In This Issue

Christopher J. Wiernicki Becomes CEO
Page 3

ABS to Class Largest Containerships
Page 4

ABS Wins Class Society Award at ShipTek
Page 6

ABS & DSME: Sloshing Analysis for FLNG
Page 11
ABS achieved another record performance in fleet size during 2010, reported Chairman Robert D. Somerville at the annual meeting of its members. An 8 percent increase in gross tonnage from year-end 2009 resulted in the ABS-fleet reaching a new record of 173m gt representing 11,191 vessels.

Somerville pointed out that ABS is in a strong position regarding the world orderbook holding more than 20 percent of the newbuild market. With the ABS orderbook standing at 45.7m gt at the close of 2010, the backlog provides confidence that classification activity will remain solid for the foreseeable future.

Attractive shipyard pricing led to a surprisingly robust flow of new orders to ABS class during 2010, particularly for bulk carriers. There was also a resurgence of interest in newbuilds by container operators based on projections of trade growth. “As the class society for the largest containerships currently in service, the designs of which include many technical innovations, ABS is well-positioned to participate in the orders for the new generation of 18,000-20,000 teu containership vessels that are currently under discussion,” said Somerville.

ABS continued to build on its position as the preferred class society for mobile offshore drilling units. In just the last few months of 2010, ABS received contracts for 43 MODUs, including options. ABS also retained its leading position in the production sector which includes floating production, storage and offloading (FPSO) units; floating, storage and offloading (FSO) units; semisubmersibles, tension leg platforms (TLPs); and spars.

“Our success to date is attributable to the outstanding service offered by our surveyors, engineering and administrative staff around the world,” said Somerville. He further emphasized that ABS has been at the forefront of raising environmental awareness across the industry. ABS has been educating industry and clients on the impact of various regulations and providing guidance on how to comply with new and pending standards. “ABS believes there is still much that can be done to further improve the shipping industry’s environmental performance,” said Somerville. “Our emphasis is on the development of practical approaches that are effective and enhance safety.”

The ABS 2010 Annual Review is available for download from the ABS website, News & Events, Publications. The Review contains a more detailed report on ABS’ activities in 2010.
Christopher J. Wiernicki Becomes ABS CEO

Christopher J. Wiernicki has assumed the duties of Chief Executive Officer of ABS. Wiernicki, a 17-year veteran of ABS has held a number of senior positions within the organization including Vice President of Engineering of the ABS Americas Division; President and COO of the ABS Group of Companies; President and COO of ABS Europe Ltd., Chief Technology Officer of ABS; and for the past four years he has served as the ABS President and COO.

Robert D. Somerville transferred his responsibilities as CEO to Wiernicki at the annual meeting on 12 April 2011. Somerville will remain Chairman of ABS and the ABS Group of Companies.

“My primary focus will be to see that ABS is at the forefront when it comes to providing the innovative products and efficient services that will define ABS as the class society of the future.”

– Christopher J. Wiernicki

Commenting on the transition, Wiernicki noted “The scope of classification services has expanded significantly over the last few years and it is clear that it will continue to change at an even more rapid pace. ABS is determined to be the leader in defining the role of class in this new environment. My primary focus will be to see that ABS is at the forefront when it comes to providing the innovative products and efficient services that will define ABS as the class society of the future.”

Wiernicki holds a BS degree in Civil Engineering from Vanderbilt University and Masters’ degrees in Structural Engineering from George Washington University and Ocean Engineering from Massachusetts Institute of Technology. Additionally, Wiernicki is a graduate of the Harvard Business School’s Advanced Management Program.

Highlighting the fact that ABS is poised to celebrate its 150th anniversary, Somerville stressed, “It is important for our clients and employees that we maintain a consistent management and operational philosophy – one that is firmly committed to ABS’ mission. It is a reflection of both our management strength and our commitment to continued expansion that I can relinquish the CEO responsibilities. This will allow me to better focus on charting the strategy that will help secure the future of ABS for the coming decades.”
ABS to Class World’s Largest Containerships

ABS will class the Maersk Line Triple-E Series, the world’s largest containerships. A total of ten vessels, with an option for an additional 20, will be built at Korea’s Daewoo Shipbuilding and Marine Engineering Co. Ltd.

“ABS has extensive in-service experience and technical capability in classing larger containerships, including the classification of the Emma Maersk, an 11,000 teu containership,” says Peter Tang-Jensen, ABS Senior Vice President, Technology. “Maersk Line is a long-standing client and we are honored to have been selected to class this landmark series of containerships,” Tang-Jensen adds.

At 400 meters long, 59 meters wide and 73 meters high, the Triple-E Series is slightly longer than the Emma Maersk, which holds the present position as the largest containership currently in operation. Each vessel in the Triple-E series is 18,000 teu and 165,000 dwt. They are also the longest and widest container vessels possible based on port restrictions.

Named Triple-E for the principles of design: economy of scale, energy efficiency and environmentally improved, Maersk says the design will produce 20 percent less CO₂ per container moved compared to the Emma Maersk and 50 percent less compared to the industry average for the Asia-Europe trade route.

Maersk estimates that the series will consume 35 percent less fuel than the super post-panamax ships currently in service.

The main drivers behind the design are container capacity, energy efficiency and environmental friendliness. The U-shaped hull maximizes container capacity with an inside cavity 16 percent greater than the Emma Maersk. The spacious hull and the additional row of containers, provide capacity for 1,500 additional containers. Each vessel in the series also has a heat recovery system that captures and recovers energy from the exhaust gas to generate increased power with less fuel consumption.

Maersk also intends to reduce the environmental impact beyond the vessels’ lifespans. All materials used to build the Triple-E Series will be documented in the vessel’s ‘cradle-to-grave passport’ so that the materials can be reused, recycled or disposed of properly.

The vessels, headed for the Asia-Europe trade route, will be flagged in Denmark. Delivery is expected during 2013-2015.

For more information about Maersk Line’s Triple-E Series, visit www.worldslargestship.com
ABS & LR Release Common Software for IACS Common Structural Rules
Societies’ establish joint venture to develop software for Harmonized Rules

ABS and Lloyd’s Register (LR) released the initial version of jointly-developed software that will be used to assess bulk carriers and oil tankers designed to comply with IACS Common Structural Rules (CSR). The common software draws upon the technical strengths of ABS and LR and will be used to evaluate new designs presented to either society.

Recognizing the strengths of their collaborative efforts and to demonstrate a commitment for consistency, ABS and LR also announced the establishment of Common Structural Rules Software, LLC – a joint venture with offices in Houston and London. The entity will maintain the newly-released software and develop new common software which will assess vessels designed to comply with the harmonized CSR that will be submitted for industry review in 2012.

“I am pleased that the strategy laid out a decade ago is achieving our objectives,” says Robert D. Somerville, ABS Chairman. “First was the development of the CSR which was completed in 2005. It was always our vision that the next step would be the common software. Since many shipowners have also been requesting common software, this is truly an important milestone.

The joint venture will help to drive the final step – the adoption of common software by other societies. It is ABS’ and LR’s desire that other societies join in this initiative.”

“This is what shipowners, designers and shipbuilders need. We can only obtain consistency in CSR calculations through common software,” says Richard Sadler, Chief Executive Officer of Lloyd’s Register Group.

“ABS and LR have developed an excellent working relationship during the last few years,” says Robert Spencer, CSR Software Director for ABS. “We have mutual respect for the technical capabilities of each society. This is important as we begin the development of the new software.”

The common software is available for download at www.CommonStructuralRulesSoftware.com. Technical software support will be available 24 hours a day, seven days a week.
For the second year running, ABS was awarded Best Classification Society at the 5th Annual International Maritime Awards at ShipTek in Dubai.

Darko Begovic, ABS Country Manager for the United Arab Emirates (UAE), received the award from Marine BizTV on behalf of ABS. The Marine BizTV award recognizes the contribution of a classification society for innovative, technical, operational or commercial developments in the maritime industry. The award focuses on the society’s commitment to safety, quality, social and environmental responsibility and its diligent effort and involvement in the training and development of personnel.

Service delivery is paramount to ABS, says Joseph Brincat, ABS Regional Vice President, Middle East. “We have remained focused on providing additional technical and software services in order to further enhance our class services. What differentiates ABS is its ability to combine technical experience with service commitment – it’s a combination that will continue to fuel ABS’ success in the region.”

Brincat adds, “ABS has maintained a strong presence in the Middle East region for more than 35 years. And throughout this time, our office network has expanded to meet the growing importance of the region as both a shipping and offshore center.” Most recent statistics show the society’s registered classed fleet for Middle East operators is just under 5m gt, representing 14 percent of the region’s existing fleet.

The region’s growth has been apparent in many sectors. In the traditional market, there has been an increase in bulk carrier fleets with owners such as Oman Shipping and several other prominent owners selecting ABS for new construction projects. In the tanker sector, ABS was the class society of choice for both AMPTC and Gulf Navigation that recently placed orders for two aframaxes and two VLCCs, respectively.

Companies ordering offshore vessels to ABS class include Zamil Offshore of Saudi Arabia, Abu Dhabi Ports Company, AGMS in Kuwait, ASRY in Bahrain, Khimji Ramdas in Oman, TOPAZ, Stanford Marine, Gulf Glory, ESNAAD, Zakher Marine International and many others. ABS has a long-term involvement with the classification of approximately 50 drilling rigs working in the region, as well as the large support vessel fleet that provides services to the rigs. UAE shipyards such as Lamprell and MIS, recognized for their repair and modification contracts, have moved into new construction of offshore rigs at their yards.

ABS maintains a very active surveyor presence in the UAE as it is one of the principal training ports for the staff. The class society rotates newer members of the global survey team through Dubai to expose them to the wide variety of work that the region handles. “ABS places great value on continued education. Combined with our robust and very active seminar program, a new Academy in Dubai provides updates and insight into new regulatory and technology developments,” adds Brincat.

“One of ABS’ goals is to provide clients with innovative solutions and the best possible service,” says Brincat. For example, in the offshore sector, ABS recently released its offshore asset integrity management program. Additionally, ABS’ expanded casualty response program offers increased technical support and includes free enrollment in the program for ABS-classed newbuilds.
ABS Authorized by USCG to Issue COF for OSVs Handling Noxious Liquid Substances

The US Coast Guard (USCG) has granted ABS the authority to issue Certificates of Fitness (COF) on the USCG’s behalf to US-flagged offshore supply vessels (OSVs) that transport or handle limited amounts of hazardous and noxious liquid substances (NLS) outside of US jurisdictional waters.

ABS is the first classification society to be granted this authority from the USCG. Acting under the authority of the USCG, the society is authorized to issue the certificate to a vessel based on the relevant conditions set forth in IMO Resolution A.673(16), as amended. Additionally, ABS will review each OSV against the requirements stipulated in MARPOL 73/78 Annex II, USCG 46 CFR 8.130, USCG Policy Letter 09-01, as revised and to the US Supplement to ABS Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length.

Existing OSVs, keels laid prior to 20 February 2010, which carry limited amounts of hazardous and NLS in bulk outside of US jurisdictional waters will be required to obtain this certificate on or just following their first annual inspection carried out in 2011.

Tidewater Selects ABS Nautical Systems as its Fleet Management Provider

Vessels operated by Tidewater Inc. will soon be using the maintenance management software tools provided by the ABS Nautical Systems Division. Replacing its legacy management software with the fully-integrated system provides Tidewater with a more streamlined approach to fleet management.

Tidewater will trial and implement several modules from the Nautical Systems’ NS5 Enterprise software suite, including Maintenance & Repair, Drydocking, On-Demand Reporting and Web-Based Vessel Drawings. Tidewater will also be implementing interfaces between the NS5 Enterprise program and its enterprise resource planning (ERP) solutions. Following the trial period, the modules will be installed in a phased approach on approximately 185 of Tidewater’s vessels over the next 24 months.

“It was imperative that we selected a company that not only had a solid product, but a business plan that echoed ours – at present and into the future,” says Bill Scott, Tidewater Manager, Engineering and Technical Services. As the world’s fastest-growing provider of integrated fleet management software for the maritime industry, the Nautical Systems Division is able to offer standardized, yet flexible solutions for fleet owners and operators to better manage their operations. The NS5 Enterprise suite of software products will help Tidewater manage its daily business functions while increasing crew productivity and reducing operating costs.

“The NS5 Enterprise system will provide us with the structure in which to schedule and track our maintenance and thus continue to build uniformity throughout our entire organization, while simultaneously and seamlessly integrating our supply chain processes. We are confident that with the system’s class integration and the assembled team’s experience, this project will be a success,” adds Scott.

Software Optimizes Marine Management Systems
The HSQE Navigator is Now Available to ABS Customers

Shipowners and operators looking to implement, improve or integrate desired management systems have a new tool: the web-based ABS Eagle HSQE Navigator.

“Going beyond ISM to achieve certification in management systems is one way to pursue and demonstrate commitment to excellence and continuous improvement,” says ABS Principal Engineer Maria Verzbolovskis. “The new HSQE Navigator software allows users to perform customized queries to highlight the variances between the requirements to obtain H, S, Q and E certifications from ABS,” adds Verzbolovskis.

Based on the ABS Guide for Marine Safety, Quality and Environmental Management, the software offers three levels of guidance on marine management systems: ISM practices, HSQE gap analysis and integrated HSQE systems.

ISM practices provide suggestions for organizations to optimize their current safety management system (SMS). The program contains checklists of typical audit questions to help improve audit readiness. “Marine companies interested in voluntarily implementing a safety management system in order to enhance operations and boost their commercial advantage can find selected implementation guidance within the HSQE Navigator,” explains Verzbolovskis.

The gap analysis presents operators with a description of the gaps between their existing certification and their desired health, quality or environmental certification, removing common requirements so operators can focus on the variances. The program provides guidance on how to close the gaps and integrate the new requirements with the existing system. “This practical guidance focuses on issues that historically have been the most challenging for marine companies to implement,” says Verzbolovskis.

The integrated HSQE level features a collection of best practices that may enhance a management system where deficiencies are leading to incidents or corrective actions requests. It also includes examples of typical ways to successfully implement an integrated management system.

The HSQE Navigator is available to ABS customers free of charge through the My Eagle customer web portal.

HSQE Navigator Key Features & Benefits
- Conducts gap analyses between HSQE management systems
- Provides guidance on achieving certifications for health, safety, quality or environmental management systems
- Features tips for optimizing the ISM system and preparing for audits
- Offers highlights of industry best practices
- Provides systemic solutions to corrective actions requests or incident root causes
- Includes guidance for voluntary compliance with ISM Code
K-Sea Transportation Achieves ABS HSQE Certification

K-Sea Transportation Partners LP is the first US flag tug and barge operator to achieve ABS HSQE certification. The company’s management system meets the standards of OHSAS 18001, the ISM Code, ISO 9001 and ISO 14001. In addition, K-Sea continues to maintain its Responsible Carriers Program certification from American Waterways Operators (AWO).

“ABS offers the Marine HSQE certification program as a tool for enhancing marine management practices as well as to support the responsible management of ship operations and pollution prevention,” says Hemant Juneja, ABS Director of Management Systems Certification. “This certification bears testimony of the openness and the proactive approach adopted by K-Sea in their quest for continual improvement.”

According to K-Sea’s President and CEO Tim Casey, the ABS HSQE certification was the result of a two-year effort that entailed a rigorous review and overhaul of the company’s operating practices, policies and procedures. “Our HSQE certification efforts grew from the need to integrate three different safety management systems that existed within K-Sea as a result of fleet merger and acquisition activity,” says Casey. “The integration process focused on identifying best practices, and wherever possible, streamlining and improving our business processes. During the same period we developed and launched VECTOR, our proprietary electronic fleet management and data communications platform,” he says.

“I am extremely proud of these accomplishments and would like to thank all of our employees whose efforts made them possible,” adds Casey. “This includes all levels of management, both sea-going and ashore and in particular our HSQE and VECTOR project teams.”

