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# SRN

## Ship Repair Newsletter



The MPI Adventure in A&P Tyne (See Shipyards)

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# VIEWPOINT:

Figures released by the Greek Shipping Co-operation Committee (GSCC) show that Liberia has cemented its position as the undisputed leading open registry of choice for Greek shipowners.

The GSCC statistics show that, in the year to end-March 2016, the gross tonnage of Greek-controlled ships in the Liberian Registry increased by 995,781 gt. Liberia, with 744 vessels aggregating 54.74m dwt, is second only to Greece itself in terms of the number of Greek-owned ships flying its flag, and comfortably ahead of the Marshall Islands in third place. A total of 18% of Greek-controlled ships are registered under the Liberian flag, again second only to Greece (20%).

Scott Bergeron, CEO of the Liberian International Ship & Corporate Registry (LISCR), the US-based manager of the Liberian Registry, says, "There can be few stronger and more mutually successful relationships in international shipping than that which exists between Greek shipowners and the Liberian Registry. It is, moreover, encouraging to see that that relationship endures through good and bad times alike for the industry and for the global economy."

Michalis Pantazopoulos, Senior Vice-President of the Liberian International Ship & Corporate Registry (Hellas) SA in Piraeus, says, "It is surely no coincidence that the world's most innovative shipping register is the number one choice of open flag for shipowners from the world's leading shipping nation. The Greek shipping community continues to demonstrate great loyalty to the Liberian Registry, which in turn continues to respond by providing the innovative service and guaranteed quality and safety which owners demand."

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# SHIPYARDS:

## A&P NORTH EAST:

A&P Group's Tyne yard has secured the maintenance and repair contract for one of the world's most advanced wind turbine installation vessels, marking its continued push into the renewables sector. The 20,739 dwt **MPI Adventure**, owned by Teesside's MPI Offshore, drydocked at A&P Group's Hebburn yard recently ahead of a two-week programme of works.

Described as one of the most advanced and efficient wind turbine installation vessels in the world, it is designed to transport, lift and install wind turbines and their foundations.

The 136.4 m x 40 m vessel will now undergo specialist repair by A&P Group's 150-strong team of highly skilled engineers and technicians, before it returns to service.

Works will include inspection and repair of three azimuth thrusters and three tunnel thrusters, installation of new log and echo sound transducers, a new main SW isolation valve and the fabrication and fitting of internal access ladders and platforms to allow fuel oil tanks to be viewed.

Ash Sinha, Group Business Development Director at A&P Group said, "The UK's offshore renewable energy sector is world-leading and A&P Group has the facilities and skilled workforce to really capitalise on that. Our work on this vessel gives us the perfect opportunity to establish A&P Group as a key player in the offshore renewables industry.

"The MPI Adventure's arrival made for quite a spectacle as it came up the Tyne and it's now towering over the yard. It's certainly one of the most high profile and imposing vessels we've ever had here. The focus now is on ensuring we complete the work on time and to budget."

A&P Group operates seven drydocks across three strategic locations in the UK and has a business in Australia that provides ship repair services and support to the Royal Australian Navy. All facilities combine a rich heritage of marine engineering skills and experience, providing ship owners and energy companies with all the precision skills needed to complete the most demanding projects.

## A&P FALMOUTH:

The south west UK facility of the leading UK shiprepairer A&P Group, A&P Falmouth has just finished the 11 month refit of the Royal Fleet Auxiliary (RFA) Primary Casualty Reception vessel RFA **Argus** (A 135) following the vessel's six month operation in Sierra Leone as part of the British Government's Operation Gritrock to combat the spread of Ebola in the country. During the vessel's 171 days on site offshore Freetown, the vessel only spent 12 hours alongside, so the toll on the vessel in this hot tropical environment was great. A&P Falmouth holds a Cluster Repair Agreement with the UK's MOD for the repair and maintenance of four RFA vessels, RFA **Argus**, plus the three Bay-class landing ships RFA **Cardigan Bay** (L 3009), RFA **Lyme Bay** (L 3007) and RFA **Mounts Bay** (L 3008).

Meanwhile, the Falmouth yard is awaiting the arrival of the first of four new RFA tankers from South Korea's Daewoo Engineering & Shipbuilding for final outfitting under a £15m contract from the MOD. The four tankers, RFA **Tidespring** (A 136), RFA **Tiderace** (A 137), RFA **Tidesurge** (A 138) and RFA **Tideforce** (A 139), are the new MARS (Maritime Afloat, Reach & Sustainability) vessels for the RFA, the long awaited replacement of the old Rover and Leaf vessels in the RFA flotilla. RFA **Tidespring** was expected in Falmouth in December 2015. However, delays in specialist equipment from the UK have resulted in the tanker's delivery by Daewoo being put back. The 37,000 tonne displacement vessel is currently on sea trials. Once in the UK, A&P Falmouth will outfit the vessel with communications equipment, ballistic protection and upgrading to allow a quick fit of self-defence weapons. The Falmouth yard is also responsible for the through-life support of the MARS tankers for a minimum of three years. The remaining three MARS tankers are due for delivery at six month intervals from

the handover of RFA *Tidespring*.

A&P Falmouth has also just completed the scheduled drydocking of one of the world's most famous super yachts, the 1929-built *Dona Amelia*, which started life as the American owned *Haida* and served as the US Navy patrol vessel USS *Argus* during WWII. This 66.4m vessel had been laid-up in the River Fal for a number of years.

Meanwhile, A&P Group has appointed Gerald Pitts as its new Managing Director of A&P Falmouth. Gerald joined A&P Group as an engineering apprentice in 1976 and held a variety of supervisory and senior managerial positions before his appointment as RFA Cluster Programme Director in 2008. Gerald will now lead the business as it continues to build its reputation in the commercial and defence sectors as a global ship repairer.

