sea Service, the tug will have 600 feet of

new 2-inch nylon line, which he said is "durable with a little bit of stretch." Marlinspikes, used by sailors for many years, are used to install the lines. The rigging had not been redone for about 25

years, but the replacement recently was recommended by the Edna G. Commission. Mel Sando, executive director of the Lake County Historical Society, said that the new mooring lines and installation will cost more than \$5,000, which represents just a portion of the expected cost of repairs and updates. "We have new life awakened in us," Sando said. He projected that the Edna G. Commission will spend about \$50,000 this year on boat assessment and maintenance projects. The most expensive single cost is a hull survey, which took place Wednesday. Divers came and examined the underside of the boat using sonar. "The hull survey will tell us whether or not we need to be concerned about pulling the boat out of the water," Sando said. "It will tell us how to best preserve the boat." Pulling the boat out of the water and making a place for it on land could result in tug tours turning a profit in years to come, he said. "We could triple the volume of visitors," Sando said. "It's very difficult to get people to get down to the dock." Currently, Sando added, the Edna G. loses money, and the city reimburses the Historical Society through a fund for the boat. The fund, which has been financed through a lodging tax passed by the Minnesota Legislature, doesn't rely on local taxpayers but on those who stay at motels and inns in the city. According to Sando, the gap between the costs associated with maintaining the boat and revenues generated by selling boat tours would close considerably with the boat on land. More visitors and locals would be more likely to go on a tour. "It's surprising how many local people haven't been on the G.," Sando said. The tug has a length of 92.42 feet a beam of 23.00 feet a depth of 7.42 feet a grt of 154 tons and a nrt of 67 tons. She was built in 1896 by Cleveland Ship Building Co. Cleveland, OH for Duluth, Missabe and Iron Range Railway Co. at a cost of \$ 35,397.50 and named for the daughter of J.L. Greatsinger president of the railroad. Home-ported at Two Harbors, Minnesota, Edna G moved ships and barges carrying iron ore and taconite from the Mesabi Range and other smaller sites in the Iron Range region of northeast Minnesota. She spent her entire working career at Two Harbors with the exception of World War I (1917-1919) when she served on the eastern seaboard. She was out of service from

1931 to 1933 due to the depression. Over the years **Edna G** was involved in several shipwreck rescues including the surviving crew of the Madeira. Her last tow was the *Cason J. Calloway* on December 30, 1980. She was the last coal-fired, steam-engine tug in service on the lakes when she was retired in 1981. Edna G. is one of the



attractions of the Lake County Historical Society in Two Harbors. Out of active service, 1986. *(Source: via Jan van der Doe-Canada/Duluth News Tribune)*



ASPIN KEMP & ASSOCIATES RECEIVES US EPA VERIFICATION ON FOR HYBRID TECHNOLOGY



Clean Hybrid Technology Gets EPA Verification Foss Maritime and AKA's retrofit system wins federal listing after tug test shows significant fuel savings reduced emissions. and Dartmouth, Nova Scotia August 12, 2013 - Clean hybrid technology that's already proving its value in two of the world's most environmentally sensitive ports has received from verification the U.S. Protection Environmental

Agency (EPA). The EPA has verified the XeroPoint Hybrid Tug Retrofit System (XeroPoint) pioneered by Foss Maritime of Seattle, Wash., and Aspin Kemp and Associates (AKA) of Stratford, PEI. The system captured the attention of the maritime industry for its potential economic and environmental savings as a Foss harbor tug was undergoing extensive testing in the ports of Long Beach and Los Angeles. The rigorous EPA verification process ensures the XeroPoint hybrid system is an effective choice for use on any U.S. harbor tug seeking to meet the nation's highest environmental standards. "The hybrid retrofit reduces fuel costs and pollution," said Paul Stevens, President and CEO of Foss Maritime. "EPA verification of the California test results is what the maritime industry has been looking for. There will be a significant market for XeroPoint retrofits, based on the world's growing demand for safe, clean technology." Jason Aspin, CEO of AKA, said, "The XeroPoint hybrid system represents a clean and simple solution that can be customized for a harbor tug's power and propulsion systems. Our partnership with Foss Maritime has allowed us to refine the system in one of the world's most important proving grounds, the ports of Long Beach and Los Angeles." The hybrid retrofit Campbell Foss has been working in southern California since 2012, using ultra-low sulfur diesel fuel. The University of California-Riverside, which has been testing the Foss Maritime/AKA system, found: •A fuel savings of roughly 30 percent; •A 25 percent particulate matter reduction; A 30 percent reduction in nitrogen oxides produced during combustion; A 30 percent reduction in one of the prime greenhouse gases, carbon dioxide; •A 35 percent reduction in carbon monoxide. "The Foss/AKA XeroPoint system is a great example of technology innovation to reduce emissions and improve fuel economy in the marine sector," said Jim Blubaugh, Deputy Director of the Transportation and Climate Office at the U.S. Environmental Protection Agency. "By reducing diesel emissions at ports, the XeroPoint Hybrid Tugboat Retrofit System can help improve air quality and energy independence in one of our nation's most important supply chain sectors. We look forward to the broad deployment of this technology in harbor tugboat vessels." The ports of Long Beach and Los Angeles and the California Air Resources Board also have partnered with Foss Maritime and AKA on the XeroPoint hybrid retrofit system. Richard Cameron, Acting Managing Director of Environmental Affairs and Planning at the Port of Long Beach, said, "The commitment of Foss and AKA to hybrid technology has meant cleaner air for communities that surround our local ports. This is a partnership that will pay long-term dividends." "The San Pedro Bay port complex and our neighbors have been benefiting from Foss Maritime/AKA hybrid technology since 2009, when the world's first hybrid tug was home-ported here," said Chris Cannon, Director of Environmental