K-Sea is one of the largest coastwise tank barge operators in the United States. The company provides refined petroleum products transportation, distribution and logistics services in the US domestic marine transportation market, and its common units trade on the New York Stock Exchange under the symbol KSP.
ABS Says the Time is Now for Floating LNG Concepts

“F rom a class society perspective there are no technology showstoppers for floating LNG (FLNG) concepts,” said William J. Sember, ABS Vice President of Global Gas Development at the recent Gastech 2011 conference in Amsterdam where he chaired the technical session on FLNG terminals and systems.

Sember noted that as recently as five years ago, floating solutions for the import and export of LNG were still considered new and novel concepts.

“Today emerging proprietary technologies and transport designs have come of age and the industry is poised for the first projects. With more than one-third of global gas reserves stranded by their location or field size, without commercially viable access to world markets, the attractiveness of FLNG cannot be denied,” he told attendees.

FLNG offers a number of advantages over land-based terminals. FLNG installations can result in lower overall project costs and a reduced environmental footprint because facilities such as long pipelines to shore, onshore development and offshore compression platforms are not needed. With gas deposits often in remote or stranded areas far from the coast, the ‘marinizing’ of production, liquefaction and export facilities offers great potential for many future development projects.

Sember noted that the shipping and offshore industries have spent the past five years successfully advancing both the technology and commercial attractiveness of the FLNG concept as a means of delivering new sources of cleaner energy. ABS is in the advanced stages of design review for a number of FLNG concepts.

Technology developments have addressed issues such as the integration of subsea architecture with FLNG; offloading systems, in particular for harsher environments with tandem configurations based on cryogenic hoses or flexible pipes; and the qualification and testing of components for LNG transfer systems.

“Liquefaction plants have been suitably optimized in order to efficiently use deck spaces while taking into account the safe and efficient operation of process equipment,” said Sember. “The advances and level of sophistication in all these subjects are evident. The time for commercialization and the first project is now” ☝

Graphic courtesy of SBM/Linde
ABS and DSME Offer New Sloshing Analysis Methodology for FLNG

Results from a joint development project between ABS and Daewoo Shipbuilding and Marine Engineering (DSME) will offer the industry a new methodology to determine critical sloshing conditions of floating liquefied natural gas (FLNG) vessels that promises to be valuable in reducing the cost and time duration for sloshing test campaigns.

Designing for sloshing impact loads is a key concern in tank containment system design. As the cargo tanks have increased in size along with various filling conditions for offshore FLNG operations, the possibility of severe sloshing becomes more likely as well as the probability of structural damage to the containment system. The new ABS-DSME methodology is being proposed as a pre-screening procedure for selecting the most severe critical sea states before the start of a sloshing model test or sloshing flow simulation.

“Model tests cannot cover all possible wave heights, periods, heading and filling levels since there are just too many combinations to determine the lifetime maximum sloshing loads,” observes Yung Sup Shin, Head of the Containment System Group, ABS Technology. “However, we have developed a robust way to determine a finite number of critical sloshing conditions consistently and efficiently compared to other existing methods.”

The methodology, explains Shin, consists of two main steps. A sloshing pseudo-response amplitude operator is defined based on the total sloshing wave energy and then, the concept of sloshing severity is introduced based on the area under the sloshing energy response spectrum curve. This highly-advanced theoretical formula represents ship motion and sloshing interaction by calculating the energy of the liquid cargo in the tank.

The numerical analysis of the fluid motion from this theoretical methodology has been validated by comparing the results to conventional sloshing tests for an FLNG cargo tank.

Shin points out that the validation is based on extensive sloshing model test data developed from a joint industry project (JIP) by DSME using a Gas Transport and Technigaz (GTT No. 96) membrane containment system for an FLNG vessel with a two-row cargo tank with centerline cofferdam arrangement. ABS was a participant in this two-row JIP along with other class societies and energy majors.

It is important to include critical sea states in a sloshing test matrix. However, current state-of-the-art computational fluid dynamic codes have a limited value for evaluating the lifetime design sloshing pressures given the lack of computational efficiency. Shin says the total sloshing wave energy and severity computation developed jointly by ABS and DSME provides a new alternative to selecting relevant sea states in sloshing model testing and analysis.

This new advanced numerical approach will join other methods for sloshing assessment developed over the past decade including sloshing flow simulation techniques, scaling laws, fluid-structure interaction and corrugation effects on sloshing and partial-filling operations.

Courtesy of DSME
Computational fluid dynamics (CFD) technology will be increasingly applied in the future for offshore applications,” ABS Principal Engineer Sing-Kwan Lee told participants at the Advanced Maritime Engineering Conference in Singapore. “The more critical applications of the CFD technology will be for the cases beyond the model such as full scale structure situations or extreme wave-induced loads.”

The comparative study, presented in the paper, “Hydrodynamic Loads on Leg Chords of Jackup Drilling Units a Comparative Study Using CFD and Industry Practice” was co-authored by Lee and ABS Engineer Deguang Yan. The study examined simulations for a typical jackup chord design under current, wave and combined wave-current conditions by comparing the three common approaches used in determining hydrodynamic forces: SNAME’s practice, data from wind tunnel tests and CFD simulations.

Traditional estimates for hydrodynamic loads on jackup legs have been based on wind tunnel measurements. “However, wind tunnel tests can only account for steady current situations and not wave oscillatory flow situations. Wave tunnel tests should be conducted to assess their relative magnitude due to large oscillatory flow,” said Lee.

The study found that CFD simulations have good agreement with the wind tunnel test results and provide valuable insights in the physics of hydrodynamic load and flow interference with jackup chord members. The study also reaffirmed that the SNAME approach predicts conservative loads in most cases. For pure current cases, the SNAME approach over-predicts 8.9 percent for the average drag accounted for all incidental angles compared to wind tunnel measured data. For wave and combined wave-current cases, roughly 20-28 percent more of the peak force is over-predicted for high wave case in SNAME practice compared with CFD simulation results.

There is great potential in the future application of CFD to technologies such as wave impact loads, vortex induced motion (VIM) and vortex induced vibration (VIV) problems in the offshore engineering field. “CFD simulation is relatively new but has the advantage of providing greater insight of the load generated mechanisms through visualizing detailed CFD simulation flow. Also, it is the most cost-effective approach when compared to the model test and the SNAME approach. For instance, the CFD results demonstrate CFD simulation can match the measurement data within a 2 percent error rate,” said Lee.

While CFD offers promise, it does not replace model testing anytime soon. The data obtained from the model test will continue to play a critical role in the development of CFD simulation. “We would like to stress that the CFD simulation can provide comprehensive information,” added Lee.
RRDA Software Gets More Engineering Capacity

As shipowners face rising scrutiny and criticism for the handling of marine incidents, the demand for improved shore-based casualty response has increased. To address these demands, ABS reviewed its existing rapid response damage assessment (RRDA) program and added capacity that more quickly analyzes the structural reaction to damage.

The most significant RRDA software enhancement is the inclusion of the ABS Sea Environment Assessment System (SEAS). Used to calculate environmental loads on structures, the program divides the world's oceans into grids. The wave database consists of 1,102 grid cells. For each cell, a wave scatter diagram is stored with the associated directional probability distribution. Using the global wave data, RRDA determines the probable loading, hull girder and local strength for the specified route such as transit to a repair yard.

“‘We have the data and tools to undertake modeling analysis. Ultimately the software provides information beyond stability, including salvage and planning for the selection of a route to the owner’s preferred repair location,” says Wang. “Our expanded RRDA software offers a wide range of technical information relevant to a vessel such as design drawings and load and strength calculations for use in providing a more detailed casualty response. We view this as part of a more comprehensive approach toward vessel safety,” says Wang.

The RRDA program, including modeling and enrollment, is offered at no charge to ABS-classed newbuild tankers, gas carriers, containerships and bulk carriers.
The ABS Harsh Environment Technology Center (HETC), based on the campus of the Memorial University of Newfoundland (MUN), recently released its first comprehensive research study, the “Review of Produced Water Management and Challenges in Harsh/Arctic Environments,” which examines the challenges and management of water produced in association with oil and gas operations in Arctic environments.

Produced water represents the largest volume of waste from oil and gas operations and is associated with significant management costs. The study, led by Professor Kelly Hawboldt of MUN, examines produced water characteristics, environmental impacts, current policy and regulations as well as management techniques currently used throughout the world. It also highlights emerging technologies and suggests areas for further review.

Although there have been few studies on produced water discharged in the Arctic, the MUN staff has extensive experience with certain aspects of produced water, including modeling and treatment. “We are pleased to have sponsored the efforts of MUN faculty who have undertaken this study,” says Roger Basu, ABS Director, Shared Technology and Dr. Ray Gosine, Vice President (Research) pro tempore, Memorial University of Newfoundland.

The HETC was created in 2009 to support the development of technologies for ships and offshore structures operating in harsh environments, particularly the Arctic. At the signing ceremony for the center from left, Roger Basu, ABS Director, Shared Technology and Dr. Ray Gosine, Vice President (Research) pro tempore, Memorial University of Newfoundland.
Looking Ahead: July MEPC Meetings Could Result in First International CO₂ Regulations

Viewpoint by Kirsi Tikka, ABS Vice President Global Technology and Business Development

The shipping industry is facing an increasing volume of international, regional and local regulations. In the last decade the focus of the regulatory development has shifted from safety and oil spill prevention to a wide variety of environmental issues ranging from air emissions to ballast water management and ship recycling.

The recent regulatory development at IMO has introduced NOx and SOx regulations in MARPOL Annex VI, the Ballast Water Management Convention and the Ship Recycling Convention. However, it must be noted that the only regulation currently in force is the MARPOL Annex VI. The trend seems to be for slow ratification of the international conventions which opens the door for regional and local regulations and adds uncertainty to planning for compliance.

We can only speculate the reasons for slow ratification. Maybe one reason is the perceived incompleteness or unfeasibility of the proposed regulations. Some of the recent regulations have been ahead of technology development and although they are pushing innovation, which I consider positive, there is a risk that ships become a testing platform for evolving and unproven technology. Another risk is that the regulations add complexity to the onboard systems and introduce new safety concerns.

This July, the Maritime Environment Protection Committee (MEPC) will convene to debate the proposed amendments to MARPOL Annex VI which would make the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP) mandatory. If the amendments are adopted they would be the first international regulations addressing CO₂ emissions from shipping. If the amendments are not adopted, shipping may face some regional regulations. All this is to be seen, but the summer of 2011 promises to be interesting from a regulatory point-of-view.

Regardless of the challenges facing the industry, regulations respond to the demands of society at-large and shipping must contribute to the improvements that the new regulations are set to achieve.

ABS Updates Ballast Water Treatment Advisory

ABS recently updated its Ballast Water Treatment Advisory to assist the industry in understanding the current state of ballast water treatment (BWT) regulations and available technologies and to provide useful guidance to shipowners, operators and builders as they make decisions about suitable treatment options.

The Advisory is divided into five key sections covering regulatory developments; an overview of treatment technologies; considerations for systems selection, installation and operation; evaluation checklists; and available systems. The evaluation checklists in the Advisory include details such as vessel ballast system particulars, ship and service characteristics that impact BWT selection, treatment technology factors, general treatment system considerations and challenges for installation.

The Advisory summarizes the practical realities of shipboard BWT systems to assist ship operators in the evaluation of treatment technologies and installation plans. Included are discussions of the key features of ships’ ballast water handling systems and practices. It documents the features of the various treatment technologies that will have an important impact on the ship or ballast practices and costs. Many of the challenges related to engineering the actual ballast water treatment system are addressed.

The Advisory also contains an appendix with technical information for BWT systems that summarize the key technical and performance data of currently available systems.
To help shipowners and operators understand the recent and pending environmental regulations that impact maritime operations, ABS recently held several environmental seminars for clients in the Middle East. Programs were held in Dubai, Doha and Kuwait.

“ABS has developed these client seminars because environmental regulations, particularly relating to emissions, are very fluid with further changes expected to come from deliberations at the IMO and in regional and local regulatory initiatives,” says Kirsi Tikka, ABS Vice President, Global Technology and Business Development.

The seminars featured an overview of the key environmental issues that impact the maritime industry – from regulatory compliance to energy efficiency and carbon emissions. On the regulatory front, discussions focused on ballast water management, ship recycling and air emissions.

An expanded presentation detailed the ratification status of the IMO’s Ballast Water Management Convention and included a summary of approved ballast water treatment systems and installation issues.

Stricter requirements for emissions have made the use of low sulfur fuels in environmentally-controlled areas (ECAs) mandatory. The seminars addressed current air emissions regulations and air emission abatement and monitoring systems.

The seminars also identified innovative new technology to improve energy efficiency, discussed the Energy Efficiency Design Index (EEDI), offered suggestions for developing a Ship Energy Efficiency Management Plan (SEEMP) and presented some environmentally-friendly design concepts.

“Energy efficiency is both about the design and operational efficiency,” says Luiz Motta, ABS Director, Technology and Business Development. “Energy efficiency is not a designer’s issue or an operator’s issue. It is a challenge for the industry at-large. Classification societies also endeavor to strike a balance between supporting these environmental initiatives and promoting the safety of the ships and their crews. As the energy efficient ship of the future evolves into reality, it will provide a win-win for the owners, the regulators and society,” Motta explains.

“ABS hosts nearly 100 free seminars on the maritime industry’s most relevant topics. For more information, go to the ABS website at www.eagle.org. Navigate to News & Events, ABS Seminars. Select the topic of your choice for dates and seminar information.”
A dedicated team within ABS focuses exclusively on helping customers understand and plan for environmental regulatory changes. The new Environmental Solutions Group works closely with shipowners, operators and designers, providing them information on new or updated regulations and when practical, offering guidance on commonly found challenges and issues.

Headed by Kirsi Tikka, ABS Vice President, Global Technology and Business Development, the group will be leading the effort to keep customers informed of the rapidly developing changes to environmental regulations.

“Helping our clients prepare for the various verification and certification requirements that result from environmental regulations is the first of ABS’ three principal environmental goals,” says Tikka. “With so much information out there we can provide a valuable service by anticipating, understanding and interpreting these new regulations for our clients so they can prepare practical solutions that will bring them into compliance with the new requirements,” adds Tikka.

Leading the expanded service for promoting energy efficiency will be ABS Vice President Ah Kuan Seah. ABS Manager Charles Dorchak will be following the development of ballast water management. ABS Senior Principal Engineer Johnny Eliasson will be promoting energy efficiency management plan developments. ABS Director Sean Bond will be responsible for alternative fuels, including liquefied natural gas (LNG) and compressed natural gas (CNG).

### ABS SPONSORS CLEAN SHIPPING AWARD

At the 23rd Seatrade Awards Ceremony Dinner at London’s Guildhall over 350 members of the maritime community celebrated the outstanding contributions made over the last year for safe, efficient and environmentally-friendly shipping. The award program recognizes and celebrates innovation and commitment to improving maritime standards.

The Clean Shipping Award, sponsored by ABS, was presented to Marinloc AB of Sweden for its Enviropilot system. The Enviropilot system was developed to assist the captain by providing applicable MARPOL related guidance at the vessel’s current position.

*From left, Kirsi Tikka, ABS Vice President, Global Technology & Business Development; HRH, The Princess Royal; Martin Gombrii, Marinloc AB General Manager, Sales and Marketing; Efthimios E. Mitropoulos, IMO Secretary-General; and Christopher Hayman, Seatrade Chairman.*
Guide and Guidance Notes on Containerships Now Available

ABS is assisting the container shipping industry with the release of three new publications: the ABS Guide for Slamming Loads and Strength Assessment for Vessels; the ABS Guidance Notes on Whipping Assessment for Container Carriers; and the ABS Guidance Notes on Springing Assessment for Container Carriers.

For large containerships, especially the next generation of mega containerships, slamming, whipping and springing present design challenges to the hull structural integrity. Understanding these common occurrences can help designers and shipbuilders develop appropriate design measures to address these challenges.

“Both the Guide and the Guidance Notes are built upon a wealth of ABS technical experience from classing the largest containerships in the world fleet over the past several decades,” says Wei-Biao (Bill) Shi, ABS Chief Engineer, Structures. “They demonstrate our commitment to the marine industry and the containership sector. ABS has experience in all relevant areas of containership designs and sizes.”

