There is currently a highly unusual merging of the commercial desires of shipowners and the more idealistic demands of the regulators whether at the IMO, in Brussels or many other shipping centers. The catalyst is the growing societal concern for the environment.

Shipowners prefer ships that give them optimum performance and identifiable savings on running costs if they can be delivered at a competitive price. The current regulatory focus on environmental issues is providing such a challenge to ship designers. The energy-efficient ship of the future will burn less fuel, thereby emitting less CO₂, SOx and NOx providing a win-win for the owners, the regulators and society.

As shipowners endeavor to establish a balance between design and operational issues that provide the desired gains in efficiency and environmental compliance, so too must their classification society endeavor to strike a balance between supporting these environmental initiatives and the need to promote the safety of the ships and their crews. This has been and will continue to be the focus of ABS’ efforts to assist in the development of these new, innovative approaches to energy-efficient designs.

There is no better example of this than the current debate over the specifics of the Energy Efficiency Design Index or EEDI. This well-intentioned regulatory initiative, as originally proposed, carried the very grave risk of diluting existing safety standards. The easiest way for a designer to meet or exceed the EEDI requirement is to reduce the installed power of the vessel by reducing the design speed.

It may be the easiest but not necessarily the best. The installed power should be reduced by decreasing the power requirement without sacrificing the margin required for safe operation. The lack of adequate power to maintain safe operation in adverse weather or when maneuvering has been a long-standing complaint of many shipowners.

A ship’s index is compared to a baseline EEDI representing typical efficiencies for the same ship type. The basic concept is that a new ship’s EEDI has to be equal to or less than a required or target EEDI value. Based on ship type and size, a ship’s energy efficiency will be measured by how much reduction can be achieved from the baseline EEDI value.
The prospect of a future generation of under-powered vessels being spawned by the EEDI is simply unacceptable from a safety perspective and ABS was among the first to raise the alarm within the IMO of the consequences of their proposal.

ABS is of the opinion that, as urgent and necessary as environmental improvements may be, there needs to be considerable progress if the shipping industry is to meet the dual goals of promoting environmental compliance while, at the same time, promoting safety and commercial efficiencies.

Fortunately ABS also believes there is ample scope for dramatic enhancements in ship design and operations that will allow these improvements to be made. Those improvements will be through much greater optimization of the existing standard design bulk carrier and tanker hull forms to improve performance and reduce resistance in a seaway.

There will be improvements in propeller design and the associated water flow using advanced computational fluid dynamics (CFD). There will be improvements that stem from a better understanding of how biofouling increases resistance and degrades performance. And, in addition to further improvements in existing engine performance, there will be step changes such as the growing adoption of flexible fuel engines that are able to burn gas, heavy fuel oils, distillates and even biodiesel.

There will also be increased research into and adoption of completely new technologies such as the application of nanotechnology to marine systems and coatings and the use of air lubrication to reduce the friction of the hull by injecting bubbles and creating air films or an air cavity. Full-scale and large model tests of air lubrication are being conducted with encouraging results.

Just as important as these new applications is the rethinking of some traditional design approaches. There is growing evidence that many bulbous bow configurations may actually adversely affect the open water performance of a bluff-bowed, high block co-efficient vessel in a seaway.

Although some designers have developed new approaches to bow design, there is still a great deal to be done to identify the optimum configuration for the various types and sizes of vessels.

At the other end of the ship, there is the promise of equal or even greater efficiencies with respect to the manner in which water is directed onto the propeller and the design of the propeller itself. Using CFD, designers will be able to further improve propeller efficiency and smooth the wake to gain significant increases in performance.

These areas of research are complimentary to that being conducted into fuel cells, solar powered auxiliaries, improved aerodynamics and all the many other areas that are ripe for investigation. The breakthroughs of the future have yet to be identified but ABS believes there is a lot that can be done to return immediate benefits from improved operational efficiencies with the bonus of reducing the environmental impact of ship operations.

Our environmental research efforts are broad. This is the new frontier for the shipping industry and ABS is determined to lead the industry in identifying, understanding and applying these innovations in a safe, practical and effective manner.
In recognition of China’s growing importance in the maritime and energy industries, ABS has instituted a major organizational change with the creation of a fifth operating division that will be responsible for the society’s activities in the People’s Republic of China including the Hong Kong SAR and Taiwan.

Spurring the decision to establish the new operating division has been the rapid diversification of China into the gas and offshore sectors, two areas of traditional strength for ABS. “The level of offshore and energy-related activity in China, both in relation to China’s own needs and also in terms of major new construction projects for a wide range of offshore exploration and production units, is growing at a very rapid pace,” says Adam Moilanen, who has been appointed President and COO of the new ABS division.