Management for the Port of Los Angeles. "We're pleased to have contributed to the development of a hybrid retrofit system that could be used on any harbor tug. It's game-changing technology." "We are working to bring clean air and a healthier environment to the hundreds of thousands of people who live and work in port-adjacent neighborhoods," said Mary D. Nichols, Chairman of the California Air Resources Board. "California's support for this new technology will help us meet our goals by improving air quality in our port areas, and is a successful example of a public-private partnership with multiple benefits." On the Campbell Foss, the XeroPoint system integrates electrical and mechanical devices onboard to provide optimal modes of operation for power and propulsion. The hybrid system's energy management system strives to eliminate the unnecessary idling of diesel engines by determining the most efficient configuration of the electrical and mechanical devices on board. Stevens of Foss said, "Our company is committed to hybrid technology. We believe it is good for the environment - and will be good for our business. Think of all the world's ports and the thousands of harbor tugs that work them - from LA/Long Beach to Puget Sound, from Rotterdam to Singapore. That's our potential market. We can bring operators in those markets cleaner air, greater fuel efficiency and reduced maintenance costs." The technology is now included on EPA's Verified Technology List. For more information about verified technologies and the Verified Technology list, please visit: http://epa.gov/cleandiesel/verification/techlist-foss.htm (Press Release Aspin Kemp & Associates)



CMS SEACAT FOR SALE

The 1947 built and rebuilt in 1978 and 2002 Malta flag tugboat CMS SEACAT off Grand Harbour, Malta which is seen on the picture is currently for sale from MALTA MARITIME SERVICES. For Serious Matters kindly email us on

maltamaritimeservices@gmail.co m. The tug has a length of 27.13 mtrs a beam of 6.25 mtrs and a



draft of 3.08 mtrs. The Crepelle main engine develops an output of 1,150 at 1,800 rpm. The 126 grt and 34 nrt tug has a max speed of 10 knots and a bollard pull of 15 tons. Further the tug is equipped

with VHF; radar, GPS, depth sounder and AIS. The location of the tug is Malta. *(Photo: Capt. Lawrence Dalli - www.maltashipphotos.com)*

ASD TUG FOR ROSNEFT FLOATS AT KHABAROVSK SHIPYARD



The Khabarovsk Shipyard (a part of Far Eastern Shipbuilding and Ship Repair Center) successfully launched the tug RN Ussuri. The ceremonial event was attended by the local public leaders - Vyacheslav Shport, Interim Governor for Khabarovski Krai, and Khabarovsk's Sokolov, Alexander Mayor - as well as Vladimir Tsybin, chief executive for Far Eastern Shipbuilding and Ship Repair Center. Gennady Koshkarev, Khabarovsk Shipyard Director, kicked off the

launching ceremony, stating "It is a momentous and gratifying occasion for the shipyard and all of its several thousand personnel." "Completion of a major construction milestone is a much-expected and needed achievement for us all, for development of the Krai industry and economy. This is yet another sister tug built at the Khabarovsk Shipyard. I would like to express my gratitude to everyone who works at the shipyard and contributed to hitting the goal," Alexander Sokolov, Khabarovsk's Mayor, stated in his welcoming remarks. "It is pleasing that you don't slow down construction progress, and work out on the shipway is moving forward on two ships for minor rivers and yet another ship to replace Meteor. To date, keel-laying of two further ships to replace Meteor was approved within the Khabarovski Krai Transportation Plan 2018. They are set to be commissioned as soon as 2014," Vyacheslav Shport, Interim Governor for Khabarovski Krai, professed in his turn. The public leaders and Vladimir Tsybin commended the best shipyard workers. More than a dozen Khabarovsk Shipyard employees were recognized with honorary resolutions by the Offices of the Governor and the Mayor. "It is emblematic that the Khabarovsk Shipyard celebrates its 60th anniversary year with ship float-outs. You were capable to meet challenges that faced you, and the second tug in the class was completed faster than the first. Let me applaud you on this enjoyable and marked occasion in the shipyard's history," said Vladimir Tsybin,

chief executive for Far Eastern Shipbuilding and Ship Repair Center. By ancient custom a champagne bottle was broken on the side of the ship by the RN **Ussuri** sponsor, the young engineer of the Khabarovsk Shipyard Natalia Malysheva. Ms. Malysheva has engaged in ship construction from keel-laying. "I saw the tug on paper and provided input in development and improvement of individual parts and machinery. It is satisfying



8/25

to see her built in steel. When you look at the final product you get overwhelmed with selfsatisfaction," Natalia Malysheva expressed her thoughts. The RN **Ussuri** got into the Amur waters to the ovation of the attendees. The tug built to the Rosneft's needs is a powerful ARC4 arctic ice classed ship intended for year-round coastal ocean operation on the high seas with up to 7 meter maximum wave height. In addition to her primary role of towing and pushing, the ship can fight fires. The design is distinct in that it features a z-drive configuration as the ship's main propulsion. The propeller is mounted in a fully steerable thrust unit that provides maneuvering in close quarters. The tug still has a journey down the Amur to the Sea of Japan for her sea trials at the delivery site of the Khabarovsk Shipyard in Vladivostok remaining ahead before she will set sail on her free voyage. *2310 Class Specifications:* Length: 22.73 m; Breadth: 10.45 m; Draft: 4.5m; Tonnage: 380 tons; 2 x 2,700 kW Rolls-Royce engines. *(Source: Khabarovsk Shipyard)*