Frequently occurring in rough seas, slamming is a violent impact of the shell plating of a vessel with incoming waves, which induces sudden extreme pressure. There are three typical types of slamming loads affecting ocean-going vessels: bottom slamming, bowflare slamming and stern slamming. “Slamming may cause severe damage on fore or aft-body shell plating and attached stiffening members, including web frames.”
Considering such critical loads is a major step in the early design for both hull form optimization and structural design," says Shi.

The Guide for Slamming Loads and Strength Assessment can be applied to all vessel types including oil carriers, bulk carriers, containerships and gas carriers. It provides a strength assessment procedure for bottom, bow flare and stern slamming. Upon verifying compliance with the requirements in the Guide, optional notations SLAM-B and SLAM-S may be granted to a vessel. "Containerships are particularly susceptible to bow flare slamming due to a large fore-body flare and stern slamming due to a flat overhanging stern," says Shi.

Whipping and springing are a form of hull girder vibrations induced by transient bow wave impact loads and steady state wave loads, respectively. Whipping often occurs in rough seas when the ship's bow or stern occasionally emerges from waves and then re-enters. Whipping contributes to fatigue damage and hull girder overloading. Springing normally occurs in relatively milder wave environments where wave frequencies are close to the natural frequencies of hull girder bending vibration. "The effect of springing on hull girder overloading is generally not significant, but springing induced fatigue damage cannot be ignored," explains Shi.

"Whipping can also be caused by slam loads that excite the hull girder natural frequency and may cause 15 to 20 percent additional dynamic wave bending moment acting on the hull girder," says Shi. The Guidance Notes can be applied to predict springing or whipping that may occur due to incoming waves.

The Whipping Guidance Notes describe the procedures for both fatigue damage and ultimate hull girder strength assessment, while the Springing Guidance Notes focus on fatigue damage. "There are a number of key parameters that influence whipping and springing, including bow geometry, container loading conditions, encountered waves, vessel speed and heading," explains Shi. The procedures in the Notes can be used during the conceptual design phase for sensitivity study with respect to the key parameters and operational profiles.

Together these publications provide comprehensive guidance for designers and shipbuilders. The Guide and the Guidance Notes are available for free download on the ABS website. Navigate to Resources, Rules & Guides, Downloads, for Publications #172, #173 and #177.

**What is whipping?**

_Hull girder vibration induced by impact load._

**The simplified whipping assessment method requires:**

- Length of the vessel
- Molded breadth
- Draft for a selected loading condition
- Block coefficient
- Depth
- Bow flare coefficient
- Local dead rise angle, breadth and draft at location of impact
- Two-node modal natural period and relative damping
- Operational profile in terms of speed, heading and sea state
- Data for SN curve for fatigue damage estimation
Recent Updates to ABS Rules & Guides

ABS Rules and Guides are available for purchase and/or free download directly from the website at www.eagle.org. Sign up to receive email notifications when new publications or notices are available. The following listing reflects Rules and Guides updates from 16 November 2010 to 15 April 2011.

**RECENT PUBLICATIONS**

**NEW**  
*Guidance Notes on Structural Direct Analysis for High-Speed Craft*, April 2011 (Pub 113)  
This updated publication supersedes the ABS Guidance Notes on “Dynamic Load Approach” and Direct Analysis for High Speed Craft (February 2003). This revision provides information about the Structural Direct Analysis procedure, which is available to assess the strength of high-speed craft and high-speed naval craft. In addition, the publication provides guidance to be followed when submitting required direct analyses or such analyses submitted in place of standard calculations. This publication is only available for download.

**NEW**  
*Guide for Slamming Loads and Strength Assessment for Vessels*, March 2011 (Pub 177)  
This Guide describes the requirements for direct slamming strength assessment for vessels. Optional notations may be assigned to vessels that comply with the requirements in the Guide. This publication is only available for download.

**UPDATE**  
This updated Guide has been revised to assist the industry with classification of drilling systems. The scope was expanded to cover all applicable drilling systems, subsystems, equipment and/or components. This publication is only available for download.

**NEW**  
*Guidance Notes on Springing Assessment for Container Carriers*, December 2010 (Pub 172)  
These Guidance Notes provide detailed procedures for the assessment of springing loads and the subsequent structural fatigue damage for container carriers. The technical background is based on direct analysis of hydrodynamic load and structure dynamic response. This publication is only available for download.

**NEW**  
*Guidance Notes on Whipping Assessment for Container Carriers*, December 2010 (Pub 173)  
These Guidance Notes contain procedures for the assessment of whipping loads and subsequent structure strength for container carriers. The technical background is based on the direct analysis of slamming load and structure dynamic response. This publication is only available for download.

**NEW**  
*Guidance Notes on Certification of Existing Blowout Preventers and Associated Systems*, December 2010 (Pub 174)  
The purpose of these Guidance Notes is to identify the required inspections, documentation and testing procedures for obtaining and maintaining ABS certification of existing blowout prevention systems (BOPs) on mobile offshore drilling units. This publication is only available for download.

**NEW**  
*Guide for the Mooring of Oil Carriers at Single Point Moorings*, December 2010 (Pub 175)  
This Guide has been developed in response to industry requests for an optional ABS Class notation to address arrangements where an oil carrier is fitted with equipment enabling it to be moored to single point moorings. This publication is only available for download.

**NEW**  
This Guide provides criteria for the design, construction, installation and survey of permanently sited support structures for offshore wind turbines. This publication is only available for download.
Recent Updates to ABS Rules & Guides

**GENERIC RULES NOTICES & CORRIGENDA**

Part 1  *Rules for Conditions of Classification (2011)*
- Rule Change Notice 1, January 2011
- Rule Change Notice 2, February 2011

Part 1  *Rules for Conditions of Classification – Offshore Units and Structures (2008)*
- Corrigenda, February 2011
- Rule Change Notice 6, January 2011

Part 2  *Rules for Materials and Welding (2011)*
- Corrigenda, February 2011

**NOTICES & CORRIGENDA**

Pub 2  *Rules for Building and Classing Steel Vessels (2011)*
- Corrigenda, February 2011

Pub 5  *Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length (2011)*
- Corrigenda, February 2011

Pub 6  *Rules for Building and Classing Mobile Offshore Drilling Units (2008)*
- Corrigenda, January 2011, February 2011
- Revised Rule Change Notice 4, January 2011

Pub 63  *Guide for Building and Classing Facilities on Offshore Installations (2009)*
- Corrigenda, February 2011

- Corrigenda, April 2011

Pub 99  *Guide for the Environmental Notation Protection for Vessels (2009)*
- Rule Change Notice 1, February 2011
- Rule Change Notice 2, April 2011

Pub 107  *Guide for Building and Classing Liftboats (2010)*
- Corrigenda, April 2011

- Corrigenda, March 2011

Pub 112  *Guide for Propulsion Systems for LNG Carriers (2005)*
- Rule Change Notice 1, February 2011

Pub 155  *Guide for Mobile Offshore Units Operating on Norwegian Continental Shelf, N-Notation (2007)*
- Corrigenda, February 2011

Pub 167  *Guide for the Environmental Protection Notation for Offshore Units, Floating Installations and Liftboats (2010)*
- Rule Change Notice 1, February 2011
- Rule Change Notice 2, April 2011

- Corrigenda, February 2011

Pub 174  *Guidance Notes on Certification of Existing Blowout Preventers and Associated Systems (2010)*
- Corrigenda, February 2011
Fairsky & UASC Awarded ABS Academy Certificates of Appreciation

ABS Academy awarded Fairsky Shipping and Trading S.A. with an ABS Academy Certificate of Appreciation, the first awarded worldwide. The certificate signifies continual dedication and commitment to training shipboard and shore-based personnel.

“There has never been a more pressing need for an expanded pool of well-trained, knowledgeable maritime personnel. Shipmanagers and operators investing in the training of shipboard and shore-based personnel, should be recognized,” says Graham Marshall, ABS Academy Director of External Training.

ABS Academy delivered a program to prepare both shipboard officers and shore-side personnel for the implementation of an integrated management system. The customized course for Fairsky took advantage of the extensive Academy training library to build a customized five-day shipboard officer course and standard shore-side personnel training course.

A series of training sessions were offered on Fairsky premises to 167 shipboard and shore-based personnel throughout 2010 both in Odessa, Ukraine and Athens, Greece. “The courses were so well received and we intend to continue to offer the sessions,” says Lefteris Karaminas, ABS Maritime Services Regional Manager, Eastern Europe and Middle East. Attendees included superintendents, department heads, managers and shipboard officers.

“The Academy’s authorized instructors relay knowledge and experience in a practical manner appropriate with the participants’ background, adding value to the overall experience,” says Capt. Leonardos Varthalitis, Fairsky General Manager. “We’re very appreciative of the Academy’s efforts.”

ABS Academy also presented an ABS Academy Certificate of Appreciation to the United Arab Shipping Company (UASC), a cargo liner and transportation company. Joseph Brincat, ABS Regional Vice President, Middle East presented the certificate to Mohammed El Sayed Ahmed, UASC Vice President, Fleet. “This in recognition of the UASC’s support to the ABS Academy,” says Brincat.

Mohammed El Sayed Ahmed, UASC Vice President, Fleet, receives an ABS Academy Certificate of Appreciation from Joseph Brincat, ABS Regional Vice President, Middle East.
ABS Training Offers Solutions, Guidance to Class Services

To assist shipowners, operators and builders, the ABS Academy in Houston regularly holds a course introducing the concepts and processes of classification. The three-day program, “Orientation to Classification Surveys and Engineering Requirements” provides a comprehensive overview of the role of the classification society as it relates to the attendees’ business operations.

In the most recent session, held in Houston, 17 participants attended the 22-module course covering such topics as class notations; ABS Rules for hull, machinery, electrical and piping; the role of the ABS surveyor; new construction and in-service surveys; plan review; materials and welding; nondestructive testing; coatings; Load Line Convention; tonnage measurement; MARPOL and SOLAS; and safety and ship management requirements.

“The training is a good orientation to ABS standards and the maritime industry,” says Christopher Montroy, US Army. “It entails everything. I will absolutely recommend Academy training to my colleagues.”

Training offered through the ABS Academy also provides clients a chance to work directly with ABS. During the course, a team of 15 authorized instructors, many of whom hold senior positions in the Survey, Engineering and Technology departments, gave participants a valuable blend of theoretical concepts and practical knowledge. These instructors provide specific insight to participants for the application of guidelines and standards such as MARPOL and SOLAS for clients’ fleets.

“In a world of increasing regulations, training is extremely important for the maritime industry,” says Graham Marshall, ABS Director of External Training. “Clients look to class to interpret regulations and provide guidance for complying with them. They are also looking to ABS training for practical courses that explain how standards and guidelines are implemented.”

The orientation course is one of over 170 training courses offered by ABS Academy through its facilities in Busan, Dubai, Houston, Piraeus, Rio de Janeiro and Singapore. Clients frequently take advantage of the Academy training library to arrange customized courses to suit their specific training needs.

To schedule a course, request a session or find out more information visit the ABS Academy website at www.absacademy.org.
Todd Grove became the Chief Technology Officer for ABS in February 2011. A 28-year veteran of ABS, Grove recently served as ABS Europe Division President and COO. Grove has held a number of senior level positions including ABS Pacific Division President and COO, ABS Chief of Staff and ABS Americas Division President and COO. Grove holds a degree in Naval Architecture and Marine Engineering from the University of Michigan and a Master’s of Business Administration from the University of Houston. He is also a graduate of the Harvard Business School Advanced Management Program. In his new position, Grove is responsible for directing the society’s technology resources and Rule development initiatives.

John McDonald assumed the position of ABS Europe Division President and COO. McDonald recently served as ABS Regional Vice President, Northern Europe and Africa. His experience also includes District Manager for the US Central District, including the Gulf of Mexico and the Great Lakes region, as well as Assistant Chief Surveyor for Naval Programs. He holds a Bachelor’s of Science in Marine Engineering from Maine Maritime Academy and a Master’s in Business Administration from Texas A&M University.

John Gallagher has assumed the position of ABS Regional Vice President of Northern Europe. Gallagher is a 30-year veteran of ABS. His experience includes ABS Regional Vice President of North America, Eastern District Manager for the US and Canada and Principal Surveyor for the Great Lakes. He holds a Bachelor’s in Marine Engineering from Massachusetts Maritime Academy and a Master’s in Marine Affairs from the University of Rhode Island.

Tom Blenk has been appointed ABS Regional Vice President of North America. A 13-year veteran of ABS, Blenk recently served as Vice President of Global Operations for the ABS Nautical Systems Division. He served as Country Manager of Dubai, Principal Surveyor in Korea and Senior Surveyor in China. He is a graduate of US Merchant Marine Academy at Kings Point and holds a Master’s in Business Administration from Rutgers University.

Assuming the role of ABS Regional Vice President Eastern Europe is Vassilios Kroustallis. Kroustallis comes to the position with 17 years experience with ABS and a Bachelor’s in Mechanical Engineering from the National Technical University of Athens.

### ADDRESS CHANGES

Please note the following changes to contact details for ABS offices.

**AUSTRALIA**
Sydney
ABS Pacific Division
Suite 2, Level 13
221 Miller Street
North Sydney, NSW 2060
Australia
Tel: 61-2-9956-7322
Night Tel: 61-4-1798-7417
Fax: 61-2-9954-4233
Email: ABS_Sydney@eagle.org

**Greece**
Piraeus
ABS Europe Division
1 Sachouri Str. & Poseidonos Ave.
Kallithea, GR176 74
Greece
Tel: 30-210-9441010
Fax: 30-210-4293809
Email: ABS_Piraeus@eagle.org

**USA**
Corpus Christi, Texas
ABS Americas Division
Mailing Address:
PO Box 1390
Ingleside, TX 78362
United States
206 Crenshaw Circle
Portland, TX 78374
United States
Email: ABS_CorpusChristi@eagle.org
Donald Liu’s Achievements Recognized by NAE
Father of Ship Structural Analysis Recognized

Donald Liu, retired ABS Executive Vice President and Chief Technology Officer, was elected as a member of the National Academy of Engineering (NAE) for his work in finite element techniques for ship structural designs and for his contributions to the developing principles for safer ships. Election to the NAE is among the highest professional distinctions accorded to an engineer.

NAE membership honors pioneers, innovators and outstanding contributors to the developing fields of technology or traditional fields of engineering, including education and research. Members are elected to NAE by current NAE members. Liu’s election brings NAE’s membership to 2,290 US members and 202 foreign associates.

“Liu pioneered the use of dynamic loading approach to assess the structural strength of vessels,” says ABS Chairman Robert D. Somerville. “He then extended that pioneering approach with the development of the innovative SafeHull system. The principles he developed for the dynamic loading approach are still in use today at ABS. His principles are also found in the current IACS Common Structural Rules.”

Liu, who co-authored the SNAME book Strength of Ships and Ocean Structures, is a member of many professional organizations and has served on numerous industry committees including the Committee on the Oil Pollution Act of 1990 Implementation Review under the auspices of the National Research Council Marine Board. His awards include the Rear Admiral Halert C. Shepheard Award, the US Coast Guard Meritorious Public Service Award, SNAME’s David W. Taylor Medal and the National Academy of Science’s Gibbs Brothers Medal.

During his 38-year career with ABS, Liu held positions as Senior Vice President of the Technical Services Group, Vice President of the Research and Development Division and Chief Research Engineer.

This photo was taken at the 1969 SNAME Annual Meeting. From left, David Bannerman, Jr., ABS Vice President, Technical; Professor Hussein Kamel, University of Arizona; Donald Liu; and Jack Obermeyer, SNAME representative.
JSTRA Meets with ABS

With the growing interest in wind and liquefied natural gas (LNG) energy and the offshore sectors, nine members of the Japan Ship Technology Research Association (JSTRA) recently met with ABS and ABS Consulting to discuss class requirements and industry standards. JSTRA is a cooperative forum that supports the development of regulations and standards as well as research to promote maritime safety, environmental protection and industry development.