Gerald Pitts, new Managing Director of A&P Group Falmouth said, "My priority is to strengthen our focus on Falmouth's core business and continue offering value for money to our customers, whilst promoting a safe working environment with a well-motivated and productive workforce. All this is pivotal to A&P Group's continued growth and it's a real privilege to be leading the Falmouth team forward in that endeavour."

Andy Shaw, Group Managing Director for A&P Group said, "Gerald has been instrumental in developing A&P Group's relationship with the MOD and it's testament to his work that we were appointed the MARS contract in 2015, which will bring an increased number of RFA-based flotilla repair and maintenance projects into the yard this year.

"Gerald is a tremendous asset to A&P and he has a very clear vision for Falmouth, growing the client base, nurturing the team and building our reputation as a leading global ship repairer. This is a strategic board level appointment and we wish Gerald well in his new and challenging role."

## VARNA MARITIME:

Bulgaria's Varna Maritime has welcomed the 30th shiprepair contract from Willie Shipping, Cardiff since December 2009. A total of 27 of these contracts involved drydocking and/or special survey. The vessels were drydocked at the Flotski Arsenal yard, which has a unique facility allowing it to lift and shift docked vessels up to 2,200 tonnes serving three slipways with a length of 130 m, each equipped with cranes of 16 tonnes.

The technology for pulling the ships on the shore by motor trucks gives an effective opportunity to drydock several ships simultaneously. The latest vessel from Willie Shipping is the 4,135 dwt general cargo vessel *Celtic Spirit* arrived in the yard on March 4<sup>th</sup> and sailed on March 27<sup>th</sup>. Work, apart from fourth

special survey, involved hull and hold blasting and painting, steel renewals to hatch covers, holds and ballast and fuel double bottom tanks, pipework repairs, all ship side valves, full main engine and diesel alternator overhauls, various electric motors and repairs to the gantry crane.



The *Celtic Spirit* in Varna Maritime

## DSAm:

The 19,558 dwt fallpipe vessel **Flintstone** has departed from Damen Shiprepair Amsterdam (DSAm), part of Damen Shiprepair & Conversion (DSC), following a six-week programme of maintenance and repairs together with her first Special Survey. Owned and operated by the Tideway group of companies, a division of the Belgium's DEME, the 155 m, DP2 **Flintstone** is the flagship of the Tideway fleet. Her equipment includes an active heave compensated ROV with state-of-the-art survey equipment and a 200 kW mass flow excavation tool for the removal of seabed materials.

The **Flintstone** underwent a comprehensive programme of maintenance, surveys and testing in the run-up to her Special Survey, spending a total of 28 days in drydock at DSAm.

Of the many activities that took place, the most complex with regard to the vessel itself was the refurbishment of the moon pool doors. These were lowered and supported on the floor of the drydock in order to undergo extensive maintenance, including the replacement of the main bearings. The unexpected and large scale of the machining work required made this a very challenging job to carry out within the original time allowed.

Other activities included the overhaul of all the thrusters together with the forward anchor winches and a wide range of other tasks relating to the water lines, fall pipes, ROV transport and storage, and other equipment.

While in DSAm the Huisman crane and tower were overhauled by the manufacturer. The yard provided full support including machining and supplying various components, and provided a berth for the extra time required to complete the project.

Project manager Arnold Bregman commented, "This was a very challenging project given the extent of additional works that became apparent as we progressed. However, DSAm was the ideal location for this with all the necessary facilities available on site. We were also able to allocate additional manpower and schedule extra shifts. That, together with excellent communication and cooperation between all the parties concerned, ensured that we were able to complete our part of the project within the original time specified."

Bas Peeters, Vessel Manager at Tideway, added, "DSAm provided us with the skills, cooperation and flexibility that we seek in a repair yard for a vessel like Flintstone."



The **Flintstone** in DSAm

## GERMAN DRY DOCKS:

The former Hamburg-Sud owned 9,998 gt cargo/passenger liner **Cap San Diego** has returned to her berth in Hamburg, where she has been a museum ship since 1988, following a month long €1m refit at Bremerhaven's German Dry Docks. Work undertaken on the 55 year old vessel included class renewal to DNV GL and the undertaking of 200 individual repair jobs. The scope of work included hull renewal as well as the replacement of 70m<sup>2</sup> of the vessel's original 'tweendecks, the cleaning, repair and conservation of tanks and bilges, the blasting and recoating of the vessel's original veg oil tanks for use as catering waste disposal tanks, propeller

shaft withdrawal and inspections, and the replacement of outer shaft Simplex seals. The entire hull of **Cap San Diego** also underwent safety thickness measurement. The vessel is now owned by Hamburg's Stiftung Hamburg Admiralitat and is licenced to carry up to 500 passenger to short river/coastal voyages.

## PELLA SIESTAS SHIPYARD:

The Hamburg-Neunfedlder-based Pella Sietas Shipyard recently completed the conversion of the former UK-owned trawler/fisheries research vessel **Clupea** into a refugee rescue vessel for Berlin-based Sea-Watch Verein. The vessel has been renamed **Sea-Watch 2** and is now operating in the Mediterranean, mainly off the coast of Libya. Work carried out on the 1968-built, 32.2 m vessel, included the installation of a purpose-built medical station.