Two DAMEN ASD 2810 ARRIVED ON BOARD THE BBC AMETHYST

This early morning 13th August at 07.45 the BBC Amethyst enters Rotterdam from Singapore via Ceuta with on board two Damen ASD 2810 tugs which were loaded in Haiphong; Vietnam. The tugs **Bulat** and **Siver** (Imo 9673587) are intend for delivery Sint Peterburg; Russia. Further cargo on board the BBC Amethyst were various parts for the Wind turbines of Vestas. *(Photo's: R&F van der Hoek-Lekko)*



ACCIDENTS – SALVAGE NEWS

Plan for salvage of Tall Ship Astrid wreck "nearing completion"

It's more than two weeks since the Dutch-owned training vessel sank near Kinsale. The final plan



for the salvage of the Tall Ship Astrid should be handed over to the Irish Coast Guard soon for a final sign-off, according the Department to of Transport. The Dutch training vessel sank after running aground on rocks close to Kinsale on 24 July. All thirty crew members were saved in a large scale multi-agency rescue operation. Divers who assessed the Astrid in the wake of its sinking last month told the

owners of the Dutch vessel she was unlikely to sail again. However, experts say it would be possible to raise the wreck from the sea. The insurers of the 95-year-old vessel have been discussing a plan with Irish salvage contractors on how to carry out that operation – but the Irish Coast Guard needs to sign-off on what's agreed before the plan can go ahead. A spokesperson for the Department of Transport told TheJournal.ie today: The Coast Guard is in regular contact with the Insurance company and understand that the plan is nearing completion. In the meantime, an exclusion order remains in effect around the vessel, with the Crosshaven Coast Guard carrying out regular patrols in the area. *(Source: The Journal; Photo: Oceanaddicts)*

OIL ON VESSEL PUMPED TO ANOTHER TANK

Marine salvors are pumping oil from a leaking tank on the Kiani *Satu* to prevent more oil pollution, the SABC reported on Sunday. The plan was to pump oil from a leaking tank lower the ship down in to а structurally sound one higher SA Maritime Safety up. Authority spokesperson Nigel Campbell told the broadcaster.



The rough seas made it too dangerous to do underwater welding. The bulk carrier ran aground off Buffels Bay, Knysna, on Thursday when it developed mechanical problems in heavy seas. It is carrying 330 tons of heavy fuel oil and 15,000 tons of rice. Salvage experts said about three tons of oil has so far leaked into the marine protected Goukamma Nature Reserve, but marine life was not yet under threat, according to the SABC. The ship was inaccessible and heavy equipment had to be flown in by helicopter. On the ship everything had to be moved by hand due to a lack of electricity. Campbell said a similar operation to remove another ship from Durban coast took them 30 days. Insurance: This time they were trying to refloat it before the next front arrived on Tuesday. "We have responsible owners who have the best insurance in place. "Evidence of this is that thy have flown in experts from all over the world to give assistance," said Campbell. "Financial commitments are being met and there is no doubt in my mind that there wil be no costs to the state in this exercise. "The ship owners through their insuers will pick up all of the costs." The environmental affairs department said its oil spill response team was collaborating with the local municipality, SANParks, and CapeNature. *(Source: by Aad Noorland correspondent in South Africa; Photo: Alex Carmichel)*



MOL COMFORT CASUALTY INVESTIGATION UPDATE - 14 AUGUST 2013

Under the leadership of ClassNK Executive Vice President Toshitomo Matsui, the ClassNK Casualty Investigation Team is carrying out a rigorous and exhaustive investigation of the causes of the MOL Comfort casualty. This analysis work is proceeding rapidly, and ClassNK expects to consolidate its preliminary findings by early September 2013. Based on the current findings of the ongoing investigation and analysis, the ClassNK Casualty Investigation Team has determined that the damage leading to the loss of the MOL Comfort did not originate from the vessel's upper deck area or hatch side coaming. As a preventative safety measure, Mitsubishi Heavy Industries and Mitsui O.S.K. Lines have developed plans to further increase the hull strength of the MOL Comfort's sister vessels. These plans have been approved by ClassNK. (*Press Release ClassNK*)

Two DIE DURING SCRAPPING OF 'LOVE BOAT'



The dismantling of one of the most famous cruise ships, the former *Pacific Princess* – also known as the **Love Boat** – has begun on a catastrophic note. Turkish media reported that two

workers at the Izmir-based scrapyard where the vessel arrived late last week for dismantling were killed by toxic gas in its engine room. The MS *Pacific*, as it is now named, arrived at the scrapyard in Turkey on Wednesday after 'wasting away' at an Italian dock for years. The famed ship's journey to the scrapyard was difficult due to weather conditions *(see above)* – causing damage to the cruise ship, allowing water to fill the engine room. A total of ten workers entered the engine room where they encountered the poisonous smoke released from a plumbing fixture's exhaust pipe, while they were trying to drain the water. The surviving eight men were released from a nearby hospital on Sunday. An investigation has been launched into the death of the two crewmen who reportedly died of smoke inhalation. Before the investigation begins, necessary gas measurements will be done,

and gas and water in the ship will be removed. The almost 20,000-ton ship is being recycled for its metal and parts. The vessel last sailed for Spanish-based Quail Cruises. The Izmir Ship Recycling Co. recently acquired the vessel for 2.5 million euros. *(Source: Marex)*

COAST GUARD RESPONDING TO TUG-AND-BARGE ALLISION

The Coast Guard is responding to an allision between a tug and barge taking on water near the Cape Cod Canal Wednesday Aug 14, At 11:28 p.m. Tuesday Aug 12, watchstanders at Coast Guard Sector Southeastern New England were notified from the crew of the 112-foot tug **Doris Moran**, homeported in Wilmington, Del., that they had reportedly lost power while towing the 410-foot barge *Alexander* and the two allided. The **Doris**