During the meeting, ABS highlighted key ABS Rules and Guides and new standards for US offshore operations. Along with the growing interest in offshore structures and wind technology, there is an increased emphasis on safety. “The question of combining engineering, technology and innovation ultimately drives us to deeper and deeper water,” says William J. Sember, ABS Vice President, Global Gas Development. “But with that comes the need to focus on safety. We don’t want to compromise safety at the expense of increasingly complex vessels.”

JSTRA says they hope to use the insights of the session in global ocean development, including assistance to shipyards and marine equipment manufacturers. Those in attendance included Takaji Nakanishi, JSTRA Chairman of Strategic Research Board for Ship Technology.

Strategic Executive Management Appointments

Jean Gould has been appointed ABS Vice President, External Affairs, replacing Stewart Wade who has retired after 14 years of service. Gould is responsible for a wide range of activities including media relations and product positioning. Gould also oversees the extensive publishing and website activity of the society. Gould has more than two decades of related experience, having managed public policy issues at the state, national and international levels. She comes to the position from Coyne PR. Prior to that, she spent 18 years with Exxon Corporation holding positions in operations and corporate affairs. Gould holds a Bachelor’s of Science in Chemical Engineering from Georgia Institute of Technology, a Master’s of Business Administration from the University of Houston and a Master’s of Science in Global Affairs from New York University.

In the creation of a new role, David Weinstein has been appointed ABS Vice President, Strategic Development. Weinstein will be responsible for strategic planning, acquisitions and major internal strategic initiatives.

Weinstein joins ABS after more than 25 years as a strategy consultant in the transportation, energy and manufacturing sectors. Before joining ABS, he was a partner with Norbridge, a firm specializing in transportation and logistics. Earlier in his career, he was a partner and global leader of Accenture’s transportation strategy practice. Weinstein has a Bachelor’s of Science in Ocean Engineering and a Master’s of Science in Ocean Systems Management from Massachusetts Institute of Technology. He also holds a Master’s of Business Administration from the Wharton School at the University of Pennsylvania.
ABS Events and Conferences Calendar

19-21 May 2011
Bari-Ship
Imabari, Japan
ABS Presenter: Shuji Maruyama
www.bariship.com

23 May 2011
Heidmar Blue & Gray Golf Classic
Washington, DC
Sponsored by ABS
www.blueandgraygolf.com

24-27 May 2011
Nor-Shipping 2011
Oslo, Norway
Stand: D02-14
www.messe.no/nor-shipping

26-27 May 2011
India Drilling & Exploration Conference
Mumbai, India
ABS Presenter: Joseph Rousseau
www.idec2011.com

1-3 June 2011
Oil & Gas Asia
Kuala Lumpur, Malaysia
www.oilandgas-asia.com

4 June 2011
Society of Marine Port Engineers of New York
New York, NY, USA
Sponsored by ABS
www.smpe.org

8 June 2011
Tribute to the US Coast Guard in Our Nation’s Capital
Washington, DC
Sponsored by ABS
www.cgfdn.org

28-29 June 2011
Advancing Projects & Commercialisation of FLNG Asia
Singapore
ABS Presenter: Joseph Rousseau
www.flngsummit.com

10-14 July 2011
Port & Ocean Engineering Under Arctic Conditions Conference
Montreal, QC, Canada
Sponsored by ABS
www.poac11.com

17-22 July 2011
International Institute of Welding
Chennai, India
www.iiw2011.com

25 July 2011
Heidmar Blue & Gray Golf Classic
New York, NY, USA
Sponsored by ABS
www.blueandgraygolf.com

3 August 2011
Pacific Area Awards Dinner
San Diego, CA, USA
Sponsored by ABS
www.cgfdn.org

8 June 2011
Tribute to the US Coast Guard in Our Nation’s Capital
Washington, DC
Sponsored by ABS
www.cgfdn.org

25-25 August 2011
Maritime Matrix 2011
Cairns, Australia
ABS Presenter: Craig Hughes
www.icebergevents.com/IMarEST2011

30-31 August 2011
Fleet Maintenance & Modernization Symposium
San Diego, CA, USA
www.navalengineers.org

10-14 August 2011
US-Korea Summit on Science & Engineering
Park City, UT, USA
www.ukc.ksea.org/ukc2011

12-14 September 2011
Canadian Ferry Operators Association AGM & Conference
Owen Sound, ON, Canada
ABS Presenters: Kevin McSweeney & Clifford Baker
Sponsored by ABS
www.cfoa.ca

14-16 September 2011
Ergoship
Göteborg, Sweden
ABS Presenter: Kevin McSweeney
www.chalmers.se

15-16 September 2011
Global Greenship
Baltimore, MD, USA
Sponsored by ABS
www.marinelog.com
The insight, experience and collaboration from ABS Members contributes to the process of developing practical, impartial and authoritative standards that promote the safety of life, property and the environment,” says ABS Chairman Robert D. Somerville.

At the Annual Meeting of Members of ABS in New York this week, the following Members were elected to a three-year term on the ABS Council:

- Angeliki N. Frangou, Navios Shipmanagement Inc
- Michael Wyllie, Offshore Energy Development Corporation/SBM Offshore N.V.

Following the Annual Meeting, the ABS Council met and elected to a one-year term as members of the ABS Classification Committee:

- William T. Bennett, Jr., Bennett & Associates, LLC
- Capt. Sanjay Sukhrani, Diamond S Management LLC

Elected to three-year terms as members of the Technical Committee:

- Dr. Bo Cerup-Simonsen, A.P. Møller-Mærsk A/S
- Hu Jin-Tao, Shanghai Merchant Ship Design & Research Institute
- Raghvan Narasimhan, Diamond S Management LLC
Elected to five-year terms as ABS Members by the Council were:

- Joseph J. Angelo, Intertanko
- RADM Vineet Bakhshi, Goa Shipyard Ltd.
- Frank Dambrin, Bourbon Offshore
- Soli Engineer, Great Offshore Ltd.
- RADM Philip H. Greene, Jr., US Merchant Marine Academy
- Jesper Bo Hansen, TORM USA LLC
- Mark Heater, Sonangol Marine Services
- Hu Jin-Tao, Shanghai Merchant Ship Design & Research Institute
- Todd Johnson, Pacific-Gulf Marine Inc
- Hiroshi Kato, Toyo Shipping Line Co., Ltd.
- Naresh Kumar, Deepwater Drilling & Industries Ltd.
- Lee Jai-Seong, Hyundai Heavy Industries Co., Ltd.
- VADM H. S. Malhi, Mazagon Dock Ltd.
- Jasneet Manaise, Diamond S Management LLC
- Datuk Nasarudin bin Md Idris, MISC BHD
- John “Jack” D. Noonan, Chembulk Tankers, LLC
- Ted C. Petrone, Navios Corporation
- Constantine (Gus) Proios, Admanthos Shipping
- Raghvan Narasimhan, Diamond S Management LLC
- Loy Stewart, Jr., Detyens Shipyard
- Sanjay Sukhrani, Diamond S Management LLC
- Capt. Ebelio B. Villena, Jr., Malayan Towage & Salvage Corp.
- Stewart H. Wade, ABS Consultant
Christopher J. Wiernicki, ABS President and CEO, presents an ABS membership plaque to Tan Zuo-Jun, President of China State Shipbuilding Corporation (CSSC).

Kenneth Richardson, ABS Vice President of Energy Development (left) looks on while Rick Hall, President of MODEC International receives an ABS membership plaque from Thomas H. Gilmour, ABS Americas Division President and COO.

Tom Blenk, ABS Regional Vice President, North America (left) looks on while Joshua Shapiro, Liberty Maritime, receives an ABS membership plaque from John Gallagher, ABS Regional Vice President, Northern Europe.

Geoff Taylor, CEO of Drydocks World receives an ABS membership plaque from Joseph Brincat, Regional Vice President, Middle East.

Gregers Kudsk, Vice President – Technical, Maersk Drilling receives an ABS membership plaque from Karel Van Campenhout, ABS Senior Vice President, Europe Division.

Mark A. McGrath, ABS Pacific Division President and COO, presents an ABS membership plaque to Captain Tey Yoh Huat, APL Vice President, Technical Services.
Louis Raspino, President and COO of Pride International Inc. receives an ABS membership plaque from Christopher J. Wiernicki, ABS President and CEO.

Roelof Horstman, Operations Manager, Naviera Bourbon Tamaulipas, Tampico, Mexico, accepts an ABS membership plaque on behalf of Ing. Gerardo Sanchez, Sub Director, Naviera Bourbon Tamaulipas, Tampico, Mexico. Paul DeLaire ABS Country Manager, Mexico presented the plaque.

Adam Moilanen, ABS Greater China Division President and COO, presents an ABS membership plaque to Wang Xingru, President of COSCO Shipyard Group Co., Ltd.

Peter Liew, Commercial Director of Aftramax, AET receives an ABS membership plaque from Eric Kleess, Senior VP Operations, ABS Americas, while Mike Wilcock, Fleet Manager, AET Inc. Ltd. (left), Bobby Khoo, Fleet Manager AET Shipmanagement (USA) LLC and Ron Wood, Chartering – Americas, AET INC. Ltd. look on.

Tony Nassif, ABS Consulting President and CEO, receives an ABS membership plaque from Robert D. Somerville, ABS Chairman.

Thomas H. Gilmour, ABS Americas Division President and COO presents an ABS membership plaque to John Rynd, President and CEO of Hercules Offshore, while James Noe, Chief Compliance Officer/Senior Vice President General Counsel of Hercules Offshore and Kenneth Richardson, ABS Vice President of Energy Development look on.

Adam Moilanen, ABS Greater China Division President and COO, presents an ABS membership plaque to Wang Xingru, President of COSCO Shipyard Group Co., Ltd.

Roelof Horstman, Operations Manager, Naviera Bourbon Tamaulipas, Tampico, Mexico, accepts an ABS membership plaque on behalf of Ing. Gerardo Sanchez, Sub Director, Naviera Bourbon Tamaulipas, Tampico, Mexico. Paul DeLaire ABS Country Manager, Mexico presented the plaque.

Adam Moilanen, ABS Greater China Division President and COO, presents an ABS membership plaque to Wang Xingru, President of COSCO Shipyard Group Co., Ltd.

Peter Liew, Commercial Director of Aftramax, AET receives an ABS membership plaque from Eric Kleess, Senior VP Operations, ABS Americas, while Mike Wilcock, Fleet Manager, AET Inc. Ltd. (left), Bobby Khoo, Fleet Manager AET Shipmanagement (USA) LLC and Ron Wood, Chartering – Americas, AET INC. Ltd. look on.

Tony Nassif, ABS Consulting President and CEO, receives an ABS membership plaque from Robert D. Somerville, ABS Chairman.

Thomas H. Gilmour, ABS Americas Division President and COO presents an ABS membership plaque to John Rynd, President and CEO of Hercules Offshore, while James Noe, Chief Compliance Officer/Senior Vice President General Counsel of Hercules Offshore and Kenneth Richardson, ABS Vice President of Energy Development look on.
Adam Moilanen, ABS Greater China Division President and COO, receives an ABS membership plaque from Robert D. Somerville, ABS Chairman.

Bertus Bernhard, President of SBM Offshore – GustoMSC, receives an ABS membership plaque from Todd W. Grove, ABS Chief Technology Officer.

Terry Watkins, Chairman of the Board for Malayan Towage and Salvage receives an ABS membership plaque from William McKay, ABS Country Manager, Philippines.

Thomas H. Gilmour, ABS Americas Division President and COO, presents an ABS membership plaque to Mel Causer, Senior Vice President, Zurich Global Energy.

Christopher J. Wiernicki, ABS President and CEO, presents an ABS membership plaque to Dong Qiang, Vice President of China Shipbuilding Industry Corporation (CSIC).

Kenneth Richardson, ABS Vice President of Energy Development, receives an ABS membership plaque from Robert D. Somerville, ABS Chairman.
Newly Classed Vessels and Recent Contracts

DHIRUBHAI DEEPWATER KG2, a 60,349 gt drillship, SH-DLA, CDS, DPS-3, NBLES, built by Samsung H I for Deepwater Pacific 1

1 October 2010 to 30 March 2011
Newly Classed Vessels and Facilities

**TANKERS**

ACHILLEAS, 156,915 gt/297,863 dwt, SH, SHCM, VEC, TCM, RRDA, built by Universal Shipbuilding for Achilleas Carriers

ACHILLEAS, 81,278 gt/157,883 dwt, AB-CM, CSR, VEC, TCM, ENVIRO, GP, RRDA, built by Hyundai H I for Mount Shipping

ALPIN LEGEND, 29,826 gt/50,000 dwt, AB-CM, CSR, RES, VEC-L, TCM, RRDA, built by SPP Shipbuilding for Artemis Shipowning

ALPINE LIGHT, 29,826 gt/50,000 dwt, AB-CM, CSR, RES, VEC-L, TCM, RRDA, built by SPP Shipbuilding for Aphrodite Shipowning

ALTESSE, 42,225 gt/74,103 dwt, AB-CM, CSR, RES, VEC-L, TCM, RRDA, built by SPP Plant & Shipbuilding for Altesse

ARCTURUS VOYAGER, 161,535 gt/317,053 dwt, AB-CM, CSR, RES, PORT, VEC-L, TCM, built by Daewoo Shipbuilding & Marine Engineering for Aquarium Shipholding

ATHIRI, 42,225 gt/73,982 dwt, AB-CM, CSR, RES, VEC-L, TCM, RRDA, built by SPP Plant & Shipbuilding for Athiri

AYANE, 12,137 gt/16,971 dwt, ES, Ice Class “IA”, NBLES, VEC, RRDA, built by Yardimci Gemi Insa for Ayane Shipping

B. SKY, 3,978 gt/5,710 dwt, VEC, built by Qingdao Hyundai Shipbuilding for Sky Marine Holdings

B. STAR, 3,978 gt/5,600 dwt, VEC, TCM, built by Qingdao Hyundai Shipbuilding for Star Marine Holdings

B. OCEAN, 3,978 gt/5,693 dwt, VEC, RRDA, built by Qingdao Hyundai Shipbuilding for Ocean Marine Holdings

BUNGA BALSAM, 29,124 gt/45,612 dwt, AB-CM, CSR, VEC, GP, RRDA, built by SLS Shipbuilding for MISC Berhad

BUNGA BANYAN, 29,124 gt/45,444 dwt, AB-CM, CSR, VEC, GP, RRDA, built by SLS Shipbuilding for MISC Berhad

CAPE DURANGO, 8,278 gt/12,834 dwt, VEC, RRDA, built by STX Offshore & Shipbuilding for Mt Rio Durango Cooperatief

CAPE ENDEAVOUR, 60,193 gt/79,993 dwt, SH, SHCM, VEC, RRDA, built by Hudong-Zhonghua Shipbuilding for Orion Bulkers

CARINA, 28,813 gt/47,917 dwt, SHR, VEC, RRDA, built by Iwagi Zosen for Blue Wake Shipping

DESH GARIMA, 64,397 gt/114,790 dwt, AB-CM, CSR, VEC-L, TCM, built by Hyundai H I for Shipping Corporation of India

DESH MAHIMA, 64,397 gt/114,686.1 dwt, AB-CM, CSR, VEC-L, TCM, built by Hyundai H I for Shipping Corporation of India

DIAMOND STAR, 5,030 gt/5,897 dwt, TCM, built by CSC Chongqing Dongfeng Shipbuilding for Overseas Maritime Carriers

DONGBU PROMY 2, 7,072 gt/10,976 dwt, VEC, RRDA, built by Nok Bong Shipbuilding for DB Marine 2

ECO III, 3,308 gt/4,999 dwt, ES, R2, VEC, built by Yardimci Gemi Insa for Cimil Shipping

EDZARD SCHULTE, 11,246 gt/16,379 dwt, ES 2020, TCM, RRDA, built by Jiangxi Jiangzhou Union Shipbuilding for Carnane Shipping

ELISABETH SCHULTE, 11,246 gt/16,371 dwt, ES 2020, TCM, RRDA, built by Jiangxi Jiangzhou Union Shipbuilding for Cooldhary Shipping

EMPIRE STATE, 29,527 gt/48,635 dwt, SH, SHCM, FL 25, VEC, RRDA, built by General Dynamics NASSCO for American Petroleum Tankers

EVERGREEN STATE, 29,606 gt/48,641 dwt, SH, SHCM, FL 25, VEC, RRDA, built by General Dynamics NASSCO for American Petroleum Tankers

EVERHARD SCHULTE, 11,233 gt/16,658 dwt, ES 2020, TCM, built by Jiangxi Jiangzhou Union Shipbuilding for Pasir Ris Park Shipping
EMPIRE STATE, a 48,635 dwt oil and chemical tanker, SH, SHCM, FL 25, VEC, RRDA, built by General Dynamics NASSCO for American Petroleum Tankers.