## BESIKTAS SHIPYARD:

The Yalova facility of Turkey's Besiktas Shipyards has drydocked the ro/pax **Bimini Superfast** for a refit and repainting before the 32,728 gt 2001-built vessel starts operations for her new Italian owner Grimaldi between Livorno and Olbia (Sardinia) as **Cruise Olbia**. In recent years the ferry had been running between Miami and the island of Bimini in the Bahamas. Other vessels undergoing repair at this yard included the following:

- **Sichem Defiance** – 17,396 dwt 2001-built chemical tanker, owned by Eitzen Chemical Singapore and managed by Sealand Shipmanagement, Mumbai, India
- **Lapis** – 24,804 dwt 1997-built bulk carrier, owned by Greece's Karlog Shipping, Athens
- **Nord Butterfly** – 38,375 dwt 2008-built oil/chemical tanker, owned by Denmark's Norden A/S and operated in the Norient Product Pool
- **Gaz Interceptor** – 6,539 dwt, 7,539 m<sup>3</sup> capacity, 2006-built LPG tanker, owned by Naftomar Shipping & Trade, Athens, Greece
- **UN Karadeniz** – 29,004 gt 2008-built ro/ro, owned by Turkey's UN RoRo Management, Istanbul

## WORLD MARINE ALABAMA:

The Mobile, Alabama yard of World Marine (formerly Signal Ship Repair) in the US has won a competitive bid to repair the US Military Sealift Command's (MSC) Champion-class tanker USNS **Lawrence H. Gianella** (T-AOT 1125). The vessel is operated by Houston, Texas-based Ocean Shipholding Inc., who she was originally built for before she was sold to the US Navy. The tanker, part of the US Navy's Prepositioning Fleet, is due to arrive at the shipyard for docking in the yard's Panamax capacity floating dock in late April with repairs expected to take 45 days to complete.

The work scope on the 40,620 tonne displacement vessel, built in 1986, includes steel and pipe renewals, underwater and freeboard hull cleaning and painting, ballast tank inspection and painting, main engine (single Sulzer 5RTA76) and auxiliary engine overhaul, and rebuilding of sea valves. USNS **Lawrence H. Gianella** last visited this shipyard for a refit in June 2014. World Marine acquired Signal Ship Repair in December 2015.

## ASRY:

Ahrenkiel Shipmanagement's 39,374 dwt container vessel **AS Carelia** has entered Bahrain's ASRY yard for repairs. Also arriving at the yard was GPK Marine Management's jack-up rig **Dixie Patriot**.

# OFFSHORE:

## AMPLEMANN:

On April 14<sup>th</sup>, Holland's Ampelmann and Sakhalin Energy Investment Company signed an agreement to install and operate a winterised version of an Ampelmann's motion compensated gangway system. This system will be capable of safely and efficiently transferring work crew up to -28 degrees Celsius, therefore supports Sakhalin Energy's requirements to continue maintenance and increase offshore POB year round in the Sakhalin-2 field.

The winterised Ampelmann, project name 'Icemann', will be installed on one of Sakhalin Energy's new ice breaking support vessels of which delivery is due next year. Ampelmann will engineer and build this bespoke, unique in the world system for its launching customer Sakhalin Energy. The contract duration will be for 10 years. The system will have to deal with extreme icing, vibrations and vessel motions, while maintaining a safe, efficient and reliable means of transfer. In addition, Sakhalin Energy will charter a standard, non-winterized version of the Ampelmann motion compensated gangway for five years, to be installed on-board a second ice breaking support vessel and to support the personnel transfer requirements during the summer period.

Jim Craig, CEO Ampelmann said, "We are delighted to have reached this next milestone in our cooperation with Sakhalin Energy, which started in 2013. Since then, Sakhalin Energy has been using our service to support the summer operations with the intention to gain experience with our system. This ultimately has now resulted in this long term commitment for year round personnel transfer support. We thank Sakhalin Energy for their trust and cooperation and look forward to many safe transfers in these harsh conditions".

# UNDERWATER:

## CHUKHAS WATERJET:

US-based Chukar Waterjet has announced that it has successfully delivered its first SUB-JET 3000 ROV-deployable waterjet system to a major offshore oil and gas contractor. "With this important delivery, Chukar Waterjet is partnered with one of the premier offshore oil and gas contractors in the world," said Bruce Kivisto, Chukar Waterjet general manager.

"This contract will allow Chukar Waterjet to make major inroads into the offshore industry by demonstrating the effectiveness of Chukar's ultra-high pressure waterjet equipment for deepwater subsea waterjet cutting and ultra-high pressure (UHP) blasting operations."

Chukar is building out its inventory of SUB-JET systems and is in a good position to offer them for prompt delivery in 2016, Kivisto noted.

Chukar's SUB-JET 3000 brings the power and versatility of ultra-high pressure (UHP) waterjet cutting and



SUB-JET 3000 ROV-deployable waterjet system

blasting to the deepwater subsea environment. Operable to 3,000 m, SUB-JET 3000 cuts steel as thick as 250 mm and quickly blasts away coatings, corrosion and marine growth at pressures up to 3,900 bar. The SUB-JET 3000 is deployed as an underslung equipment skid on a work class ROV and is powered from the ROV's auxiliary power.

The 100 hp SUB-JET 3000 produces 7.5 litres/min of 3,900 bar ultra-high pressure water for cutting and blasting. It carries 35 litres of abrasive, providing 30 to 90 mins of cutting time. The ROV provides hydraulic oil to power the waterjet intensifiers and operate attached tooling, 24 Vdc (300 W) for control power, and a fiber optic data link to the topside controller. The system requires between 150 and 200 litres/min of hydraulic oil to run at full capacity but can be operated at lower output if the auxiliary oil is not available from any given ROV. Cutting and coating removal are still effective at lower UHP output, only at slower throughput rates. The system weighs about 500 kg on the deck and is neutrally buoyant with 35 litres of abrasive.

## **SUBSEA GLOBAL SOLUTIONS:**

Subsea Global Solutions (SGS) has announced that, as part of its effort to expand its business in the Pacific Northwest, the company has opened a new office in Seattle, Washington. The fully staffed Seattle office will have highly skilled technicians and extensive equipment, enabling fast response for emergency services and underwater maintenance. The office will also provide environmental compliance, fuel-efficiency programs, surveys and routine inspections.