Moran crew was able to tow the *Alexander* outside of the Canal into Buzzards Bay to an anchorage approximately two miles east of West Island. The barge is taking on approximately five-feet of water and pumps are keeping up with the water. The barge is carrying cement and was enroute to New York. There has been no reported impact to the environment. There have been no reported injuries. Cape Cod Canal vessel traffic has not been affected. Responding are crews from: •Coast Guard Station Woods Hole, Mass.; •New Bedford, Mass., Fire Department; •Massachusetts Department of Environmental Protection; •Massachusetts Emergency Management Agency; •National Oceanic Atmospheric Administration. The incident is under investigation. *(Source: USCG)*

Update Kiani Satu: Still hope ship off Buffels Bay can be refloated

There is about a 50% chance the cargo ship that ran aground off Buffels Bay near Knysna may begin to break up, although the team tasked with salvaging the vessel are cautiously optimistic that the 168m Kiani Satu can be refloated today 13th August. Captain Nigel Campbell, who is overseeing the operation for the South African Maritime Authority, said it was hoped the team could conclude its operations before heavy storms forecast for the Western Cape hit tomorrow. The operation was dealt a blow yesterday when it was delayed by 12 hours after the main Russian built salvage helicopter experienced technical difficulties. "The plan was to refloat the ship at 5pm yesterday but we can only start attempts at 5am today," Campbell said. While repairs were being made to the salvage helicopter, smaller helicopters were used to fly in the rest of the equipment needed to salvage the vessel. By sunset yesterday all the equipment was on board, including a 1,000 m tow rope. "We are using a tow rope made from an extremely strong and expensive material and pulling this rope will be the strongest salvage tug boat in the world," Campbell said. While there is a 50% chance of the ship breaking up, the salvage team has already begun to draw up a back-up plan in the case of such an eventuality. "The first step would be to secure the pollutants on board. We are busy drilling into the tanks and using pipes to get the fuel into a secure tank." The oil that has leaked from the Kiani Satu since Saturday is still visible on the beach at Buffels Bay, which lies in the Goukamma Marine Protected Area. At the scene yesterday, thick oil clumps were seen along a vast stretch of the beach and the water was turned black where it broke on the shore. Several jellyfish that had washed up were also covered. But Campbell said although more oil had leaked overnight it is estimated that between 10 and 15 tons has entered the water around the vessel to date -a layer

of fuel floating on top of the water drifting about five miles off shore near the Knysna Heads yesterday morning had moved seven miles east later in the afternoon. "This is encouraging and the thick oil patches are also a lot less and oil washing out onto the beach is not too bad. At this stage oil has only made it onto a two-mile [3.2km] stretch of beach." A pollution containment team has also set up barriers to keep the spill from making its way into rivers and other sensitive areas. Although one of the barriers broke yesterday it was "swiftly repaired". A bulldozer was also working feverishly to dam the river near the beach yesterday so the river water would not be contaminated. Meanwhile, Knysna municipal manager Lauren Waring yesterday lauded the "quick and efficient" action of nearly 20 different stakeholders who had been working on the salvage operation. Environmental safety precautions in the area's other two estuaries – Knysna and Swartvlei – were also being implemented, which would have some traffic and related implications. *(Source: The Herald)*



OFFSHORE NEWS

DOF SUBSEA USA TAKES DELIVERY OF 'HARVEY DEEP-SEA'

DOF Subsea USA has taken delivery of the new build DPII Multipurpose Construction Vessel - Harvey Deep-Sea under a 4-year long term charter agreement with Harvey International Gulf Marine. DOF Subsea will immediately commence the planned mobilization, comprising of structural reinforcement of the back deck to allow rapid



mobilization of project specific equipment, repositioning of the crane boom rest, expansion of deck utilities, integration of two (2) new XLX ROV system and installation of on-line /off-line survey systems. Upon completion of the mobilization and prior to commencing committed work with undisclosed client in the Gulf of Mexico, the vessel will undertake a short trials program to test the newly integrated ROV's and calibrate on-board USBL and Crane AHC Systems. The Harvey Deep-Sea is a 92 meters in length and 19.5 meters in beam vessel featuring a 165t AHC Knuckle-boom crane (approx. 90t to 3,000 meters), accommodation for 71 people, S92 helideck, FiFi 2 and it is certified to carry methanol proving a suitable asset to the Subsea Team to deliver integrated projects

safely and in compliance with the Jones Act. DOF Subsea owns and operates a high specification fleet of vessels and ROVs, which in combination with our team of highly qualified and experienced personnel provides our Clients with safe, efficient and cost effective project delivery. *(Source: DOF Subsea; Photo: Scott Pittman)*

FUGRO BRASILIS IN CAPE TOWN



The 2013 built and owned Fugro Australis - Adelaide, Australia and managed Fugro - Leidschendam; Netherlands Panama flagged seismographic research ship Fugro Brasilis (Imo 9627423) which arrived in Cape Town for a bunker call. The vessel is built by Oakwell Shipbuilding Engineering & Construction – Singapore. She is the former Fugro Australis intil May 2013. Her grt is 1,929 tons and dwt is 531 tons. (Photo: Aad *Noorland*)

COASTAL'S SUBSIDIARY SELLS TWO VESSELS

Coastal Contracts Bhd yesterday $12^{\rm th}$ August, announced that its whollyowned subsidiary, Thaumas Marine Ltd has secured contracts for the sale of one unit Anchor Handling Tug Supply ("AHTS") and one unit Subsea Support/Maintenance Vessel for an aggregate value of approximately RM170 million (USD 52 million).