INA THERESA, a 12,825 dwt oil and chemical tanker, VEC, RRDA, built by STX Offshore & Shipbuilding for Rio Delaware Schifffahrtsgesellschaft.
PISSIOTIS, 85,362 gt/163,000 dwt, AB-CM, CSR, VEC-L, TCM, built by New Times Shipbuilding for Agroexport
PUNTA MEDANOS, 11,431 gt/16,500 dwt, TCM, RRDA, built by Zhejiang Friendship Shipyard for Antares Naviera
RBD ANEMA E CORE, 60,185 gt/110,000 dwt, SH, SHCM, VEC, TCM, built by Hudong-Zhonghua Shipbuilding for Rizzo-Bottiglieri de Carlini Armatori
SAGA, 61,332 gt/115,000 dwt, AB-CM, CSR, ES, NIBS, VEC-L, TCM, built by Samsung H I for Olympian Zeus Owners
SAHAM, 156,919 gt/299,991 dwt, SH, SHCM, VEC, TCM, RRDA, built by Universal Shipbuilding for Saham Maritime Transportation
SAMPATIKI, 5,031 gt/6,436 dwt, VEC, built by Zhenjiang Sopo Shipbuilding Co., ltd for Avin International S.A.
SANKO NATURE, 11,987 gt/19,900 dwt, VEC, RRDA, built by Fukuoka Shipbuilding for Nature Chemicalship
SANKO NAVIGATOR, 11,987 gt/19,991 dwt, VEC, RRDA, built by Fukuoka Shipbuilding for Fernus Line
SHANNON STAR, 8,537 gt/13,010 dwt, VEC, GP, RRDA, built by Hyundai H I for Shipping Corporation of India
SOLANA, 156,651 gt/279,991 dwt, SH, SHCM, VEC, TCM, RRDA, built by Shanghai Jiangnan-Changxing Shipbuilding for Nestori Maritime
SPRING SPLENDOR, 156,651 gt/296,808 dwt, SH, SHCM, VEC, RRDA, built by Shanghai Jiangnan-Changxing Shipbuilding for Giant Shipping Co
STELLA, 5,031 gt/6,448 dwt, ACC, VEC, RRDA, built by Zhenjiang Sopo Shipbuilding for Pearl Dawn Shipping
SWARNA JAYANTI, SWARNA KAMAL, 156,651 gt/279,991 dwt, SH, SHCM, VEC, RRDA, built by Shanghai Jiangnan-Changxing Shipbuilding for Diversified Investments
YIFENG 6, 5,031 gt/6,401 dwt, built by Zhejiang Antai Ship Co for Hong Kong Yufeng Shipping

BULK CARRIERS

NORD INTEGRITY, a 44,998 dwt oil tanker, SHR, VEC, built by Iwagi Zosen for World Star Shipping.

SAHAM, a 299,991 dwt crude and oil product tanker, SH, SHCM, VEC, TCM, RRDA, built by Universal Shipbuilding for Saham Maritime Transportation.

CAPTAIN HARRY, a 57,266 dwt bulk carrier, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by STX Dalian Shipbuilding for Agios Steamship.
BALTIC WOLF, 91,373 gt/177,752 dwt, BC-A, SH, SHCM, GRAB, TCM, RRDA, built by Shanghai Jiangnan-Changxing Shipbuilding for Baltic Wolf

BEAUTIFUL RENA, 33,194 gt/57,181 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, BWE, RRDA, built by STX Dalian Shipbuilding for Trojan Maritime Inc.

BOTTIGLIERI FRANCO VELA, 53,722 gt/92,550 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, built by Jiangsu New Yangzi Shipbuilding for Giuseppe Bottiglieri Shipping

BOTTIGLIERI GUILIO BORRIELLO, BOTTIGLIERI SOPHIE GREEN, 51,255 gt/92,500 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, built by Jiangsu New Yangzi Shipbuilding for Giuseppe Bottiglieri Shipping

BULK ACHIEVEMENT, 91,971 gt/175,800 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Zhoushan Jinhaiwan Shipyard for CLC Ship Chartering III

BULK INTEGRITY, 91,971 gt/175,966 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Zhoushan Jinhaiwan Shipyard for CLC Ship Chartering II

CAPE AGAMEMMNON, 92,744 gt/179,221 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Sungdong Shipbuilding & Marine Engineering for Patroklos Marine

CAPE ALEXANDROS, 92,744 gt/179,221 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Sungdong Shipbuilding & Marine Engineering for Ektoras Marine

CAPTAIN HARRY, 33,194 gt/57,266 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by STX Dalian Shipbuilding for Agios Steamship

CARO, 91,373 gt/177,832 dwt, BC-A, SH, SHCM, GRAB(25), TCM, RRDA, built by Shanghai Waigaoqiao Shipbuilding for Orion Bulkers

CHRISTINA J, 91,373 gt/177,832 dwt, BC-A, SH, SHCM, GRAB(25), TCM, built by Shanghai Waigaoqiao Shipbuilding for Fairsea Shipping

CLIPPER IWAGI, 17,009 gt/28,050 dwt, BC-A, GRAB, SHR, built by Shimanami Shipyard for Los Halillos Shipping

CMB CHARLOTTE, 20,846 gt/32,626 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Jiangsu Lanbo Shipbuilding for Bohandymar

CONTI PERIDOT, 33,036 gt/57,010 dwt, BC-A, AB-CM, CSR, ES, GRAB(20), TCM, RRDA, built by Taizhou Sanfu Ship Engineering for Conti 168

CS CRYSTAL, 19,972 gt/30,477 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Tsuji H I for Campbell Shipping

DANIELA SCHULTE, 51,239 gt/93,062 dwt, BC-A, AB-CM, CSR, GRAB(30), TCM, RRDA, built by Taizhou Catic Shipbuilding H I for Reederel Thomas Schulte

EGS CREST, 23,054 gt/35,914 dwt, BC-A, SH, SHCM, GRAB(20), TCM, RRDA, built by Hyundai Mipo Dockyard for East Gulf Shipholding

EGS TIDE, 23,054 gt/35,916 dwt, BC-A, SH, SHCM, GRAB(20), TCM, RRDA, built by Hyundai Mipo Dockyard for East Gulf Shipholding

EGS WAVE, 23,054 gt/35,921 dwt, BC-A, SH, SHCM, GRAB(20), TCM, RRDA, built by Hyundai Mipo Dockyard for East Gulf Shipholding

ELINA B, 34,374 gt/58,923 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by SPP Shipbuilding for Megisti Shipping

EMERALD STAR, 33,205 gt/57,367 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, BWE, RRDA, built by STX Dalian Shipbuilding for Dubai Bulkers

EPIC, 93,360 gt/182,060 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Odense Steel Shipyard for Moonshade Shipping

FAUSTINA, 91,373 gt/177,775 dwt, BC-A, SH, SHCM, GRAB(25), TCM, GP, built by Shanghai Waigaoqiao Shipbuilding for Califa Navigation
FORTUNE PLUM, 33,036 gt/57,053 dwt, BC-A, AB-CM, CSR, ES, GRAB(20), TCM, built by Taizhou Sanfu Ship Engineering for White Rosebay Shipping

FOUR NABUCCO, 23,456 gt/34,404 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, built by SPP Shipbuilding for Four Handy

FOUR OTELLO, 23,456 gt/34,356 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, built by SPP Shipbuilding for Four Handy

GENCO OCEAN, 23,456 gt/34,403 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, RRDA, built by SPP Shipbuilding for Genco Ocean

GH GLORY, 40,325 gt/74,973 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Sasebo H I for Way Ocean Shipping

GOLDEN EMINENCE, 43,498 gt/79,444 dwt, BC-A, AB-CM, CSR, ES, GRAB(20), TCM, built by Zhoushan Jinhaiwan Shipyard for Golden Future

GOLDEN EMPRESS, 43,498 gt/79,600 dwt, BC-A, AB-CM, CSR, ES, GRAB(20), TCM, RRDA, built by Zhoushan Jinhaiwan Shipyard for Golden Empress

GOLDEN ENDEAVOUR, 43,498 gt/79,600 dwt, BC-A, AB-CM, CSR, ES, GRAB(20), TCM, RRDA, built by Zhoushan Jinhaiwan Shipyard for Golden Endeavour

GOLDEN ENDURER, 43,498 gt/79,600 dwt, BC-A, AB-CM, CSR, ES, GRAB(20), TCM, RRDA, built by Zhoushan Jinhaiwan Shipyard for Golden Endurer

GOLDEN SHANGHAI, 91,971 gt/175,835 dwt, BC-A, AB-CM, CSR, GRAB(25), RRDA, built by Zhoushan Jinhaiwan Shipyard for Golden Shanghai

GOLDEN ZHEJIANG, 91,971 gt/175,837 dwt, BC-A, AB-CM, CSR, GRAB(25), RRDA, built by Zhoushan Jinhaiwan Shipyard for Golden Zhejiang

GOLDEN ZHOUZHAN, 91,971 gt/175,853 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, RRDA, built by Zhoushan Jinhaiwan Shipyard for Golden Zhousan

HANJIN SHIKOKU, 92,725 gt/180,200 dwt, BC-A, AB-CM, CSR, GRAB(20), built by Imabari Shipbuilding for Hawaii Shipping

HEROIC, 93,360 gt/182,060 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by Odense Steel Shipyard for Scarlet Trading

HISPANIC G, 51,255 gt/93,237 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, RRDA, built by Jiangsu New Yangzi Shipbuilding for Gestioni Armatoriali

JIN LANG, 51,265 gt/93,280 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, RRDA, built by Jiangsu New Yangzi Shipbuilding for Jinlang Shipping

JIN MING, 33,919 gt/61,414 dwt, BC-A, SHR, RRDA, built by Oshima Shipbuilding for Jinling Marine

JIN YUE, 33,036 gt/56,934 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by Shanghai Shipyard for Jinhe Marine

KEY BOUNDARY, 44,471 gt/83,369 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Sanoyas Hishino Meisho Corp for Primavera Montana

KEY CALLA, 44,428 gt/83,353 dwt, BC-A, AB-CM, CSR, GRAB(20), RRDA, built by Sanoyas Hishino Meisho for James Cook Seatead

KEY HONGKONG, 42,942 gt/82,008 dwt, BC-A, AB-CM, CSR, GRAB(20), RRDA, built by Tsuneishi Shipbuilding for Kuang Ming

LM VICTORIA, 51,255 gt/93,318 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, RRDA, built by Jiangsu New Yangzi Shipbuilding for Liberty Maritime International

LYULIN, 19,906 gt/30,868 dwt, BC-A, AB-CM, CSR, GRAB(20), Ice Class “IC”, TCM, built by Shanhaiqiang Shipbuilding Industry for Lyulin Maritime

MERCURIUS, 23,456 gt/34,386 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, built by SPP Shipbuilding for Seaorbit Shipping

MINERAL NEW YORK, 91,971 gt/175,841 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, GP, RRDA, built by Zhoushan Jinhaiwan Shipyard for Bocimar International

MINERAL STONEHENGE, 91,971 gt/175,800 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, GP, RRDA, built by Zhoushan Jinhaiwan Shipyard for Bocimar International
NAVIOS ALTAMIRA, 92,668 gt/180,000 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, RRDA, built by Sungdong Shipbuilding & Marine Engineering for Faith Marine

NAVIOS BONHEUR, 92,715 gt/179,905 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, RRDA, built by Sungdong Shipbuilding & Marine Engineering for Red Rose Shipping

NAVIOS BUENA VENTURA, 92,715 gt/179,144 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, built by Sungdong Shipbuilding & Marine Engineering for Floral Marine

NAVIOS ETOILE, 92,715 gt/179,144 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, built by Sungdong Shipbuilding & Marine Engineering for Ducale Marine

NAVIOS FULVIA, 92,715 gt/179,144 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, RRDA, built by Sungdong Shipbuilding & Marine Engineering for Customized Development

NAVIOS LUZ, 92,715 gt/179,144 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, built by Sungdong Shipbuilding & Marine Engineering for Kohylia Shipmanagement

NAVIOS MELODIA, 92,715 gt/179,312 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, RRDA, built by Sungdong Shipbuilding & Marine Engineering for Pandora Marine

NORTHERN DANCER, 22,523 gt/31,875 dwt, BC-A, AB-CM, CSR, TCM, built by Shanhaiguan Shipbuilding Industry for Meridan Marine Management

ORSOLA BOTTIGLIERI, 91,373 gt, BC-A, SH, SHCM, GRAB(25), TCM, built by Shanghai Waigaoqiao Shipbuilding for Rizzo-Bottiglieri-De Carlini Armatori

PAOLA BOTTIGLIERI, 53,722 gt/69,997 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, built by Jiangsu New Yangzi Shipbuilding for Giuseppe Bottiglieri Shipping


PEACE VOYAGE, 51,265 gt/93,236 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, built by Jiangsu New Yangzi Shipbuilding for East Sunrise International Shipping

PROMISE 2, 22,927 gt/32,400 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, GP, RRDA, built by Samho Shipbuilding for Kleomenis Shipping

PROMISE 3, 22,927 gt/32,312 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, GP, RRDA, built by Samho Shipbuilding for Promy 3

REGINA, 20,887 gt/32,588 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Liaoning Hongguan Shipbuilding for Globex Shipping

RINI, 91,373 gt/178,069 dwt, BC-A, SH, SHCM, GRAB(25), TCM, built by Shanghai Waigaoqiao Shipbuilding for Faire Marine

ROSCO BANYAN, 40,325 gt/74,967 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by Sasebo H I for Hahui (Tianjin) Leasing

ROSCO MAPLE, 93,385 gt/181,453 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Sasebo Heavy Industries for Jianxin Jinyi Leasing

ROSCO OLIVE, 40,325 gt/74,961 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by Sasebo H I for Jianxin Jinyi Leasing

RUGIA, 91,374 gt/176,505 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, RRDA, built by Shanghai Waigaoqiao Shipbuilding for Orion Bulkers

SAG BULK GERMANY, 91,971 gt/175,835 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Zhoushan Jinhaiwan Shipyard for Sag Unternehmensbeteiligungs ges MS Bulk

TESORO, 20,939 gt/32,640 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Liaoning Hongguan Shipbuilding for Globex Shipping

THALASSINI KYRA, 34,374 gt/58,923 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by SPP Plant & Shipbuilding for Acacia Development

THELISIS, 34,374 gt/58,814 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, RRDA, built by SPP Plant & Shipbuilding for Sandstone Shipping

MUSTAFA DAYI, a 1,849 teu containership, SH, SHCM, Ice Class “IC”, NIBS, built by Sedef Gemi Insaati for Kasif Denizcilik.

RASHEEDA, a 266,276 m³ liquefied natural gas carrier, SH, SH-DLA, SHCM, ES2020, NIBS, TCM, built by Samsung H I for Qatar Gas Transport.