“Seattle is a major hub for Far East trade, and this office will complement the Los Angeles office to allow us to serve the commercial shipping industry up and down the entire U.S. West Coast. We also plan to offer our services to the cruise ship industry, as Seattle is a gateway for the Alaskan cruise trade,” said Paul Peters, Chief Executive Officer at SGS. “In addition, inland waterways, industrial and power industry companies reliant on water as cooling media in the states making up the Pacific Northwest can now access the expertise and experience of SGS through our Seattle hub.”

Because of the lag time for ships to unload on U.S. West Coast ports, it makes sense for shipping companies to use that time to have inspection and maintenance work done while in port in Seattle. Once the maintenance work is done, the ships can depart across the Pacific to pick up more cargo in countries such as China, Hong Kong, Singapore, Taiwan and South Korea. Europe-bound ships can also take advantage of the lag time in U.S. ports to have inspections and maintenance services performed.

With renewed focus on coastal and inland waterway infrastructure renewal projects, SGS's expansion into Seattle, Wash., will fill the need for unique underwater inspection, maintenance and repair solutions for civil, power and industrial markets.

SGS is undergoing significant expansion in the U.S. this year. In addition to Seattle, the company opened two other new offices – one in Webster, Texas, to address growing demand for services in the U.S. Gulf Coast, and one in Tampa, Fla., to better serve customers in Port Canaveral and the West Coast of Florida.

# PAINTS & COATINGS:

## AQUALUMA:

The new Aqualuma Ultrasonic anti-fouling System (UAS) provides enhanced, targeted protection in all climates wherever it is needed – the hull, running gear, prop, rudder, IPS drive, stern drive, sea chest, seawater piping, sea strainer, thruster, stabiliser and more.

The system, which is scalable for any size vessel and hull composition (GRP Fibre Glass, Carbon Fibre, Kevlar, Steel or Aluminium), outputs a refined automated program of short ultrasonic wave burst signals through ultrasonic transducers.

The output from the Aqualuma UAS is up to 30% more for the same or less input than competing systems. Each strategically placed transducer emits a specific digital low power frequency, which is beyond the hearing range of humans. The ultrasonic sound waves are emitted to generate a barrier at a microscopic level of moving water, which destroys the food source, algae, to prevent unwanted sea growth.

- Extends the life of existing anti-fouling/bottom paint coatings
- Destroys algae
- Prevents barnacles
- Simple install. No holes!
- Reduces running costs
- Improves fuel economy
- Improves performance
- Reduced haul outs
- Improves efficiency
- Eco friendly



# REFRIGERATION:

## OCEANIC:

Oceanic Technical Solutions has introduced a new compressor overhaul exchange service to meet increased market demand for ship-board refrigeration compressor overhauls.

As part of the programme, the UK-headquartered refrigeration specialist will offer its customers scheduled compressor overhauls on a service exchange basis. Based on compressor running hours, Oceanic will deliver a completely overhauled compressor in exchange for one that has exceeded working hours and requiring refurbishment.

Workshop overhaul involves the complete strip down of the compressor, including cleaning and chemical dipping to remove rust and dirt, the replacement of all bearings and seals using genuine or OEM spares parts, and repainting.

David Lloyd, Oceanic Technical Solutions' Technical Director, said, "While a lot of shipboard machinery is designed to operate with minimal maintenance, refrigeration compressors are required to have periodic overhauls based on the number of running hours, but due to the complexity of twin-screw compressors, the knowledge and skill to perform these overhauls is limited in vessel crews. "Many of the compressors in service are older units and it is becoming increasingly difficult to find spare parts as some manufacturers no longer exist. And with new compressors costing upwards of £20,000, we are beginning to see more shipowners implement preventative maintenance measures. "At a fraction of the cost of a new compressor, a scheduled overhaul offers serious savings for the owner, preventing cargo damage and costly downtime should a ship's refrigeration plant fail," said Lloyd, referring to a reefer ship that recently lost three compressors in one week. "A reefer ship would typically have three or four compressors – they're the heart of the refrigeration system," said Lloyd. "The plant can cope with one compressor failing but if you lose another it's a serious problem. Our scheduled maintenance plan and compressor exchange service can prevent these mechanical failures from happening, ultimately saving shipowners from incurring unbudgeted additional costs."

Oceanic Technical Solutions has recently secured a long term service agreement with a major EU-based shipmanager to implement a programme of planned refrigeration maintenance across its fleet of refrigerated cargo ships. "The quality, reliability and safety of shipboard systems is at the core of responsible ship management and a planned maintenance schedule for refrigeration plant ensures that these critical systems are safe and operating to optimum commercial and environmental efficiency," said Robert Chesters, Managing Director, Oceanic Technical Solutions. "We have recently invested in a new purpose built workshop and office facility near Liverpool's River Mersey. With lifting facilities up to 2 t, the new workshop has the capacity to overhaul and repair most models of reciprocating and twin-screw compressors," he added.

The first batch of compressors under the new agreement is currently undergoing refurbishment at Oceanic's UK facility, although the company also has workshop and servicing capabilities in Singapore and Dubai. In October 2015, Oceanic Technical Solutions secured a long-term service contract with Mitsui O.S.K Lines MOL LNG Transport (Europe) Ltd for the annual inspection, leak testing, condition monitoring and analysis of the refrigeration plants aboard all 15 LNG carriers in the Japanese ship owner's European managed fleet.

# MACHINERY:

## MHI-MME:

The newly developed waste heat recovery system 'Hydrocurrent Organic Rankine Cycle (ORC) Module 125EJW 1 by Japan's Mitsubishi Heavy Industries Marine Machinery & Engine Co., Ltd. (MHI-MME) has begun operation on Maersk Line's 109,000 dwt containership **Arnold Maersk**.