These vessels are scheduled for delivery up to 2014. The revenue stream from these vessels is expected to contribute positively to the top and bottom line performance of the Group for the financial years ending 31 December 2013 and 31 December 2014. As of to date, Coastal Group has approximately RM1.2 billion worth of vessel sales orders awaiting delivery to customers up to 2014. Mr Ng Chin Heng, the Executive Chairman of Coastal, commented: "Following our first and second order book intakes for 2013, I am pleased to announce that Coastal Group has bagged another vessel sales orders amounting RM170 million. Including these new deals, Coastal Group has managed to clinch vessel sales orders totalling RM1 billion in 2013 alone. Cumulatively, the value of Coastal Group's outstanding vessel sales order book has reached approximately RM1.2 billion (USD 368 million). This will further underpin the Group's growth momentum as well as earnings visibility for the next one to two years. We are optimistic about the steady growth of Offshore Support Vessel

("OSV") in the future, given that OSV is a moderately developing market with no other substitutes currently available which makes it the backbone of the oil and gas upstream segment." Mr Ng further added: "With stable recovery of OSV market, Coastal Group remains confident in its fundamental ability in building right mixed of purpose-driven OSV for customers. Moving forward, we will continue to bolster our building programme to leverage on the OSV supply-demand disequilibrium." *(Source: Coastal Contracts)*

HIGHLAND MONARCH IN NEW COMPANY COLOURS



The **Highland Monarch** has been painted in the new company colours of GulfMark Offshore. In a very short period of time it is the second PSV in the Southern North Sea (SNS) Pool that has been repainted. The first one was the **Highland Citadel** in May this year. *(Source and photo Paul Schaap)*

Advertisement



GPA IN BRAZIL

In recent years, GPA has been noticeably active in the Brazilian offshore market with several contracts awarded. GPA focused on building relationships with local operators and shipyards in Latin America and created a direct presence with subsidiaries in Chile and Brazil. These subsidiaries provide naval architecture support to the GPA headquarters in Seattle, working in conjunction with the GPA design and engineering staff, as well as providing technical assistance and project and contract management directly to local shipyards that are currently constructing GPA designs. GPA incorporates extensive experience in the offshore sector into each design. Our proven design standards offer an economical solution that evolved throughout many years by working with clients in developing the most practical and economical vessel to construct and turning complex ideas into reality. These established standards include many GPA methods and ideas that enable shipyards to build more vessels in less calendar time in a cost-saving manner while owners benefit from a vessel that provides efficient operations.

GPA 688SC PSV (PETROBRAS PSV 4500): - 8 vessels under construction

The GPA 688SC PSV was designed to meet the requirements of the Petrobras 4500 PSV. The vessel, measuring 88 meters in waterline length, provides accommodations for 30 people. The vessels are equipped with environmentally friendly diesel-electric propulsion, resulting in lower fuel consumption than direct drive systems, thus producing far less pollution. To fulfil Petrobras' requirements for the 4500 PSV, GPA has developed a modern look vessel, the GPA 688SC



PSV, with a special deckhouse arrangement. This design has the capability to be transformed into the PSV 3000 (GPA 675 PSV), another vessel specified by Petrobras, by merely changing the midbody section. This characteristic is extremly valuable for the shipyard as it offers a high degree of flexibility. The GPA 688SC PSV, measuring 88.00 meters in waterline length, has a deadweight capacity of 4500 MT. The vessels will be outfitted with tanks capable of carrying oil-based mud (1,450 m³), water-based mud (590 m³), brine (1,494 m³) and dry bulk (340 m³). The vessels will be optimally equipped for all conditions with a diesel-electric propulsion system, consisting of MTU engines, propulsors by Schottel and the Integrated Engine Control Room (ECR) by EPD. Running on four MTU generators rated for 1,845 kW and one MTU emergency generator rated for 176 kW, GPA sees several benefits for the operator as these generators provide a powerful and compact, robust and quiet solution. They also offer the highest cost-effectiveness and profitability due to low consumption values, long maintenance intervals, and a low-maintenance engine design. This propulsion configuration is optimized by combining it with two azimuthing drives rated for 2,500 kW and two tunnel thrusters rated for 900 kW delivered by SCHOTTEL. The Engine Control Room (ECR) provided by EPD is a completely pre-tested, pre-manufactured container and designed as an integral part of the ship's structure. It allows for the equipment to be installed and tested in a controlled environment. During construction, the ECR is lowered onto the vessel, secured and connected to power and control cables externally. The GPA 688SC PSVs, providing accommodations for 30 crew members, will bear the class notation ABS, +DPS-2, +A1, Offshore Support Vessel, Circle E, +AMS and +ACCU. Brazilian based operator Starnav ordered four GPA



688SC PSVs, which are under construction in Itajai, Brazil, at Detroit Brasil Ltda.

GPA 675 PSV (PETROBRAS PSV 3000): - 2 vessels under construction

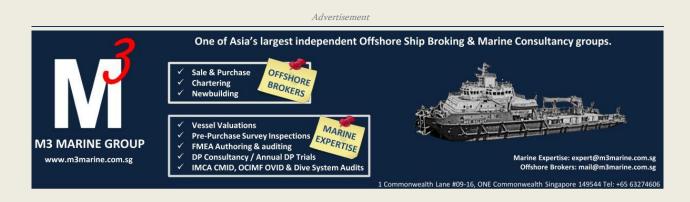
The GPA 675 PSV was designed to meet the requirements of the Petrobras 3000 PSV. The vessel, measuring 75 meters in waterline length, provides accommodations for 22 people. The vessels are equipped with environmentally friendly diesel-electric propulsion, resulting in lower fuel consumption than direct drive systems, thus producing far less pollution. The electrical components of the propulsion system will be provided by WEG. Other major equipment related to the propulsion arrangement includes a DP-2 system by Kongsberg. The use of a diesel-electric propulsion system creates valuable flexibilities, allowing for the maximization of cargo carrying capacities below deck, as the engine room is located above the main deck. The cargo tank equipment will be supplied by Van Aalst Marine & Offshore. The vessels are capable of carrying 1,018m³ of potable water, 687m³ of bulk mud, 869m³ of fuel oil, 449m³ of ship's fuel oil, 172 m³ of ship's fresh water and 1,705m³ of ballast . The vessel reaches a cruising speed @ DWL of 13 knots. Two of the DP-2 and Fifi-1 certified vessels are under construction at a Brazilian shipyard for Astromaritima and will be serving the oilfields of Petrobras.