“We have been spending a lot of time and effort working with all sectors of the energy community in China and in the shipyards assisting them with this ambitious and rapid level of expansion,” says Moilanen. “We see the need for this close cooperation increasing and we will be establishing a very active department within the new division to provide the support and service that will be needed.”

The new Greater China Division will be headquartered in Shanghai, operating in coordination with the existing Pacific, Europe and Americas Divisions of the society and also with the ABS Nautical Systems division. More than 500 employees operating from more than 30 offices across the country and in Taiwan will be working within the division. These numbers are expected to steadily increase in line with the expanded activities.
“The importance of China to our current and future activities cannot be overemphasized,” says ABS Chairman and CEO Robert D. Somerville in announcing the reorganization. “ABS is now active in more than 140 shipyards in China with an orderbook approaching 1,000 vessels aggregating almost 21 million gross tons.

“In addition, the growing importance of China as a shipowning center, as a leader in ship repair as well as a prominent manufacturer of marine machinery and equipment has increased the level of ABS classification, certification, engineering and type approval activities in the country to a level which demands a more focused and active management team,” he adds.

Somerville also pointed to the physical size and logistics within China as posing constant administrative challenges that need to be managed effectively for ABS to continue to provide the superior level of service delivery to its clients that it is known for.

“Our activities throughout the rest of the Pacific region have also been growing rapidly,” Somerville notes. “This new divisional structure will allow us to better serve our clients in Korea, Japan, Singapore, India, the Philippines, Indonesia and elsewhere across Asia and Australasia.”

ABS Fleet Breaks 170m gt Mark

The ABS-classed fleet has broken through the 170m gross tons threshold. The latest statistics show the fleet as standing at 11,055 vessels aggregating nearly 170.3m gt representing an increase of more than 9m gt to date in 2010.

The ABS fleet has sustained consistent year-on-year growth for the last 16 years and firmly positions the society as the third largest class society in terms of aggregate gross tonnage. ABS is the largest society in terms of the number of vessels and offshore units in its class. Industry statistics also show ABS has maintained its position as the favored classification society for new construction, a standing it has held for most of the last three years. The current orderbook is comprised of 2,384 vessels aggregating 50.95m gt.

“The continued strength of the newbuilding market, given the current global economic uncertainty, is surprising,” says ABS Chairman and CEO Robert D. Somerville. “New orders to ABS class continue to offset the uncommonly high level of deliveries providing a consistently high demand for our engineering and survey services and giving us the youngest fleet profile in our history.” More than 67 percent of the in-service ABS-classed fleet is now ten years of age or less.

The latest fleet statistics show that ABS continues to hold the leading market share for newbuildings on order in both Korea and China, the world’s top two shipbuilding nations. The society is equally successful with shipowners with its 30 percent share of all Greek-controlled tonnage on order clearly demonstrating its success in this most demanding market.
With production scheduled to begin in 2013, Liwan 3-1 is expected to produce 6.6 to 8 billion m³ of gas per year. These volumes will be maintained for ten years then increased to between 10 to 12 billion m³ per year.

In his speech at the contract signing ceremony at CCS' headquarters in China, William J. Sember, ABS Vice President of Global Marketing noted that “tonight is an important occasion since it marks the beginning of deepwater development in Chinese offshore history. The Liwan 3-1 project shows the pioneering spirit of China and the ability to continue making progress offshore.”

Although this project presents unique cooperative challenges for all parties involved, Sember added, “recent examples of cooperation with CCS include the completion of the construction of the first LNG carriers built in China at Hudong Shipyard and the largest semisubmersible drilling unit (Hai Yang Shi You 981) built in China at Waigaoqiao. Both were dual-classed by ABS and CCS and are examples of tackling complex projects and working together to bring them to a successful conclusion.”

CNOOC’s Executive Vice President, Guangyu Yuan said, “CNOOC is confident these two classification societies fulfill the service contract based upon their tremendous experience, careful and precise style of work and an excellent cooperative working attitude.” Confidence is high that CCS and ABS will again work hand in hand on this and future projects to verify the latest technologies are applied in the design, construction and installation of deepwater offshore facilities.

The signing ceremony for the Liwan 3-1 South China Sea deepwater development, seated (from left): Feng Sun, CCS Vice President; Yu Liang, CNOOC Ltd Team Leader; and Kenneth Richardson, ABS Vice President, Energy Development. Standing: Zhong Ming Lin, CCS Offshore Division Deputy Director; Zhaojie Gao, CCS Vice President; Guangyu Yuan, CNOOC Ltd Executive Vice President; Kejun Li, CCS Chairman and President; Shouwei Zhou, CNOOC Vice President; William J. Sember, ABS Vice President of Global Marketing; Licheng Sun, CCS Vice President; Xiaojian Jin, CNOOC Ltd General Manager, Engineering; and Guohai Lin, CNOOC Ltd General Manager, Procurement.
ABS Becomes a Recognized Organization for the Republic of Kazakhstan

ABS and the Republic of Kazakhstan’s Ministry of Transport and Communication (MTC) have concluded an agreement granting ABS Recognized Organization (RO) status, able to act on behalf of the country’s maritime Administration.