The ORC system enables the utilisation of extremely low temperature heat sources to generate electrical power at low-cost and high-efficiency in marine applications. In concrete terms, the system generates electricity using the waste heat of the main engine jacket cooling water (approx. 85°C), and by reducing the load on the vessel's main generator, cuts CO<sup>2</sup> emissions and improves the efficiency of the vessel's plant.

The ORC has an output of 125 kW and is fitted to the **Arnold Maersk**. Prior to this, a pilot ORC machine completed performance testing at the factory of Calnetix Technologies who is a partner of MHI-MME, gaining the approval of ClassNK and Lloyd's Register of Shipping in 2015.

Maersk Line is a shipping company based in Denmark's capital Copenhagen under the umbrella of the world's largest shipping conglomerate A.P. Moller - Maersk A/S. The Group has offices around the world, and in addition to shipping, operates in areas such as oil, gas and mining.

MHI-MME will continue to offer diverse and creative energy efficiency and environmental solutions to improve the efficiency of shipping, contributing to the reduction of resource use and environmental impact.

# FUELS:

## SHELL:

Shell Marine Products (SMP) continues to expand its global port network by adding more than 70 ports in less than one year as well as expanding its operation in 14 countries, which now stands at 604 ports in 56 countries. In 2016, SMP expanded product availability in:

- Argentina - Villa Constitucion
- India - Goa, Hazira
- Japan - Hatsukaichi, Hibikinada, Iknow, Iyomishima, Naoshima, Ogishima, Onahama, Saganoseki, Shibushi, Tonda, Tsukumi
- South Korea - Boryeong, Taean, Tongyeong
- Spain - Castellon, Pasajes, Sagunto, Motril, Villagarcia
- Taiwan - Taipei
- UAE - Mina Saqr
- UK - Fawley, Great Yarmouth, Hamble, Portbury, Sunderland
- US - Gloucester, Searsport, Kingsbay.

"One of our goals as a business is to give our customers peace of mind. We aim to do this via our consistently



Shell has added some 70 ports during the past 12 months

high quality products, our attentive technical and customer service, as well as making sure our customers can lift the lubricants they need in as many locations as possible. They continue to be supported by our 24/7 International Customer Service Centre (iCSC) for any of their order delivery concerns as well as track their orders via our industry first Shell Marine Products app on their mobile devices,” said Jan Toschka, General Manager of Shell Marine Products.

## IMO MEETING:

### ICS:

The International Chamber of Shipping (ICS) has made a number of submissions to a critical meeting of the IMO Marine Environment Committee (MEPC) which begins in London next week (April 18<sup>th</sup>-22<sup>nd</sup>). These address further measures to reduce the sector’s CO<sub>2</sub> emissions, outstanding problems with the implementation of the IMO Ballast Water Management Convention, and the need for an immediate IMO decision on whether or not ships will have to use 0.5% sulphur fuel in 2020.

ICS says its immediate priority is to help ensure that the new global CO<sub>2</sub> data collection system is adopted by IMO as soon as possible. This will then facilitate the possible development of additional CO<sub>2</sub> reduction measures.

ICS Secretary General, Peter Hinchliffe explained “The data global system now before the MEPC is a workable compromise between governments primarily interested in data on fuel consumption and CO<sub>2</sub> emissions and those that wish to collect additional information, for example on so called transport work.”

ICS fears that any failure by the MEPC meeting to make progress could result with unilateral action against international shipping. The European Union has already adopted a regional regulation on the monitoring reporting and verification (MRV) of individual ship emissions. This currently uses different metrics to those about to be adopted by IMO. The apparent intention of the European Commission is to develop this into a regional system of mandatory operational efficiency indexing of individual ships, which ICS says will lead to serious market distortion.

Any possibility of persuading the EU to adjust its regulation to make it compatible with that agreed internationally could be weakened if there is any further delay at IMO. It is disappointing that EU Member States, acting as a block, now wish to reopen discussion on some of the data metrics on which there was seemingly consensus at a recent IMO meeting in which many EU nations participated.”

ICS has set out its support for immediate adoption of the CO<sub>2</sub> data collection system in a submission made jointly with BIMCO and Intercargo.

In a separate submission to the meeting, ICS has responded to the Paris Agreement on climate change with a radical proposal that IMO should develop an Intended IMO Determined Contribution for CO<sub>2</sub> reduction on behalf of the sector. This would mirror the commitments or Intended National Determined Contributions (INDCs) which governments have made for their national economies, but from which international transport is currently excluded.

However, ICS emphasises that the Paris Agreement recognises that different parts of the global economy, including shipping, will need to decarbonise at different speeds, and that international shipping should not be expected to make the same level of CO<sub>2</sub> commitments as developed economies. ICS says its member national

shipowners' associations are now developing ideas on what such an IMO commitment might entail, for discussion at a future session of the MEPC.

Although the IMO Ballast Water Management (BWM) Convention has still not entered into force, it will almost certainly do so before the end of 2017. ICS is hoping that the MEPC meeting will make progress towards addressing a number of outstanding implementation issues. This includes finalising the revision of the IMO type-approval Guidelines for the expensive new treatment systems that shipowners will be required to install, in order to make them more robust so that shipowners will have confidence that the equipment will actually work to the satisfaction of Port State Control authorities.

In a submission (made jointly with Intertanko), ICS has explained how the BWM Convention's entry into force will present ship operators with a major challenge because of the expected lack of shipyard capacity needed to retrofit the new treatment equipment. ICS says that many shipowners have understandably delayed fitting equipment due to a lack of certainty as to whether it will be regarded as fully compliant. This uncertainty has been increased by the United States which has placed a reservation against an earlier IMO decision not to penalise early movers which, in good faith, have installed equipment that has been approved in accordance with existing IMO Guidelines.