GPA 462-10 OSRV (PETROBRAS 750-10 OSRV): 6 vessels under construction

In 2010, GPA signed a contract with Brazilian shipyard EISA. Estaleiro Ilha for one GPA 462-10 OSRV, designed specifically to Petrobras requirements (OSRV 750-10). Later on, an order for one identical OSRV followed. Both vessels are currently under construction at EISA for the Brazilian offshore operator Astromaritima Navegacao S/A. The GP 462-10 OSRV, measuring 62meters in waterline length, are outfitted with diesel-electric а propulsion configuration. The



system consists of two azimuthing drives, each rated for 1,700kW, and two bow thrusters, each rated for 448kW. The propulsors and bow thrusters will run on three generator sets each rated for 1,700kW. The use of a diesel-electric propulsion system creates valuable flexibilities, allowing for the maximization of cargo carrying capacities below deck, as the engine room is located above the main deck. Besides fresh water tanks (315 m³), permanent fuel oil tanks (489 m³) and day oil tanks (33.3 m³), these OSRVs will be capable of transporting a maximum of 800 m³ of recovered oil. *(Source: Guido Perla Associates Inc.)*



SUPPLIER RESCUED 110 MIGRANTS

The "VOS Theia" was involved in a dramatic rescue of over one hundred refugees from a sinking



boat off the coast of Libya. The ship was under way to Tripoli, Libya, when they received a telephone call from the Italian Coastguard in the evening of the July 26, 2013, and was requested to assist a rubber boat in distress. When the vessel approached the boat, the crew noticed that the boat was damaged and sinking. All 110 persons on board were rescued and transferred to the main deck. The refugees advised the Captain that they were of nationality. Algerian The Italian Coastguard, in cooperation with the

Libyan maritime authorities, advised the ship to proceed to Tripoli. After a series of negotiations, the refugees were successfully disembarked at the port on July 27 and arrangements were made to repatriate them to their country of origin. *(Source: Vesseltracker)*

WINDFARM NEWS

DOLWIN ALPHA TOW OUT



Multiple offshore HVDC (High Voltage Direct Current) transformer substations are being built at about 60 km off the German coast in the North Sea. These substations are used to convert electric power from Alternating Current (AC) to Direct Current (DC) in order to interconnect offshore wind farms to the German power grid. TenneT Offshore GmbH is the Electrical Grid Controller of the substations and the customer for the design, manufacturing and installation of the HVDC transformer platforms. DolWin Alpha is one of these HVDC transformer platforms. ABB Offshore Wind Connections is the main contractor for the entire project. The project consist of the DolWin Alpha Offshore transformer platform, an onshore transformer substation at Dörpen (Germany) to make the connection with the German electricity grid and all the interconnecting onshore and offshore cables. Heerema Fabrication Group in Zwijndrecht (the Netherlands) was contracted by ABB to design and build the platform including its platform support facilities and they asked Iv-Oil & Gas to perform the design. The DolWin Alpha platform houses an 800 MW HVDC transformer substation. This substation receives electrical energy from the nearby wind far m substations, each supporting blocks of approximately 80 wind turbines, using relatively short distance subsea cables at 155 kV 3-phase AC. At the HVDC substation, the alternating current is converted to 320 kV direct

current to be able to transport the electricity to the onshore receiving substation. The HVDC transmission platforms are grouped together at sea to be able to expand the HVDC system easily, reducing the operating costs. B y installing bridges between the platforms, one of them, normally the first one, will be used as mother platform. The mother platform houses all the central facilities, such as the living quarters and a helicopter deck . DolWin Alpha will act as a mother platform. The transport, last Saturday 10th August, departed from the Mammoetkade – Schiedam to the DolWin Alpha field in the German Bight. The tow out, of the DolWin Alpha loaded on the Heerema ponton *H-542*, was carried out by the tug **Carlo Martello** and on the river assisted by the Smit tug **Thamesbank** and URS tug **Union 7** (both Boskalis group). (Photo: Jan Oosterboer)



ACCOMMODATION AND HELIDECK DOLWIN ALPHA ON TRANSPORT



One day later 11th August was seen the departure of the Accommodation module and helideck for the above DolWin Alpha platform loaded on the Heerema barge H-302. The leading tug for the transport is the **Bugsier 9** from Bugsier Reederei. Assistance during the river transport was given by the Muller Dordrecht tugs **En Avant 7** at the bow; **En Avant 4** and **Sirius** at the stern. *(Photo: Willem Holtkamp)*

MCS EXPANDS FLEET DUE TO DEMAND IN OFFSHORE WIND SECTOR

This week, Maritime Craft Services (MCS) will take delivery of one of the two additional Twin Axe Fast Crew Suppliers 2610 ordered from Damen, The Scotsman reports. After MCS took delivery of three Damen Twin Axe FCS 2610s last month, it ordered two more, named **MCS Coromell** and **MCS Boreas**. The company will have **MCS Coromell** in its hands this week and the vessel will be immediately deployed to the Greater Gabbard offshore wind farm. MCS' fleet has grown to 21



vessels, as the offshore wind sector is growing fast and demands more and more vessels to support the construction and O&M of wind farms. The company has expanded not only in its vessel offering, but it has also created jobs and now has over 180 employees. "The offshore wind farm sector is booming across the UK and Europe as more developments spring up. That sector in particular is key to our long-term plans," The Scotsman quotes Dirk Kuyt, Managing Director of MCS, as saying. *(Source: World Maritime News)*