CONTAINERSHIPS

COSCO KAWASAKI, 4,506 teu, SH, SHCM, TCM, built by Samsung H I for Lucretia Shipping

MAERSK WOLGAST, 1,713 teu, SH, SHCM, built by CSBC for White Grape Shipping

MERATUS BENOA, 368 teu, built by Fujian Fu-An Chengfeng Shipbuilding for PT Meratus Line

MERATUS BONTANG, 368 teu, built by Guangzhou Salvage Company Dockyard for PT Meratus Line

MOL DIAMOND, MOL DIRECTION, MOL DISTINCTION, 4,308 teu, SH, built by Daewoo Shipbuilding & Marine Engineering for Castle

MUSTAFA DAYI, 1,849 teu, SH, SHCM, Ice Class “IC”, NIBS, built by Sedef Gemi Insaati for Kasif Denizcilik

OOCL JAKARTA, OOCL SAVANNAH, 4,578 teu, SH, SHCM, RRDA, built by Samsung H I for RBSSAF (26) Limited

GAS CARRIERS

AAMIRA, 266,237 m³, built by Samsung H I for Qatar Gas Transport

GASLOG SAVANNAH, 154,984 m³, SH, SH-DLA, SHCM, ES, RES, DFD, NIBS, PORT, RRDA, built by Samsung H I for Gas-One

GASLOG SINGAPORE, 155,006 m³, SH, SH-DLA, SHCM, ES, RES, DFD, NIBS, PORT, built by Samsung H I for Gas-Two

METHANE BECKI ANNE, 170,678 m³, SH, SH-DLA, SHCM, FL 40, NBL, RRDA, built by Samsung H I for Methane Service

METHANE MICKIE HARPER, 170,684 m³, SH, SH-DLA, SHCM, FL 40, NBL, RRDA, built by Samsung H I for Methane Service

METHANE PATRICIA CAMILA, 170,683 m³, SH, SH-DLA, SHCM, FL 40, NBL, RRDA, built by Samsung H I for Methane Service

RASHEEDA, 266,276 m³, SH, SH-DLA, SHCM, ES2020, NIBS, TCM, built by Samsung H I for Qatar Gas Transport

ZARGA, 266,433 m³, SH, SH-DLA, SHCM, ES2020, NIBS, TCM, built by Samsung H I for Qatar Gas Transport

OFFSHORE

Column Stabilized Accommodation Unit

FLOATEL RELIANCE, 18,426 gt, Fire Fighting Vessel Class 2, OPS-2, built by Keppel Fels for Floatel Reliance

Column Stabilized Drilling Units

GOLD STAR, 27,065 gt, OPS-2, built by Keppel Fels for Gold Star Equities

SS PANTANAL, 24,268 gt, OPS-2, built by Yantai CIMC Raffles Offshore for Soratu Drilling
Drillships
DEEP OCEAN CLARION, 60,162 gt, SH-DLA, CDS, DPS-3, NBLES, WT-READY, built by Samsung H I for Pride International
DEEP OCEAN MENDOCINO, 60,105 gt, SH-DLA, CDS, DPS-3, NBLES, WT-READY, built by Samsung H I for Pride International
DHIRUBHAI DEEPWATER KG2, 60,349 gt, SH-DLA, CDS, DPS-3, NBLES, WT-READY, built by Samsung H I for Deepwater Pacific 1
OCEAN RIG CORCOVADO, 59,610 gt, SH-DLA, CDS, DPS-3, NBLES, built by Samsung H I for Drillship Hydra Owners
PACIFIC BORA, 60,349 gt, SH-DLA, CDS, DPS-3, NBLES, WT-READY, built by Samsung H I for Drill Ship International
PLATINUM EXPLORER, 67,825 gt, SH-DLA, built by Daewoo Shipbuilding & Marine Engineering for Vantage International Management
VITORIA 10000, 60,331 gt, SH-DLA, CDS, DPS-3, WT-READY, built by Samsung H I for Drill Ship International
WEST GEMINI, 59,626 gt, SH-DLA, CDS, DPS-3, NBLES, WT-READY, built by Samsung H I for Seadrill Gemini

Fixed Platforms
JKWI, KPWF, NPWK, PLWI, SUWC, YUWA built by Cuel Limited for Chevron Thailand Exploration & Production
PLLQ2, built by PT McDermott for Chevron Thailand Exploration & Production

Floating Offshore Installations
ATP TITAN, built by Gulf Marine Fabricators for ATP Oil & Gas

Self Elevating Drilling Units
EL QAHER I, EL QAHER II, 9,985 gt, built by PPL Shipyard for Egyptian Offshore Drilling
KAN TAN 6, 9,985 gt, built by PPL Shipyard for Shanghai Offshore Petroleum Exploration & Development
MENADRILL I, 6,978 gt, built by Maritime Industrial Services for Menadrill Investment
NAGA 3, 9,627 gt, built by PT Graha Trisaka Industry for UMW Tandard Drilling 3
PERRO NEGRO 8, 9,627 gt, built by PT Graha Trisaka Industry for Saipen Portugal Comercio Maritimo
REMEDIALSEV SOLUTION, 7,530 gt, DPS-1, built by Cosco Nantong Shipyard for Remedial Offshore
ROWAN EKL-11, 7,279 gt, CDS, built by Keppel Amfels for Rowan Companies
SETTY, 9,985 gt, built by PPL Shipyard for Egyptian Drilling
TAM DAO 02, 9,985 gt, built by PPL Shipyard for Vietsovpetro Joint Venture
WEST JUNO, 10,406 gt, CDS, built by Keppel Fels for Seadrill Management
WEST LEDA, 9,985 gt, CDS, built by PPL Shipyard for Seadrill Management

Self Elevating Units
GMS ENDURANCE 6101, 5,087 gt, DPS-2, built by Sainty Marine for Gulf Marine Services
HAI YANG SHI YOU 901, HAI YANG SHI YOU 902, 3,074 gt, PAS, built by China Merchants H I for China Oilfield Services
KELOA 4306, 2,910 gt, PAS, built by Yangzhou Taurus Shipbuilding for Navtec Keloa Investment
LEWEK LIFTER, 5,097 gt, built by Saigon Shipyard for Teras Conquest 3

Single Point Moorings
HPCL - MITTAL SPM, built by SBM Atlantia for HPCL - Mittal Pipelines

GOLD STAR, a 27,065 gt column stabilized drilling unit, DPS-2, built by Keppel Fels for Gold Star Equities.

OCEAN RIG CORCOVADO, a 59,610 gt drillship, SH-DLA, CDS, DPS-3, NBLES, built by Samsung H I for Drillship Hydra Owners.
**MISCELLANEOUS**

**Barges**

- 650-3, 13,462 gt, SH, SHCM, built by VT Halter Marine for Vessel Management Services
- ABC-2, 1,261 gt, built by Astilleros Bender for Astilleros Bender
- ABJV 1, ABJV 2, ABJV 3, ABJV 4, 4,946 gt, built by Huarun Dadong Dockyard for Aarsleff Billfinger Berger JV London Array
- AFRICAN LIFTER, 9,150 gt, built by Yantai CIMC Raffles Offshore for Marine Subsea Lifter
- ALE 300, 3,934 gt, built by Yangzhou Hairun Shipping for Ale Transport Systems
- ANCHORAGE TRADER, 4,889 gt, built by Gunderson Marine for Northland Services
- ANNA ELIZABETH, 2,746 gt, built by U.S. Barge for Harley Marine Services
- ARTHA SARANA XV, 3,085 gt, built by Jinsheng Ships Manufacture for PT Mitra Kemakmuran Line
- ARTHA SARANA XVI, 3,085 gt, built by Nantong Jinjian Shipbuilding & Repairing for PT Mitra Kemakmuran Line
- BARGE 455 8, 7,913 gt, built by Gunderson Marine for Vessel Management Services
- BENAMI-II, 3,060 gt, built by Yangzhou Hairun Shipping for PT Andalan Lancar Niaga
- BIG GIRL, BIG GUY, 4,851 gt, built by Wujiang Soho Xinheng Shipyard for Asian Shipping
- BIG SKY, BIG STAR, 3,151 gt, built by Taizhou Sanfu Ship Engineering for Asian Shipping
- BRM - 02, 1,430 gt, built by Nantong Tongde Shipyard for PT BRM Marine
- BS 27, 4,506 gt, built by Yangzhou Topniche Shipbuilding for Bok Sen Asia
- BUKIT EMAS 2501, 2,305 gt, built by PT Sumatera Maju Jaya for PT Sumatera Maju Jaya
- CAJUN COURAGE, 1,063 gt, built by C & C Marine and Repair for Cajun Maritime
- CBR 793, 2,152 gt, built by Sneed Shipbuilding for Central Boat Rentals
- CHARLES 205, 3,146 gt, built by Nanjing Yonghua Shipbuilding for PT Panca Merak Samudera
- CHARLES 206, 3,233 gt, built by Nanjing Yonghua Shipbuilding for PT Panca Mearak Samudera
- CHARLES 207, CHARLES 208, 3,233 gt, built by Nanjing Asiapride Shipping Making for PT Panca Merak Samudera
- CIB 722, 2,164 gt, built by C & C Marine and Repair for CIBCO Barge Line
- COSL 225, 7,174 gt, built by China Merchants H I for China Oilfield Services
- DBL 55, 4,276 gt, built by Zidell Marine for Zidell Marine
- DELMA-11, 2,305 gt, built by Yangzhou Hairun Shipping for National Marine Dredging
- DLB NORCE ENDEAVOUR, 26,544 gt, built by PT TWC Bintan for Norce Offshore
- DMOCLAIRE, 2,164 gt, built by C & C Marine and Repair for Dale Martin Offshore
- DOUBLE SKIN 303, 2,671 gt, VEC, built by Orange Shipbuilding for Vane Line Bunkering
- DY 303, 10,528 gt, built by Oriental Precision and Engineering for PSK Investment
- EMI 2400, 12,602 gt, built by Gunderson Marine for Express Marine
- FAJAR 3001, 3,222 gt, built by PT Jasamarin Engineering for Harvest Marine Engineering
- FINACIA 101, FINACIA 102, 5,248 gt, built by Nantong Tiannan Shipyard for PT Mitra Bahtera Segar sejati
- FORDECO 3007, 3,105 gt, built by Nanjing Ding Feng Shipbuilding for Sapangar Shipyard

**KONGO STAR**, a 13,011 dwt oil and chemical tanker, VEC, GP, RRDA, built by 21st Century Shipbuilding for Rigel Schiffahrts.

**Naming ceremony for OOCL SAVANNAH**, a 4,578 teu containership, SH, SHCM, RRDA, built by Samsung H I for RBSSAF (26) Limited.

**METHANE PATRICIA CAMILA**, a 170,683 m³ liquefied natural gas carrier, SH, SH-DLA, SHCM, FL 40, NBL, RRDA, built by Samsung H I for Methane Service.
GB 8283, 2,331 gt, built by Nanjing Yonghua Shipbuilding for Greenbay Marine

GLOBAL LONG BEACH, 1,005 gt, built by Trinity Marine Group for Global Marine Transportation

GLOBAL SEATTLE, 1,004 gt, built by Trinity Marine Group for Global Marine Transportation

GLORY MARINE 5, GLORY MARINE 6, GLORY MARINE 9, GLORY MARINE 10, 8,528 gt, built by Jiangsu Huatai Shipbuilding for Harita Berlian Shipping

GLORY MARINE 7, GLORY MARINE 11, 8,528 gt, built by Nantong Hongqiang Marine H I for Harita Berlian Shipping

GLORY MARINE 8, 8,528 gt, built by Nantong Tongcheng Ship Manufacturing for Harita Berlian Shipping

GLORY MARINE 12, 8,528 gt, built by Nanjing Yonghua Shipbuilding for Harita Berlian Shipping

GOLDEN HILL 2301, 1,438 gt, built by PT Jasamarin Engineering for Khoo Kian Seng Machinery

GSL-10, 2,140 gt, built by Yangzhou Hairun Shipping for PT Pelayarans Gema Samudera Lines

JIAO LONG, 30,807 gt, built by Nantong Jialong H I Offshore & Marine for Jiangsu Cenen H I Technology

JMC 2822, JMC 2823, 3,418 gt, built by Nanjing Nanjiang Shipbuilding for President Marine

JOSEFA RUFINA I, 5,775 gt, built by Signal International for Waller Marine

KM-1, 12,031 gt, built by Kencana H I for Mermaid Kencana Rig 1

LION TOLL FC 5, LION TOLL FC 8, 2,460 gt, built by PT Karimun Sembawang Shipyard for Techvance Marine Services

M-2501, 2,078 gt, built by Tres Palacios Marine for Misener Marine Construction

MARGARITA I, 5,775 gt, built by Signal International for Waller Marine

MERLIN 2301, MERLIN 2302, MERLIN 2303, 1,424 gt, built by Nanjing Yonghua Shipbuilding for Merlin Shipping

MOPC 1, MOPC 2, 3,105 gt, built by Nanjing Wujiang Shipyard for MOPC

NAUTICA 23, NAUTICA 24, 3,279 gt, built by PT Marcopolo Shipyard for MPST Marine

NAUTICA 25, NAUTICA 26, 3,279 gt, built by PT Marcopolo Shipyard for PT Ufuk Terang Cakrawala

NORSUL 14, 3,589 gt, built by Bogazici Tersanelicik Gemi Insa San. Ve Tic. for Companhia de Navegacao Norsul Srl

P-11, 1,611 gt, built by Industrias Astivik for C I Prodeco - Productos de Colombia

PARTA JAVA 3005, 3,060 gt, built by Yangzhou Hairun Shipping for Regent Offshore

PB 2502, 2,212 gt, built by Nanjing East Star Shipbuilding for Putra Bulian Shipping & Trading

PB 3009, PB 3010, 3,146 gt, built by Nanjing Yonghua Shipbuilding for Putra Bulian Shipping & Trading

PELANGI TIRTA MAS, 8,402 gt, built by PT Samudra Marine Indonesia for PT Rig Tenders Indonesia

PENGUIN NIUGINI, 1,367 gt, built by PT Karyasindo Samudra Biru Shipyard for Penguin Shipyard International

PENN NO. 80, 6,373 gt, built by Corn Island Shipyard for Penn Maritime

PROSPAQ 27A, 2,133 gt, built by Jinsheng Ships Manufacture for Prospaq Marine

QUINPO PRAKASH, 20,364 gt, built by Jiangjiang Nanyang Shipbuilding for Quippo Prakash

RTC 61, 4,533 gt, built by SENESCO for Reinauer Transportation Companies

GB 8283, 2,331 gt, built by Nanjing Yonghua Shipbuilding for Greenbay Marine

GLOBAL LONG BEACH, 1,005 gt, built by Trinity Marine Group for Global Marine Transportation

GLOBAL SEATTLE, 1,004 gt, built by Trinity Marine Group for Global Marine Transportation

GLORY MARINE 5, GLORY MARINE 6, GLORY MARINE 9, GLORY MARINE 10, 8,528 gt, built by Jiangsu Huatai Shipbuilding for Harita Berlian Shipping

GLORY MARINE 7, GLORY MARINE 11, 8,528 gt, built by Nantong Hongqiang Marine H I for Harita Berlian Shipping

GLORY MARINE 8, 8,528 gt, built by Nantong Tongcheng Ship Manufacturing for Harita Berlian Shipping

GLORY MARINE 12, 8,528 gt, built by Nanjing Yonghua Shipbuilding for Harita Berlian Shipping

GOLDEN HILL 2301, 1,438 gt, built by PT Jasamarin Engineering for Khoo Kian Seng Machinery

GSL-10, 2,140 gt, built by Yangzhou Hairun Shipping for PT Pelayarans Gema Samudera Lines

JIAO LONG, 30,807 gt, built by Nantong Jialong H I Offshore & Marine for Jiangsu Cenen H I Technology

JMC 2822, JMC 2823, 3,418 gt, built by Nanjing Nanjiang Shipbuilding for President Marine

JOSEFA RUFINA I, 5,775 gt, built by Signal International for Waller Marine

KM-1, 12,031 gt, built by Kencana H I for Mermaid Kencana Rig 1

LION TOLL FC 5, LION TOLL FC 8, 2,460 gt, built by PT Karimun Sembawang Shipyard for Techvance Marine Services

M-2501, 2,078 gt, built by Tres Palacios Marine for Misener Marine Construction

MARGARITA I, 5,775 gt, built by Signal International for Waller Marine

MERLIN 2301, MERLIN 2302, MERLIN 2303, 1,424 gt, built by Nanjing Yonghua Shipbuilding for Merlin Shipping

MOPC 1, MOPC 2, 3,105 gt, built by Nanjing Wujiang Shipyard for MOPC

NAUTICA 23, NAUTICA 24, 3,279 gt, built by PT Marcopolo Shipyard for MPST Marine

NAUTICA 25, NAUTICA 26, 3,279 gt, built by PT Marcopolo Shipyard for PT Ufuk Terang Cakrawala

NORSUL 14, 3,589 gt, built by Bogazici Tersanelicik Gemi Insa San. Ve Tic. for Companhia de Navegacao Norsul Srl

P-11, 1,611 gt, built by Industrias Astivik for C I Prodeco - Productos de Colombia

PARTA JAVA 3005, 3,060 gt, built by Yangzhou Hairun Shipping for Regent Offshore

PB 2502, 2,212 gt, built by Nanjing East Star Shipbuilding for Putra Bulian Shipping & Trading

PB 3009, PB 3010, 3,146 gt, built by Nanjing Yonghua Shipbuilding for Putra Bulian Shipping & Trading

PELANGI TIRTA MAS, 8,402 gt, built by PT Samudra Marine Indonesia for PT Rig Tenders Indonesia

PENGUIN NIUGINI, 1,367 gt, built by PT Karyasindo Samudra Biru Shipyard for Penguin Shipyard International

PENN NO. 80, 6,373 gt, built by Corn Island Shipyard for Penn Maritime

PROSPAQ 27A, 2,133 gt, built by Jinsheng Ships Manufacture for Prospaq Marine

QUINPO PRAKASH, 20,364 gt, built by Jiangjiang Nanyang Shipbuilding for Quippo Prakash

RTC 61, 4,533 gt, built by SENESCO for Reinauer Transportation Companies

W-SKY, a 93,059 dwt bulk carrier, BC-A, AB-CM, CSR, GRAB(30), TCM, RRDA, built by Taizhou Catic Shipbuilding H I for Corbeil Shipping.