ICS will also be explaining to governments the problems created by the different approval regime that has been adopted by the United States and the need, so far as possible, to make the IMO Guidelines compatible with the U.S. approach, especially with respect to defining what is a 'non-viable' marine organism and the test methods used for approving ultra-violet systems.

The MARPOL Convention requires that ships (outside Emission Control Areas) must use fuel containing no more than 0.5% sulphur in 2020, but leaves open the possibility of postponement until 2025 depending on the outcome of a study into the availability of compliant fuel currently being conducted by IMO.

In a further submission (made with Intertanko) ICS has requested IMO Member States to make a clear decision about whether or not the global sulphur cap will be implemented in 2020, at its next session in October 2016.

"The decision will be significant because the cost of compliant fuel could be over 50% more than the cost of residual fuel that most ships currently burn" said Peter Hinchliffe. "Whatever date is decided by IMO, ship operators and oil refiners will need as much time as possible to prepare for the impact. The refining industry will need to take important decisions to ensure that sufficient quantities of compliant fuel are available. Shipowners will need time to take important decisions about whether to invest in alternative compliance mechanisms such as scrubbers or LNG."

## **BIMCO:**

Bimco has shared the two critical issues at the top of its own priority list ahead of the IMO's Marine Environment Protection Committee (MEPC) meeting next week. These are:

- approving a mandatory data collection system for fuel used on ships in international trade and
- tangible progress on the revision of the G8 guidelines for approval of ballast water management systems – to address the concerns that surround IMO's Ballast Water Convention coming into force in the near future.

The data collection system is a necessary first step in IMO's agreed three-step process on further greenhouse gas actions for shipping. The three steps will be:

- collection of data on fuel use – for which a system needs to be approved
- determining how much CO<sub>2</sub> the shipping industry may emit
- establishing further measures to reduce emissions, if needed, and what they should be.

Lars Robert Pedersen, BIMCO's Deputy Secretary General, commented, "Knowing how much CO<sub>2</sub> is emitted by ships is crucial before beginning a detailed discussion and reaching future agreement on emission targets. The data on emissions – in combination with a target – is needed to determine if and what further measures are needed by the marine industry."

BIMCO wishes to see the MEPC finalise the revision of the G8 guidelines – which are not yet adequate for IMO approved systems to consistently meet the requirements of the Ballast Water Convention. The revised guidelines are urgently needed by manufacturers, shipowners and regulators to realise the ambitions of the Ballast Water Convention. Mr Pedersen commented, "The shipping industry needs reliable ballast water treatment systems that are fit for global use. Presently, IMO approved systems may not always live up to the required standards under real operating conditions on-board ships, and no such systems are presently available that are approved to the much more stringent USCG approval standard."

## BALLAST WATER TREATMENT:

### OPTIMARIN:

Norway's Ballast Water Treatment (BWT) specialist Optimarin has cemented its place at the vanguard of the market, with the news that it has now sold over 400 of its environmentally friendly UV-based systems. The landmark has been surpassed on the back of a succession of major contracts, fuelled by the firm's unique retrofit experience, proven technology and upcoming USCG certification.

This year (2016) has been a boom year for a company that installed the first ever commercial BWT system back in 2000. Optimarin Ballast System (OBS) orders have been confirmed with Atlantis Tankers (10 units) and Sinopacific Shipbuilding Group (nine), while the firm also made its first foray into fishing, with a contract for the Fisherman's Finest vessel America's Finest. The latest win, with Carisbrooke from the UK, was the largest - a fleet agreement with the potential to encompass retrofits on 46 bulk and multipurpose vessels.

"We've been working with BWT technology since our formation in 1994," comments Optimarin CEO Tore Andersen, "so we feel this surge in business reflects an appreciation of our established expertise, technology, and ability to satisfy all individual customer, and vessel, requirements.

"Now that the ratification of the IMO's Ballast Water Management convention is finally imminent, we're seeing more and more shipowners engaging us for fleet wide retrofit assignments. This is because they know they can trust us, our market proven system, and unparalleled retrofit experience."

Together with its global engineering partners, Goltens and Zeppelin, Optimarin has now fitted over 70 units on existing vessels, alongside over 200 on newbuilds. Its flexible, modular system is perfect for making the most of limited vessel space, while its totally compliant technology ensures peace of mind.

This latter point has proven to be another of Optimarin's strengths. The firm has invested millions of dollars in testing and certification, with certificates from DNV GL, Lloyd's, Bureau Veritas, MLIT Japan, and American Bureau of Shipping, alongside full IMO approval. However, it's the latest testing with USCG that appears to be elevating the business to a new commercial plane.

"USCG has the most stringent approval demands, thanks to its FDA/CMFDA test, which judges the life forms

transported in ballast water as either living or dead,” Andersen explains. “The power of the 35 kW UV lamps in the OBS ensures it has the power to instantly kill invasive organisms and that’s exactly what USCG wants to see.

“The system has now satisfied all marine water tests and is in its final testing stage, with full USCG approval expected later this year. For shipowners with large global fleets this gives them the flexibility to sail in and out of US waters, discharging ballast, as desired. For those with fleets based exclusively in North America this is a ticket to trade, full stop.

“USCG approval is becoming a benchmark standard for forward-thinking customers planning for guaranteed future regulatory compliance. This is proving to be a key business driver for Optimarin.”

Optimarin’s customers include names of the order of Saga Shipholding, MOL, Grieg Shipping Group, Gulf Offshore, Farstad Shipping, NYK, Nor Line, and Evergreen Marine Corp, amongst others. Its OBS system is easy to install, simple to maintain – with no moving parts – and does not use, or discharge, any chemicals.

“We believe we have an industry leading proposition,” Andersen concludes, “and it’s hugely satisfying to see the market respond to that at this key time for the BWT sector.”