YARD NEWS

RUSSIANS TURN TO GERMANS FOR QUALITY SUPERSTRUCTURE

German shipyard group Nordic Yards has won a €30 million order from Russia for the 2,500 ton deckhouse on the new LK-25 icebreaker 'Viktor Tschernomyrdin' being delivered in 2015, writes Tom Todd. The icebreaker is being built at the Baltiyskiy Zavod Shipyard in St Petersburg, subsidiary а of Russia's state shipbuilding concern OSK, for delivery in December 2015 to the Russian state shipping company



Rosmorport. It will cost about €200 million and German media reports said it will be the biggest conventional icebreaker in the world. The order for the deckhouse, which will accommodate up to 90 specialists and 38 crewmembers, includes complete outfitting. Baltiskiy Zavod official Artjom Pidnik said it was the requirement for quality outfitting and comfort that had determined the award to Nordic. The Diesel-electric newbuilding will be 146.8m long and of 29m maximum width and powered by three propellers, a 10 MW centreline shaft and two 7.5 MW Azipod thrusters. It will be capable of breaking through ice up to two metres thick. Nordic Yards, located in Wismar and Rostock-Warnemuende, is owned and directed by a Russian, Vitaly Yusuf, who took it over after insolvency in 2010. Since then the group has built the 18,500dwt type AT-19 Arctic ice-breaking tanker Enisey for the Russians and modernised the Arctic container ship Talnakh, one of four built by Nordic for Norilsk Nickel. It is also building two ice-breaking salvage and rescue ships for Russia starting this year. Nordic has meanwhile also become a leading builder of offshore wind park transformer platforms and offshore service ships. It booked its fourth transformer platform early this year – a contract worth more than €1 billion. Just this week German news media reports named Vitaly Yusufov as one of two officially unidentified Russian parties interesting in acquiring Volkswerft in Stralsund, part of the defunct P+S Werften group which became insolvent a year ago.

(Source: The Motorship; Photo: Baltiyskiy Zavod Shipyard)

VARD BAGS CONTRACTS FOR FOUR PIPELAYERS



Vard Holdings Limited ("VARD") has secured contracts with joint ventures of DOF Subsea and Technip for the design and construction of four Pipe Lay Support Vessels (PLSVs). The contracts constitute the largest order in VARD's history, with an aggregate order value of approximately USD 1.1 billion (NOK 6.5 billion). Two of the vessels, of VARD 3 05 design, will be delivered 2O 2016 and 3O 2016 in respectively. The hulls of these vessels will be built at Vard Tulcea in

Romania and outfitted at Vard Søviknes in Norway. The other two vessels, of VARD 3 16 design, will be delivered from Vard Promar in Brazil, in 4Q 2016 and 2Q 2017 respectively. The award of these prestigious contracts reinforces VARD's position as a leading provider of large and complex Offshore Subsea Construction Vessels (OSCVs). Through this order, VARD is able to capitalize on its track record, experience and world-class design capabilities in Norway as well as its long-standing presence and investments in the Brazilian market. The new designs have been developed in close cooperation with DOF and Technip. The Norwegian built vessels will carry pipe lay towers rated at 650 tons, among the largest ever in the industry. At 340 tons, the Brazilian built vessels will be among the most complex vessels ever constructed in Brazil. Topside equipment for all four ships will be delivered by Huisman of the Netherlands. CEO and Executive Director Roy Reite commented, "I look forward to working with DOF and Technip on these milestone projects. VARD yards in both Europe and Brazil being chosen to build these vessels illustrates the value of having a global presence when working with international clients, and bringing leading edge technology to new markets." (*Source: VARD*)



ITG GROUP ORDERS TWO PSVs OF PX121 DESIGN FROM ULSTEIN

The ROC yard, China, will be constructing two platform supply ships of ULSTEIN's PX121 designs for the ITG Group. The contract includes an option for two more vessels. The PX121 has become

very popular among various shipowners and investment companies, and ROC is a new yard entering the stage of constructing vessels carrying the X-BOW® hull line design from ULSTEIN. This inverted bow leads to reduced loss speed in waves, and consequently oil less fuel consumption, and the absence of slamming is an attractive feature as the comfort for the crew is increased. Ulstein Design & Solutions provides а



comprehensive design & equipment package that includes basic and detail design, all major equipment, site support/construction consultancy and commissioning. "We are happy to see the materialisation of this project and that the yard and the owner, who, after careful evaluation of different designs and design companies, in the end selected ULSTEIN as their partner when entering into the offshore market. We are very pleased with the confidence they show by awarding these contracts to us," says deputy CEO Tore Ulstein in Ulstein Group. The ships have a length of 83.4 metres and a beam of 18 metres, and meet the requirements of DNV's Clean Design notation. They have a load capacity of approximately 4,000 tonnes and a cargo deck of 840 square metres. Maximum speed is stipulated to 14.5 knots. This version of the medium-sized PX121 platform accommodates a total of 30 persons. The vessels will be prepared for an ROV mezzanine deck and a subsea crane for future installation. They will be built in accordance to IMO's SPS Code (Special Purpose Ships) for carrying specialised personnel, and will have OILREC class notation for oil recovery in emergency situations. The vessels are planned for the European market and are suitable for worldwide operation. The vessels are planned for delivery in the first half of 2015. *(Source: Ulstein)*