SS PANTANAL, a 24,268 gt column stabilized drilling unit, DPS-2, built by Yantai CIMC Raffles Offshore for Soratu Drilling.
SEA AARYAN, 10,392 gt, built by Taizhou Sanfu Ship Engineering for Stallion Offshore
SK LINE 303, 10,159 gt, built by Fuzhou Xiyang Shipbuilding for Nam Cheong Dockyard
SOEKAWATI-207, 3,233 gt, built by Nanjing Sandingli Ship Industry for PT Pelayaran Borneo Karya Swadiri
SOEKAWATI-212, 3,233 gt, built by Nanjing Asiapride Shipping Making for PT Pelayaran Borneo Karya Swadiri
STI B31, 1,148 gt, built by Yangzhou Songchuan Ship Building for STI Panama
SUPPORT 1, SUPPORT 2, SUPPORT 3, 2,133 gt, built by Jinsheng Ships Manufacture for PT WHS Maritime Investments
SUPPORT 5, SUPPORT 6, 2,133 gt, built by Jinsheng Ships Manufacture for Tanoto Shipyard
SUPPORT 7, SUPPORT 8, SUPPORT 9, SUPPORT 10, 2,133 gt, built by Jiangsu Huatai Shipbuilding for PT WHS Maritime Investments
TERAS 337, 4,951 gt, built by Nanjing Wu Jiang Shipyard for Teras Pegasus
TGH 2509, TGH 2510, 2,212 gt, built by Nanjing Yonghua Shipping for Tanoto Shipyard
TONG WOON 35, 2,305 gt, built by Yangzhou Hairun Shipping for Tong Woon Marine
TONG WOON 36, 2,305 gt, built by Yangzhou Hairun Shipping for Mermaid Marine Charters
TMT 2501, 2,305 gt, built by Yangzhou Hairun Shipping for Target Engineering Construction
TOP 12, 1,024 gt, Ice Class “A0”, built by Adyad Abu Dhabi for Bue Marine
TRUST LINE 777, 2,212 gt, built by Nanjing East Star Shipbuilding for PT Trust Line Marine
VDA XI, VDA XII, 1,407 gt, built by Erin-Estaleiros Rio Negro for Navegacao Cunha
VML 4, 2,307 gt, built by Nanjing Tian Shun Shipbuilding for Valentine Maritime
WINBUILD 1449, 5,089 gt, built by Nantong Tongde Shipyard for Pacific Ocean Engineering & Trading
WINBUILD 1473, 3,147 gt, built by Jingjiang Nanyang Shipbuilding for Pac-Ocean Shipping & Trading
WINBUILD 2206, 5,248 gt, built by Nantong Tongde Shipyard for Hoe EE Trading
ZEUS 251, ZEUS 252, 2,305 gt, built by Yizheng Xinyang Shipbuilding for Zeus Marine

**Government Vessels**
USNS CHARLES DREW, 43,758 gt, SH-DLA, Ice Class “C0”, RC3, APS, NIBS, R1, VEC, built by General Dynamics NASSCO for Military Sealift Command.

**Passenger Vessels**
STELLA AUSTRALIS, 4,508 gt, built by Astilleros Y Servicios Navales (ASENAV) for Transportes Maritimos Geo Australis.

**Tugs, Workboats and OSVs**
ALGOSAIBI 51, 1,064 gt, built by Zamil Offshore Services for Zamil Offshore Services
ARMADA TUAH 83, ARMADA TUAH 85, 2,183 gt, Fire Fighting Vessel Class 1, DPS-1, built by PT Drydocks World Pertama for Bumi Armada Navigation
ARMADA TUAH 84, 2,147 gt, Fire Fighting Vessel Class 1, DPS-1, built by Nam Cheong Dockyard for Bumi Armada Navigation

**COSCO KAWASAKI**, a 4,506 teu containership, SH, SHCM, TCM, built by Samsung H I for Lucretia Shipping.

**USNS CHARLES DREW**, a 43,758 gt T-AKE 10 vessel, SH-DLA, Ice Class “C0”, RC3, APS, NIBS, R1, VEC, built by General Dynamics NASSCO for Military Sealift Command.

**STELLA AUSTRALIS**, a 4,508 gt passenger vessel, built by Astilleros Y Servicios Navales (ASENAV) for Transportes Maritimos Geo Australis.
BEE HIVE, 1,786 gt, built by Bollinger Shipyards for Bee Mar-Bee Hive

BORCOS TASNEEM 6, 1,706 gt, Fire Fighting Vessel Class 1, built by Mset Shipbuilding for Syarikat Borcos Shipping

BOURBON LIBERTY 121, 1,517 gt, Fire Fighting Vessel Class 1, built by Yangzhou Dayang Shipbuilding for Bourbon Liberty 121 SNC

BOURBON LIBERTY 122, 1,517 gt, Fire Fighting Vessel Class 1, built by Yangzhou Dayang Shipbuilding for Bourbon PS Sasu

BOURBON LIBERTY 226, 1,733 gt, Fire Fighting Vessel Class 1, built by Zhejiang Shipbuilding for Bourbon Marine Services Ukraine

BOURBON LIBERTY 229, 1,733 gt, Fire Fighting Vessel Class 1, built by Zhejiang Shipbuilding for Bourbon Offshore Greenmar

BOURBON LIBERTY 232, 233, 234, 235, 236 and 237, 1,733 gt, Fire Fighting Vessel Class 1, built by Zhejiang Shipbuilding for Bourbon Liberty

BRAVO TOPAZ, 1,279 gt, built by Sealink Engineering & Slipway for Sealink Shipyard

BRITOIL 81, 2,049 gt, Fire Fighting Vessel Class 1, built by PT Britoil Offshore Indonesia for Britoil Offshore Services

BRITOIL 120, BRITOIL 121, 2,375 gt, Fire Fighting Vessel Class 1, built by PT Britoil Offshore Indonesia for Britoil Offshore Services

BUSHBUCK, 2,461 gt, Fire Fighting Vessel Class 1, Oil Recovery Capability Class 2, built by Northern Shipyard Gdansk for Galliano Marine Services

CASPIAN SUPPORTER, 2,921 gt, Fire Fighting Vessel Class 1, built by Fujian Southeast Shipyard for Team XV

CECILIE K, 1,731 gt, Fire Fighting Vessel Class 1, built by PT ASL Shipyard for Asian Offshore III

CHERAMIE BOTRUC NO.41, 1,751 gt, built by VT Halter Marine for L&M Botruc Rental

CREST NAUTILUS 1, CREST NAUTILUS 2, 3,661 gt, built by Jiangsu Zhenjiang Shipyard for Pacific Radiance

CREST ODYSSEY 1, CREST ODYSSEY 2, 4,938 gt, built by Wison (Nantong) H.I for Pacific Crest

CREST TITAN 1, CREST TITAN 2, 1,027 gt, Fire Fighting Vessel Class 1, built by Weihai Xinghai Shipyard for Pacific Crest

DELA LLANA TIDE, 1,678 gt, Fire Fighting Vessel Class 1, built by Fujian Southeast Shipyard for Platinum Fleet

DULACA TIDE, 1,678 gt, Fire Fighting Vessel Class 1, built by Fujian Southeast Shipyard for Tidewater Marine International

Dwight S. Ramsay, 3,764 gt, built by Eastern Shipbuilding for Aries Marine

EFOGEN NUHA, 1,976 gt, built by Berjaya Dockyard for Efogen Nuha

FORTE, 1,485 gt, built by North American Shipbuilding for Nautical Solutions

GREENWOOD TIDE, 2,921 gt, built by Jingjiang Nanyang Shipbuilding for Tidewater Marine

HADI 26, 1,596 gt, built by Zhoushan Jinhui Ship Repair and Building Factory for Hadi Al-Hammam Establishment

HAMZEH, 1,674 gt, built by Fujian Southeast Shipyard for Glory Marine Services

HARVEY CARRIER, 2,287 gt, built by Eastern Shipbuilding for Laborde Marine Services

HOLIDAY, 4,924 gt, built by North American Shipbuilding for Holiday Offshore

HOS WILDWING, 1,955 gt, built by Leevac Industries for Hornbeck Offshore Service

ARMADA TUAH 83, a 2,183 gt offshore support vessel, built by PT Drydocks World Pertama for Bumi Armada Navigation.

FORTE, a 1,485 gt escort and towing vessel, built by North American Shipbuilding for Nautical Solutions.

HOLIDAY, a 4,924 gt offshore support vessel, built by North American Shipbuilding for Holiday Offshore.
INA K, 1,731 gt, Fire Fighting Vessel Class 1,ynthia:1, by PT ASL Shipyard for Asian Offshore III

INNOVATION, 1,052 gt, built by VT Halter Marine for Vessel Management Services

JAYA ALMIGHTY, JAYA AMAZON, 1,458 gt, Fire Fighting Vessel Class 1, built by Guangzhou Hangtong Shipbuilding & Shipping for Jaya Shipbuilding & Engineering

JAYA CAVALIER, 2,744 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Jaya Shipbuilding & Engineering for JSE Shipping

JAYA CHIEFTAIN, 2,342 gt, Fire Fighting Vessel Class 1,ynthia:2, built by PT Jaya Asiatic Shipyard for Jaya Shipbuilding & Engineering

JAYA CONCORDIA, JAYA CONTINENTAL, 2,558 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Tongfang Jiangxin Shipbuilding for Jaya Shipbuilding & Engineering

JAYA CONFIDENCE, 2,558 gt, Fire Fighting Vessel Class 1, built by Tongfang Jiangxin Shipbuilding for Aria Jaya Marine

LACOSTE TIDE, 1,674 gt, Fire Fighting Vessel Class 1,ynthia:1, built by Fujian Southeast Shipyard for Platinum Fleet

LAMNALCO Merganser, 1,290 gt, Fire Fighting Vessel Class 1,ynthia:1, built by ABG Shipyard for Lamnalco

LEWEK LARK, 1,124 gt, Fire Fighting Vessel Class 1, built by Guangzhou Panyu Lingshan Shipyard for Bovey II

LEWEK LEOPARD, 1,678 gt, Fire Fighting Vessel Class 1,ynthia:1, built by Chongqing Jinlong Shipbuilding for Bovey II

LYMAN MARTIN, 2,998 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Tampaship for Nautical Solution

MARIDIVE 701, 2,379 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Jiangsu Zhenjiang Shipyard for Maridive & Oil Service

MARIE ELISE, 1,842 gt,ynthia:2, built by Thoma-Sea Marine Construction for Gulf Offshore Logistics

MMPL Merlin, 2,369 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Fujian Mawei Shipbuilding for Stamford Merlin

MONICA W CALLAIS, 1,158 gt,ynthia:2, built by Master Boat Builders for Abdon Callais Offshore

MP Prelude, 2,181 gt, Fire Fighting Vessel Class 1,ynthia:2, built by PT Marcopolo Shipyard for Marco Polo Offshore (II)

NICHOLAS P CALLAIS, 1,158 gt,ynthia:2, built by Master Boat Builders for Abdon Callais Offshore

OCEAN AMBER, 2,921 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Jingjiang Nanyang Shipbuilding for Samson Maritime

OCEAN TABA, 1,696 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Guijiang Shipbuilding for Ocean Marine Egypt

OUR LADY OF LA SALETTE, 1,158 gt,ynthia:2, built by Master Boat Builders for Abdon Callais Offshore

PACIFIC PANDA, PACIFIC PAPILLON, PACIFIC PARROT, 1,329 gt, built by Qingdao Qianjin Shipyard for Swire Pacific Offshore Operations

PACIFIC PLATINUM, 1,970 gt, Fire Fighting Vessel Class 1,ynthia:1, built by PRM Offshore H I for Pacific Richfield Marine

PACIFIC TITANIUM, 1,986 gt, Fire Fighting Vessel Class 1,ynthia:1, built by PRM Offshore H I for Aracruz Richfield Marine

PACIFIC VIGILANCE, PACIFIC VIGOUR, PACIFIC VULCAN, 2,147 gt, built by PT Nanindah Mutiara Shipyard for Swire Pacific Offshore Operations

POSH ASSISTOR, 1,347 gt, Fire Fighting Vessel Class 1, built by Yuexin Shipbuilding for Starling Shipping

POSH CHAMPION, 3,261 gt, Fire Fighting Vessel Class 1, ES 2020,ynthia:2, built by Universal Shipbuilding for Condor Shipping

POSH CONQUEST, POSH CONSTANT, 2,736 gt, Fire Fighting Vessel Class 1,ynthia:2, built by Yuexin Shipbuilding for Condor Shipping

POSH VALUE, 2,538 gt, Fire Fighting Vessel Class 1,ynthia:1, built by Yuexin Shipbuilding for Starling Shipping

QUEEN BEE, 1,786 gt,ynthia:2, built by Bollinger Shipyards for Bee Mar
REDFISH 1, REDFISH 2, 2,446 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Yuexin Shipbuilding for Redfish
REYNALDO TIDE, 1,674 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Southeast Shipyard for Platinum Fleet
RICHARD TIDE, 2,465 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Niigata Shipbuilding & Repair for Platinum Fleet
ROMIC TIDE, 1,529 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Guangzhou Shipbuilding & Engineering for Aqua Fleet
ROXANNE 43, 1,297 gt, built by Sealink Engineering & Slipway for Sealink Engineering & Slipway
SANKO BIRDIE, SANKO BRIDE, 2,430 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Universal Shipbuilding for Birdie Offshore
SANTOS SCOUT, 2,999 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Estaleiro Navship for Bram Offshore Transportes Maritimos
SEA VALIANT, SEA VICTOR, 2,301 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Northern Shipyard Gdansk for Gulf Marine Far East
SEALINK 161, 1,896 gt, Fire Fighting Vessel Class 1, built by Sealink Engineering & Slipway for Sealink Offshore
SEAWAYS 16, 1,566 gt, Fire Fighting Vessel Class 1, Oil Recovery Capability Class 1, \( \text{DPS-2} \), TCM, built by Keppel Fels for Seaways International
SETIA IMAN, SETIA LUHUR, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Southeast Shipyard for Alam Maritim
SK LINE 106, 2,534 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Fujian Crown Ocean Shipbuilding Industry for Nam Cheong Dockyard
SK LINE 201, 2,921 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Fujian Southeast Shipyard for Nam Cheong Dockyard
SOUTHERN CROSS, 1,656 gt, \( \text{DPS-2} \), built by Thoma-Sea Marine Construction for Southern States Offshore
STANFORD CONDOR, 1,393 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Mawei Shipbuilding for Stanford Condor
STANFORD KITE, 1,393 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Mawei Shipbuilding for Stanford Kite
STANFORD OSPREY, 1,393 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Mawei Shipbuilding for Stanford Osprey
SURF MANDIRI, 1,733 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Zhejiang Shipbuilding for PTSMI
SURF MITRA, 1,733 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Zhejiang Shipbuilding for Bourbon PS Sasu
SWIWAR MARY-ANN, 2,708 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Fujian Southeast Shipyard for Bukit Timah Offshore
SWIWAR CRUSADER, 2,708 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Fujian Southeast Shipyard for Swiwar Offshore
TAHA ASSAFA, 2,534 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Fujian Mawei Shipbuilding for TH Marine
TAHA ASSALAM, 2,534 gt, Fire Fighting Vessel Class 1, \( \text{DPS-2} \), built by Fujian Mawei Shipbuilding for TH Marine
TOPAZ KHOBAR, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Southeast Shipyard for Topaz Khobar
TOPAZ JOHOR, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Funing Shipbuilding for Bovey Offshore VIII
TOPAZ JURONG, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Funing Shipbuilding for Bovey Offshore VII
TOPAZ KARAMA, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Southeast Shipyard for Topaz Karama
TOPAZ KHALIDIYA, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Southeast Shipyard for Topaz Khalidiya
TOPAZ KUWAIT, 1,678 gt, Fire Fighting Vessel Class 1, \( \text{DPS-1} \), built by Fujian Southeast Shipyard for Topaz Kuwait
ABS ACTIVITY

UOS ENTERPRISE, UOS FREEDOM, UOS NAVIGATOR, UOS PATHFINDER, UOS VOYAGER, 2,922 gt, Fire Fighting Vessel Class 2, Oil Recovery Capability Class 1, ØOPS-2, TCM, built by Fincantieri Cantieri Navali Italiani for ATL Offshore.