This designation allows ABS to perform statutory certification surveys and functions on board Republic of Kazakhstan flagged vessels and offshore units, and for companies which operate these ships and units. In this capacity, ABS determines the compliance of such vessels with applicable international convention requirements and national regulations for the issuance of relevant statutory certificates on behalf of the Republic of Kazakhstan.

United States Embassy delegates, led by Chargé d’affaires Pamela Spratlen, joined representatives from ABS and MTC at a ceremony held in the Kazakhstan capital city of Astana to mark the occasion.

During the ceremony, ABS Europe Division President and COO Todd Grove said, “This formal recognition builds on the well-established relationship between ABS and the Ministry of the Republic of Kazakhstan. We are now able to offer our clients with vessels flying the Kazakhstan flag a fully integrated classification and certification service that will be more efficient than before.”

On behalf of MTC, Berik Uandykov, Chairman of the Transport and Railways Committee, recognized the importance of the international marine and offshore experience that ABS brings to the region.

Grove also noted the importance of Kazakhstan to ABS with the appointment of Vasily Svistak as ABS Manager of Technology and Business Development based in Kazakhstan.

ABS is the leader in providing classification services to offshore operators working in the Caspian Sea region with the majority of the drilling and offshore units classed by ABS.
Specialized Mooring for Deepwater

ABS Brazil Offshore Technology Center Studies Torpedo Piles

The ABS Brazil Offshore Technology Center, in partnership with the Federal University of Rio de Janeiro (COPPE/UFRJ), is conducting a multiyear study on the application of torpedo piles as an alternative mooring anchor system. The concept has been developed by Petrobras for continued use offshore Brazil.

The study will examine state-of-the art techniques available to simulate soil conditions and determine a set of requirements and criteria that address the holding capacity and structural strength of torpedo piles in operation.

Expected to result in the development of a rational approach for the class review and approval of the mooring system, the study was launched in early August and is anticipated to be completed by February 2012. According to Christiane Machado, ABS Senior Engineer, Technology, upon completion of the study, a report with recommendations to the industry will be issued together with guidelines for the design and use of torpedo piles.

Some of the key considerations surrounding the design of offshore foundation systems, in particular those using torpedo piles, are the uncertainties related to the determination of holding capacity values. The determination of relevant parameters of soil characteristics and the final installed position angles, together with the safety factors to be considered in the design, will be addressed in this study, explains Machado. “We want to provide a set of parametric equations to better estimate anchor weight, installation limits for penetration distance and angles and check the adequacy of the installed pile holding capacity.”

Petrobras is the patent holder for torpedo pile technology. Torpedo piles typically range in size from 24 to 98 tons. The largest torpedo pile can provide an anchor-holding capacity of up to 1,000 tons. Photo courtesy of Petrobras.

Torpedo piles are gravity-embedded cylindrically-shaped projectiles used to anchor deepwater flowlines and facilities offshore. Photo courtesy of Petrobras.
ABS has been selected to class two of the major components in Petrobras’ Papa Terra offshore Brazil field development. The tension-leg wellhead platform (TLWP) known as P-61 and the floating production, storage and offloading (FPSO) unit known as P-63 will both be ABS classed. The P-61 is the first-of-its-kind TLP dry tree application to be installed in deep-water offshore Brazil.

The Papa Terra heavy oil field is located in the Campos Basin approximately 110 km off Rio de Janeiro in water depths of up to 1,200 meters. Petrobras and partner Chevron are slated to put the field into production by late 2013.

The assembly of control valves, gauges and chokes that control oil and gas flow in a completed well are installed on the TLP platform as opposed to on the seabed floor so they are referred to as ‘dry’ trees. ABS will provide a review of the safety systems related to the dry trees.

“ABS has a longstanding relationship with Petrobras and, since dry trees are being considered as one of the solutions for deepwater exploration in the region, we are proud to class this unit,” says Kenneth Richardson, ABS Vice President, Energy Development. “ABS looks forward to assisting Petrobras in achieving another milestone in its exploration and production history.”

ABS’ scope of classification for an FPSO includes: review and approval of the FPSO design for compliance with ABS Rules; survey of fabrication components in the field to facilitate compliance with ABS Rules; verification that the hull structure, mooring systems and foundation, marine, production, utility and safety systems comply with the relevant standards; as well as survey of the offshore hook-up and commissioning.