FUJIAN SOUTHEAST MARKS STEEL-CUTTING FOR NEW 60M ERRV



Fujian Southeast Shipyard today held the steel-cutting ceremony for Vroon's newbuilding emergency response and rescue vessel, DN60M-4. This ERRV-FSV is the last in a series of four 60-metre ERRVs currently on order at Fujian Southeast Shipyard in China. The vessel is due to be delivered to Vroon Offshore Services next year. Fujian Southeast Shipyard, established in 1956, has developed into the absolute leading player for the construction of mid-sized anchor handling tug supply vessel and

platform supply vessel in China. And different from other Chinese shipyards who are forced into the offshore support vessel construction due to the depressed dry & wet market outlook, Southeast Shipyard is an established player for such OSV construction and has a proven track record over the

years. Vroon, founded in 1890, is a diversified international shipping company. Today the company operates worldwide and has a fleet of around 160 vessels transporting livestock, dry cargo, containers, automobiles, and clean and dirty oil products, as well as a large fleet of offshore-support vessels. *(Source: Vroon)*



New Fireboats With Voith Propulsion Amongst World's Most Powerful

Voith Schneider propellers and couplings turbo will be propelling two fireboats designed by Robert Allan Ltd. for the Port of Long Beach, USA. With a water pumping capacity of more than 40,000 gallons per minute they will be most among the world's powerful fireboats. Fireboat Design: Robert Allan Ltd. has in recent years designed a



significant number of emergency response vessels for major port cities around the world. Primarily configured as fireboats, these platforms also frequently serve as Command and Control centres or as primary response vessels for local emergency actions, such as pollution response and search and



local emergency actions, such as pollution response and search and rescue. They have a diverse array of configurations and fire-fighting performance. Based on the successful operation of numerous prototype fireboat designs, the Vancouver-based naval architects have created the RAnger Class of fireboats in a range of lengths and Fi-Fi capacity. These are intended generally to be used simply as the starting point for each new fireboat design, in response to each port's unique operational needs. The current series design goes upward from RAnger 2000 to the RAnger 4600. *The New Long Beach Fireboats:* The vessels are currently being built by the Foss Maritime shipyard in Seattle. Delivery to the Long Beach port authority is scheduled for spring 2014 and autumn 2014 respectively. These new powerful fireboats

will be equipped with two Voith Schneider Propellers VSP 26GII/165 AE45 (driven by two 1,350 kW diesel engines) each in the forward half of the vessel. The relatively short VSP blade length of 5.4 feet makes it possible for them to enter shallow areas of the port without compromising maneuvering safety and consequently they can also support onshore firefighting. For each fireboat, the Voith scope of supply includes not only two VSP but also two 866 DTL Voith turbo couplings as well as a twin control stand unit. Its positioning in the wheelhouse is such that the captain and crew benefit from a 360 degree panorama view. The numbers are impressive: With a total of ten monitors, each of the two identical fireboats is able to throw more than 40,000 gallons of water per minute. The water jets reach a height of up to 236 feet and a distance of up to 580 feet. Two of the total of four fire pumps are driven by the diesel engines which supply propulsion power to the VSP. When fighting a fire, the VSP propulsion power is limited to approximately 25%; the remaining 75% is available to the fire pumps as pumping power. This allows the fireboats to be positioned fuel-efficiently using the VSP while at the same time increasing the vessels' pumping power without requiring additional engines. *(Source: Voith)*

WEBSITE NEWS

HTTP://WWW.TOWINGLINE.COM

ARE YOU ALSO INTERESTED IN THIS FREE TUGS TOWING & OFFSHORE NEWSLETTER. PLEASE VISIT THE WEBSITE WWW.TOWINGLINE.COM AND SUBSCRIBE YOURSELF FOR FREE

Last week there have been new updates posted:

- 1. Several updates on the News page posted last week:
 - <u>'Chevalier Floatels' "DP Galyna" christened at Holland Shipyards</u>
 - <u>Certification Alphatron Marine Training Department</u>
 - Boskalis expects record profit in 2013
 - <u>VIKING takes 3600 safety servicing offshore</u>
 - <u>Conrad Announces Second Quarter 2013 Results and Backlog</u>
 - <u>Kiani Satu Latest</u>
 - <u>Oil spills from grounded Kiani Satu</u>
 - <u>Aspin Kemp & Associates Receives US EPA Verification for Hybrid Technology</u>
 - <u>Growing factors within Damen Marine Components and Damen Anchor & Chain</u>
 <u>Factory</u>
 - <u>The military minds behind THOR Twin Hulled Offshore Raider: CTruk's new</u> <u>multi-role force protection craft</u>

Be informed that the mobile telephone number of Towingline has changed into: +31 6 3861 3662 The old number +31 6 5364 2576 is closed

mailto: *jvds@towingline.com*

This site is intended to be collective exchange of information. Information on this site has been pulled from many sources; we have attempted to credit these sources. But due to the multitude of sources sometimes we are unable to note all the sources. If you feel that

material that is posted here is of your authorship and you have not been credited properly please alert us and I will correct the credit or remove it in accordance to the author's wishes.

DISCLAIMER

The compiler of the Tugs Towing & Offshore Newsletter disclaim all liability for any loss, damage or expense however caused, arising from the sending, receipt, or use of this e-mail communication and on any reliance placed upon the information provided through this free service and does not guarantee the completeness or accuracy of the information. For more information about advertising, subscription, preferences and un-subscription visit the website: http://www.towingline.com The Tugs Towing & Offshore Newsletter is a ::JVDS-MARCOL:: Archive Production.