## NEWBUILDINGS:

### KEPPEL:

Singapore’s Keppel Singmarine, part of Keppel Offshore & Marine, will soon deliver a high-specification deepwater derrick lay vessel to Hydro Marine Services, a subsidiary of McDermott International (McDermott).

The derrick lay vessel, which is built to Keppel’s proprietary design, was named **DLV 2000** during a ceremony held earlier today. The first project she will be deployed for is the INPEX Ichthys Liquefied Natural Gas project in offshore Western Australia.

Chow Yew Yuen, Chief Executive Officer of Keppel O&M, said, “We are pleased to deliver what would be McDermott’s flagship derrick lay vessel to add to their growing global fleet of specialised vessels. **DLV 2000** has been designed with enhanced features to work in water depths of up to 3,048 m (10,000 ft) and in severe weather conditions. Having built over 400 vessels, Keppel Singmarine has a strong track record in designing efficient and specialised units to meet the needs of the market. We are confident that this robust and high-quality vessel will serve McDermott well as their flagship derrick lay vessel wherever she operates.”

David Dickson, President and CEO of McDermott, added, “We are glad to add this state-of-the-art derrick lay vessel to our global fleet. The flexibility and features built into the design of **DLV 2000** will enable us to provide more value-added services to match the needs of the evolving market. We have built a strong partnership with Keppel O&M over the years, and they have demonstrated that their capabilities in design, engineering, execution and providing top-notch customer service run throughout the Group.”

Developed by Keppel’s design arm, Marine Technology Development, **DLV 2000** is capable of achieving efficient pipelay rates for long trunklines and operating in severe weather conditions while maintaining significant thrust output and power distribution. Although **DLV 2000** is designed to carry out pipelaying using the S-lay installation method, the vessel has the flexibility to accommodate a deepwater, 500-tonne flex-lay system that can be installed as needed in response to market needs.

**DLV 2000** is one of a number of specialised vessels that Keppel Singmarine has recently delivered, adding to its strong record of designing and building some 400 ships of various specifications and functions.

## ABB:

ABB's Azipod D will power the luxurious 10-deck discovery cruiser **Scenic Eclipse** to some of the world's most remote destinations. Built to Polar Class 6 the vessel will have the ability to navigate the summer waters of Polar Regions. The ship's two 3 MW Azipod units will allow it to reach destinations previously off limits for large passenger vessels, taking advantage of the propulsion system's track record of operating safely in every corner of the planet.

Juha Koskela, Managing Director of ABB's Marine and Ports business, said, "**Scenic Eclipse** maintains the strong tradition of

Azipod propulsion powering some of the world's most innovative ships. With our unrivalled pedigree in the passenger and icebreaking segments, we are able to meet the owner's demands for a flexible and efficient propulsion system which can operate safely in all sea conditions."

Azipod propulsion is integral to the majority of modern cruise vessels and **Scenic Eclipse** will take advantage of the unique characteristics of podded propulsion. With the engine mounted outside of the ship, passengers benefit from a reduction in noise and vibration whilst the freed-up space can be used for other purposes. In **Scenic Eclipse's** case, this includes a submarine and six restaurants.

**Scenic Eclipse** will visit some of the world's most pristine ecosystems and Azipod propulsion's strong environmental credentials are in keeping with this spirit. Azipod D's gearless construction, high motor efficiency and advanced hydrodynamic design ensure fuel consumption is typically 10-15 % lower than with geared thrusters. Azipod propulsion's long track record of reliability is also important for vessels operating in faraway regions, so far clocking up more than 12m running hours since its first installation a quarter of a century ago.

Fitted with the technology that make Azipod propulsors the leading podded propulsion system, but with less installed power than other models, the Azipod D has gained traction in the market since its launch in 2015. Orders have already been achieved in the offshore sector whilst the **Scenic Eclipse** will be the first passenger vessel fitted with this model.

"There is growing interest in the Polar Regions from the passenger segment and recent orders have shown ship owners trust our solutions in these areas," said Koskela.

**Scenic Eclipse** will be built by Uljanik Group in Croatia and is due for completion in 2018. The vessel will have a capacity of 228 passengers (200 in polar regions) and 172 crew (182 in polar regions) with a total of 114 passenger cabins, the largest being 233 m<sup>2</sup>. The gross tonnage will be 16,800 with a length of 168 m.



An artist's impression of the **Scenic Eclipse**

# FEATURE:

## Mis-placed optimism?

A recent report in a well-known shipping publication spoke of Capesize rates, on an average weighted timecharter basis, having “shot up to more than US\$8,000 a day”. Well let’s all go and have a party then. Admittedly this is a few bucks more than the \$4,700 a day prevailing this time last year but it is still far below a realistic breakeven rate if finance and overheads are also taken into account. Anyway, according to the report, “positive sentiment reverberated along to other vessel segments” causing the Baltic Dry Index to “resurge” to its highest level in more than five months. Yippee!

Anyone with a Hewlett Packard can do the sums. Some of the Capes plying the oceans today, or sitting idle, were ordered at prices 50% higher than those prevailing today. A rate of \$8,000 is far from profitable unless you assume only direct operating costs, no finance and no overheads. Even then, it is barely more than breakeven. Let’s face it: Capesize bulk carriers are still losing their owners lots of money every day.

It is true that there are some marginally positive signs – demolition rates have reached record levels in the first quarter of the year. Iron ore prices are in the \$50-60/tonne range which is profitable for the big mining firms, according to a recent report from Maritime Strategies International (MSI), and will support the ramp-up of new export capacity in Australia and Brazil.

Meanwhile, a modest rise in steel prices and higher production in China in March are also positive signs, says MSI. And iron or stock levels held there are not as high as some analysts have made out. MSI believes there are currently 97m tonnes of ore stockpiled in China, the highest since May last year, but not much more than the historical average and well below the 114m tonnes of stocks held in the second quarter of 2014.