VOS HECATE, VOS HYPERION, 1,678 gt, Fire Fighting Vessel Class 1, built by Fujian Southeast Shipyard for Vroon Offshore Services.

WINDERMERE, 4,750 gt, ØOPS-2, built by Drydocks World for HM2.

ZAMIL 57, ZAMIL 58, 1,514 gt, Fire Fighting Vessel Class 1, ØOPS-1, built by Zamil Offshore Services for Zamil Offshore Services.

**Yachts**

ADOR A, 1,034 gt, built by Azimut-Benetti for Two Four Nine.

BARAKA, 899 gt, built by Proteksan Turkuaz Yat San for Ilan Orly Adv & Notary.

BIG ZIP, 399 gt, built by Trinity Yachts for Sands Point.

BISTANGO, 1,026 gt, built by Azimut - Benetti for Unicredit Leasing.

BOARDWALK, 492 gt, built by Westport Shipyard for Aqua Waterfront.


EXUMA, 497 gt, built by Perini Navi for Future Charter.

FIVEA, 321 gt, built by Perini Navi for Fivea Limited.

FRAMURA 2, 388 gt, built by Cantieri Ugo Codecasa for Symmetry Design.

GLORIA MARIS, 162 gt, built by Xiamen South Coast Marine Yacht Building for Pacific Asian Enterprises.

IMAGINATION, 492 gt, built by Azimut-Benetti for Sea Wind International Shipping.

JULIA, 193 gt, built by Azimut - Benetti for Tinkelstar.

LA BELLA SARA, 193 gt, built by Azimut - Benetti for Sara Nautical.

LAMMOUCHE, 498 gt, built by San Lorenzo for Banque Populaire Cote D’azur.

LATITUDE, 398 gt, built by Dutch Yacht Builders for Manov Shipping.

LENA, 338 gt, built by San Lorenzo for Sands Point.

LUCKY ME, 385 gt, built by Cantieri Navali Baglietto for Tankoa Yachts.

MAKIRA, 343 gt, built by Italyachts for Longos Capital.

MARIE, 290 gt, built by Vitters Shipyard for MCM Management.

MELEK, 496 gt, built by Perini Navi for Poyraz Chartering.

MI SUENO, 771 gt, built by Trinity Yachts for Mi Sueno.

MIA ELISE, 490 gt, built by Trinity Yachts for Mary Ann Holland.

PERLE NOIRE, 245 gt, built by Heesen Yacht Builders for Willpower.

PRINCESS CLAUDIA II, 338 gt, built by San Lorenzo for Eagle Universal.

REMEMBER WHEN, 498 gt, built by Christensen Shipyard for ACA Megayachts.

RUSH, 488 gt, built by Overmarine Due for Mongusto.

S. BERNARDO, 458 gt, built by Heesen Yacht Builders for Heesen Yacht Builders.

SEA OWL, 473 gt, built by Burger Boat for Sea Owl II.

STATUS QUO, 441 gt, built by Richmond Yachts for Richmond Yachts.

WESTPORT 40M, 333 gt, built by Westport Shipyard for Westport Shipyard.

UOS LIBERTY, a 2,922 gt offshore support vessel, Fire Fighting Vessel Class 2, Oil Recovery Capability Class 1, ØOPS-2, TCM, built by Fincantieri Cantieri Navali Italiani for ATL Offshore.

ADOR A, a 1,034 gt yacht, built by Azimut-Benetti for Two Four Nine.

LATITUDE, a 398 gt yacht, built by Dutch Yacht Builders for Manov Shipping.
Others

ASB MUTIARA 5, 238 gt, HSC crew boat, built by Strategic Marine for Asian Supply Base Maritime Resources
CARLENE MCCALL, 496 gt, HSC crew boat, built by Gulf Craft for Seacor Marine
CULLAMO, 357 gt, ferry, built by Astilleros Y Servicios Navales (ASENAV) for Ministerio de Obras Publicas
FAST TITAN, 449 gt, HSC crew boat, built by Breaux Bros Enterprises for Nautical Solutions
FOS GEMINI, 785 gt, HSC standby vessel, built by San Aluminum Engineering for Fast Offshore Supply
GLOBAL 1200, 32,550 gt, pipe laying vessel, built by Keppel Singmarine for Global Industries Offshore
KAREN TIDE II, 494 gt, HSC crew boat, built by Inace Industria Naval Do Ceara for Mare Alta do Brasil Navegacao
MICHAEL G. MCCALL, 496 gt, HSC crew boat, built by Gulf Craft for Seacor Marine
MP SPECTRUM, 270 gt, HSC utility vessel, built by PT. Palindo Marine for Seaman Marine
SAMPSON, 25,735 gt, heavy lift vessel, built by PT Drydocks World Pertama for V Ships
SENTINEL, 353 gt, HSC crew boat, built by Midship Marine for Gulf Marine Service
SENTRY, 353 gt, HSC crew boat, built by Midship Marine for Mid Atlantic
SMS RAINBOW, 282 gt, HSC crew boat, built by Sam Aluminum Engineering for PT Wintermar
SMS VISION, 244 gt, HSC utility vessel, built by Sam Aluminum Engineering for PT Wintermar
TERAS BANDICOOT, 1,369 gt, landing craft, built by Nanjing Yonghua Shipbuilding for EG Marine
TOLL SANDFLY, 1,273 gt, landing craft, built by Nanjing Yonghua Shipbuilding for Toll Logistics
VICTORIA TUJUH, 925 gt, landing craft, built by Sealink Shipyard for Sealink Shipyard
WARAYA, 1,070 gt, landing craft, built by Josefa Slipways for Ajman Shipping & Trading
WESAL VI, 240 gt, HSC crew boat, built by Grandweld for Wesal Shipping

REMEMBER WHEN, a 498 gt yacht, built by Christensen Shipyard for ACA Megayachts.

FLOATEL RELIANCE, a 18,426 gt column stabilized accommodation unit, built by Keppel Fels for Floatel Reliance.

Naming ceremony for WEST GEMINI, a 59,626 gt drillship, built by Samsung H I for Seadrill Gemini.
Recent Class Contracts

**TANKERS**
- Eight 81,500 gt/158,000 dwt for Unisea Shipping at Samsung H I
- Six 62,000 gt/155,500 dwt for Kyklades Maritime at Samsung H I
- Five 84,000 gt/159,000 dwt for Sociedade Nacional de Combustíveis at Daewoo Shipbuilding & Marine Engineering
- Four 160,782 gt/317,788 dwt for Samco Shipholding at Hyundai Samho H I
- Four 81,200 gt/158,258 dwt at Hyundai H I
- Three 62,000 gt/115,500 dwt for Unisea Shipping at Samsung H I
- Two 62,400 gt/112,100 dwt for Arab Maritime Petroleum Transport at Hyundai H I
- Two 60,200 gt/107,000 dwt at Tsuneishi Holdings
- Two 57,200 gt/105,200 dwt at Hyundai H I
- Two 62,400 gt/105,000 dwt for NYK Line at Hyundai H I
- Two 30,000 gt/49,750 dwt for Formosa Plastics Marine at STX Offshore & Shipbuilding
- Two 11,900 gt/19,900 dwt at Fukuoka Shipbuilding

**BULK CARRIERS**
- Twelve 9,160 gt/10,000 dwt for PFS Shipping at ABG Shipyard
- Four 40,000 gt/82,000 dwt at Zhoushan Jinhaiwan Shipyard
- Four 31,000 gt/55,435 dwt for Atlantic Bulk Carriers Management at Hyundai Mipo Dockyard
- Three 46,500 gt/84,120 dwt at Hyundai Samho H I
- Three 44,766 gt/82,000 dwt at CSSC Guangzhou Longxue Shipbuilding
- Two 105,000 gt/206,000 dwt at Shanghai Waigaoqiao Shipbuilding
- Two 107,000 gt/205,500 dwt for Cosco Bulk Carrier at Dalian Cosco Shipbuilding
- Two 93,200 gt/179,180 dwt at Hyundai H I
- Two 90,000 gt/176,000 dwt at Shanghai Waigaoqiao Shipbuilding
- Two 50,900 gt/95,000 dwt for Safety Management Overseas at Imabari Shipbuilding
- Two 44,000 gt/81,450 dwt for Kyla Shipping Enterprises at Hyundai Samho H I
- Two 33,036 gt/57,000 dwt at Shanghai Shipyard
- Two 22,850 gt/36,400 dwt at Onomichi Dockyard
- Two 25,000 gt/35,200 dwt at Samho Shipbuilding
- Two 21,000 gt/34,000 dwt at Daesun Shipbuilding & Engineering
- Two 23,250 gt/26,800 dwt for Pacific Carriers at Taizhou Kouan Shipbuilding
- One 42,868 gt/79,600 dwt at Zhoushan Jinhaiwan Shipyard
- One 22,400 gt/32,500 dwt at Samho Shipbuilding
- One 17,070 gt/28,050 dwt at I-S Shipyard

**OFFSHORE**

**FSOs**
- One 125,000 gt/152,000 dwt for Chevron Thailand Exploration & Production at IHI

**MODUs**
- Two 50,800 gt/56,200 dwt for Queiroz Galvao Oleo e Gas at Samsung H I

**Self Elevating Drilling Units**
- Nine 7,000 gt/10,000 dwt at Shanghai Zhenhua H I
- One 5,000 gt/7,000 dwt for Geosea at IHC Offshore & Marine

**Single Point Moorings**
- One at Gulf Piping
- One for Oil Search at Penglai Jutao Offshore
**MISCELLANEOUS**

**Barges**
- Three 3,231 gt at Nanjing Asiapride Shipping Making
- Three 3,151 gt at Poet Shipbuilding & Engineering
- Three 2,340 gt at Nanjing Yonghua P Shipbuilding
- Three 2,057 gt for Cashman Equipment at Lad Services of Louisiana
- Two 5,500 gt at Jiangsu Huatai Shipbuilding
- Two 5,500 gt at Yangzhou Hairun Shipping
- Two 3,151 gt at Taixing Sunhoo Shipbuilding
- One 12,600 gt at IHI Marine United
- One 10,615 gt at Daewoo-Mangalia H I
- One 9,964 gt at Daoda H I
- One 8,500 gt for Poet Investment Holdings at Poet Shipbuilding & Engineering
- One 8,000 gt for Eastern Navigation at Yu Lian Dockyards
- One 3,151 gt at Nanjing Ding Feng Shipbuilding
- One 3,151 gt at Nanjing Wu Jiang Shipyard
- One 3,151 gt at Nanjing Yonghua Shipbuilding
- One 3,151 gt at Taixing Hong Yun Shipyard
- One 3,080 gt for Norfolk Dredging at Corn Island Shipyard
- One 2,340 gt at Jiangsu Soho Marine H I
- One 2,340 gt at Nanjing Asiapride Shipping Making
- One 2,340 gt at Nanjing East Star Shipbuilding
- One 2,340 gt at Nantong Tongde Shipyard
- One 2,310 gt for Triton Offshore at Nanjing Lanheng Shipyard
- One 2,300 gt at Jinsheng Ships Manufacture
- One 2,020 gt at C & C Marine and Repair
- One 1,360 gt for J E McAmis at Gunderson Marine
- One 1,028 gt at C & C Marine and Repair

**Government Vessels**
- Twenty 420 gt for Indian Coast Guard at Cochin Shipyard
- One 2,218 gt for NOAA at Marinette Marine
- One 90 gt for US Army Corps of Engineers at Horizon Shipbuilding

**Tugs, Workboats and OSVs**
- Ten 1,720 gt for Bourbon Supply at Zhejiang Shipbuilding
- Four 2,340 gt for Pacific Ocean Engineering & Trading at Poet Shipbuilding & Engineering
- Four 1,320 gt at Modest Infrastructure
- Four 1,199 gt for Vessel Management Services at Bollinger Marine Fabricators
- Three 2,000 gt for Great Offshore at Bharatli Shipyard
- Two 2,900 gt for Nam Cheong Dockyard at Fujian Southeast Shipyard
- Two 2,000 gt for Bue Kyran at Adyard Abu Dhabi
- Two 1,690 gt at Fujian Huahai Shipbuilding
- Two 1,678 gt for Offshore Support Vessel 10 at Fujian Southeast Shipyard
- One 4,200 gt for Otto Candies at Candies Shipbuilding
- One 1,677 gt at Fujian Crown Ocean Shipbuilding

**Yachts**
- Two 500 gt at Azimut-Benetti
- Two 500 gt at San Lorenzo
- One 1,230 gt at Heesen Yacht Builders
- One 600 gt at Heesen Yacht Builders
- One 500 gt at Cantieri Navali Codecasa Tre Spa
- One 500 gt for SNP Boat Services at Ital Yachts

**Others**
- One 55,500 gt special purpose vessel for National Petroleum Construction at Shanghai Zhenhua H I
- One 99 gt high speed craft for Nautical Solutions at Breaux Bros Enterprises
We Welcome Your Thoughts

Activities is intended to provide our members and clients with ABS views, news and research. Editorial content is gathered from ABS engineering and field offices around the globe.

Editor-in-Chief: Jean Gould
Managing Editor: Jennifer Bewley
Contributing Editors: Susan V. Gonzalez, Leokadia Rucinski, Marita Ayala and Lauren Williams
Production Manager: Sherrie Anderson
Graphic Designers: Sharon Tamplain and Christopher Reeves

To comment, please contact Jean Gould, Vice President, External Affairs, at tel: 1-281-877-5850 or email CorporateCommunications@eagle.org.

The mission of ABS is to serve the public interest as well as the needs of our clients by promoting the security of life, property and the natural environment primarily through the development and verification of standards for the design, construction and operational maintenance of marine-related facilities.

ON THE COVER

The new Maersk Line Triple-E Series, the world’s largest containerships are 400 meters long, 59 meters wide and 73 meters high. Each vessel in the Triple-E series is 18,000 teu and 165,000 dwt. They are the longest and widest container vessels possible based on port restrictions.