MSI says it is “relatively optimistic” for the Capesize market over the next six months when compared with today’s levels. It is forecasting spot rates of \$8,000 a day for June and \$10,000 a day for September. Once again, these are far below breakeven rates. By way of example, \$30m borrowed at 6% over 15 years – if you could get such a term in the present market – requires a bareboat rate of almost \$8,300 every day, 365 days a year. Of course, op costs and a contribution to fixed overheads come on top.

The fact is that Capesize owners may not be losing quite as much money as they were a few weeks ago, but the sector is still deep in crisis. Clarkson figures reveal that there are 220 Capesize units on order, equivalent to almost 16% of the existing fleet which is itself much larger than it has even been before. Moreover, Chinese leasing companies are back in buying mode as hungry shipyards help to build the domestic fleet and cut steel mills’ reliance on third-party Capesize owners.

Record demolition has certainly helped and the Capesize fleet has actually shrunk slightly so far this year. But will optimistic sentiment – justified or not – slow the pace of scrap sales? Or perhaps it will act as a stimulus for progress on the construction of large bulk carriers which has stalled in many Chinese yards. The number of bulker contracts is changing by the day, as owners seek either to postpone deliveries or cancel them completely.

At a Marine Money Hong Kong Ship Finance Forum recently, Wah Kwong chief executive Tim Huxley said that he had seen a lot of ships supposedly under construction in China “just sitting there waiting”. Meanwhile Mats Berglund, boss of Pacific Basin, said that many of the ships under construction in China don’t have engines because the yards can’t afford them and would never make it to the shipping market - Let’s just hope so!



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## ON WATCH:

- Unni Einemo, a respected and highly renowned journalist and analyst specialising in the marine fuel and shipping industries, will be joining the secretariat of the **International Bunker Industry Association (IBIA)** as IMO representative, Media and Communications manager with effect from April 15<sup>th</sup> 2016. A key member of the team that built up the Bunkerworld and Sustainable Shipping news services, Unni brings with her almost 20 years of industry experience and expert knowledge, in particular on regulatory affairs and fuel quality issues. She joins IBIA at a time when the Association has been growing its membership and its activities, driven by a small and dedicated full time team with support from a diverse board consisting of industry professionals. Employing Unni will allow IBIA to further develop its multiple initiatives and bring in-house some of the tasks that are currently fulfilled by external resources.
- Lars Ljoen (46) will take over the position of Executive Vice President and Managing Director at **Carnival Maritime**, the marine service unit of the Costa Group in Hamburg. Besides further advancing the unit's performance, he will be responsible for supervising the departments Fleet Governance, Cruise Preparation & Projects, Cruise Execution as well as Continuous Improvement and the Fleet Operations Centre. The native Norwegian shows a long track record in marine operations - He began his career on supply vessels and shuttle tankers in the North Sea offshore industry. In 1997, he joined Royal Caribbean Cruises Ltd. where he worked on the cruise vessels and ashore at the headquarters in Miami, managing fleet-wide navigation issues, maritime training and deck operations. During his eight years of employment here, he became Director of Marine Operations. In 2005, Ljoen joined Ceres Marine Terminals (NYK Ports) in Miami as Vice President of Business Development. Almost 10 years later he headed up the development of business strategies for cruise services, roll-on/roll-off business and general cargo for the North American port activities of NYK Line. Finally in 2015, Ljoen joined Carnival Maritime, leading the Cruise Preparation & Projects department as Senior Vice President. In this position he was responsible for port operations, dry dockings, deck & engine human resources, innovations and technical purchasing.

- **Wärtsilä** has announced that John Hatley, Vice President, Wärtsilä Marine Solutions in America, has been elected to the Board of Directors of the Society for Gas as a Marine Fuel (SGMF). Wärtsilä has long been at the forefront of developing technologies to make possible the use of gas as a marine fuel, and this appointment reflects this long standing commitment. The SGMF is a new non-governmental organization (NGO) established to promote safety and industry best practices when using gas as a marine fuel. Gas fuel provides the marine industry with a viable path to achieving compliance with increasingly stringent environmental standards. The use of gas fuel notably reduces the level of harmful exhaust emissions from ship engines that are typical with conventional liquid fuels. At Wärtsilä, Hatley has worked since 2010 to shape the trajectory of marine gas fuel adoption in North America. His efforts have helped generate momentum across the fundamental enablers, namely the gas supply, regulatory framework and training, while facilitating leadership in moving the industry forward. “I believe the SGMF will play a pivotal role in promoting the safe adoption of gas as a preferred fuel throughout the marine global markets, both today and in the future. It is my honour to represent Wärtsilä within this premier organization, and to assist the marine industry in its move forward into this new gas fuel era,” says Hatley. The mission of SGMF is to promote safe and responsible operations for gas fuelled ships. SGMF promotes the sharing of lessons learned, training and industry development, and the fostering of relationships amongst regulatory agencies with principal stakeholders.
- **Maritime Cook Islands (“MCI”)**, the leading ship registry, has just appointed William Hasting as a Technical Manager serving the European region, and in so doing significantly boosting MCI’s presence in Europe. His appointment takes place with immediate effect. William brings with him the knowledge gained at sea and ashore which are the qualities essential in helping with the oversight of the diverse fleet of vessels under the Cook Islands Administration. Glenn Armstrong, Chief Executive Officer of MCI, commented, “We can confidently say that William is the right fit for MCI and his appointment will play a big role in MCI’s expansion across Europe. William has a consistent track record in overseeing the technical aspects of vessel operations and I believe with his experience and know-how – MCI’s clients are in good hands. This will also benefit our European clients tremendously as this will mean a direct line to a MCI person - in the same region and in the same time zone as them. Things will get done very much faster.”

**SHIPPAAT**