The P-63 will join many other ABS-classed FPSOs operating offshore Brazil. The unit is a conversion of a very large crude carrier (VLCC) and, when completed, will have 16 topside modules weighing over 14,000 metric tons. The facilities on board are designed to process approximately 140,000 barrels per day of oil and 35 million standard cubic feet of gas per day.

More information on this project is available on the ABS website. Find the original press release by navigating to News & Events, Newsroom, Press Releases.
PACC Ship Managers Pte Ltd has signed up for voluntary compliance with the requirements established in the ILO Maritime Labour Convention (MLC) for 50 of its vessels.

“For ABS, voluntary compliance represents a validation of our existing partnership with PACC Ship Managers Pte Ltd for class and statutory services covered in the ISM and ISPS Codes,” says Eugene Low, ABS Pacific Division Head, Management Systems Certification.

Dinesh Thareja, ABS Head, Management Systems Certification says that while the Convention is not fully ratified, voluntary compliance “provides evidence to the client’s stakeholders that the shipowner is prepared for early compliance and therefore should have little difficulty in the transition to statutory certification.” He further adds that early voluntary compliance may “help reduce overall cost due to planned implementation and certification.”

Ships that are 500 gross tons or above involved in international trade will be expected to be in compliance within 12 months of ratification by 30 member States. Shipowners will be required to plan and implement measures for initial and ongoing compliance with the national requirements for the seafarers’ working and living conditions before the Convention is expected to enter into force in 2012.

Seaspan International has announced it will build four ship assist tugs to ABS class. The tugs, Seaspan Terminal III, IV, V and VI, will be built in Istanbul, Turkey at Sanmar Denizcilik Shipyard and are the first Seaspan tugs to be classed by ABS. Jonathan Whitworth, Washington Marine Group CEO, noted the importance of fleet enhancement saying it was a ‘golden opportunity.’

The prime duties for these ABS-classed tugs will be to dock, undock and escort ships in Vancouver Harbor and Roberts Bank. The RAstar 28 meter tugs will feature full firefighting capability and, upon arrival, will be among the most powerful vessels to sail British Columbian waters. The first vessel is scheduled to arrive by the end of 2010; while the remaining three tugs will be delivered in the summer and fall of 2011.
Australia Amends Requirements for Helicopter Operations

Australia’s amended requirements for helicopter operations, applicable to Australian flag ships and ships of other flags undertaking helicopter operations in Australian waters, entered into force on 1 August 2010.

Among other changes, the amended requirements documented in AMSA Marine Order 57, Issue 3, stipulate that documentary evidence regarding deck strength be made available on board including the maximum weight (tonnes) that can be landed on the nominated helicopter landing area. This information may be provided by, among others, the classification society that conducts the ship’s surveys.

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USCG Requires New Vessel Response Plans for Oil Tankers

Plains must be received by 22 February 2011

The United States Coast Guard (USCG) has issued Navigation and Vessel Inspection Circular (NVIC) Number 2-10 which requires owners and operators of regulated tank vessels carrying group I through IV petroleum oils to submit new or updated vessel response plans that meet the requirements of the Salvage and Marine Firefighting (SMFF) Final Rule.

The plans must be provided in accordance with the regulations in 33 CFR Part 155, Subpart I and received by the USCG before 22 February 2011 in order for vessels to remain in compliance with the relevant USCG regulations.

The newly issued 90-page NVIC provides voluntary guidance to owners and operators on preparing the response plans and includes a glossary, answers to frequently asked questions about SMFF Final Rule and job aids offering alternative planning criteria and guidance on evaluating SMFF services. A listing of the major revisions required for achieving SMFF compliance is also included.

The ABS Rapid Response Damage Assessment program complies with the US Coast Guard requirements of 33 CFR 155.240 which requires oil tankers to have “prearranged, prompt access to computerized, shore-based damage stability and residual structural strength calculation programs.” Contact ABS at rrda@eagle.org for more information.


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Cargo Stowage Code Revisions to Mitigate Risk

New Requirements are Applicable to Existing Vessels

The IMO Maritime Safety Committee’s 87th session approved a new Annex to the Code of Safe Practice for Cargo Stowage and Securing (CSS Code). The amendment includes new requirements for containership operators to begin documenting the types of lashing equipment, securing gear and fixtures associated with specialized containers their staff may encounter on board. Additionally, operators should maintain records of the training provided to the crew for the proper use of the equipment and the maintenance performed to keep it up to safety standards.

The revisions to the CSS Code detailed in IMO Circular MSC.1/Circ.1352 will apply in their entirety to new containerships constructed on or after 1 January 2015. Existing containerships constructed before 1 January 2015 are recommended to comply with the documentation suggestions and principles of design and operational procedures that can be implemented practically and without major structural modifications.

These principles are contained in sections 6 and 7.2, respectively of the new Annex 14. Operators of existing containerships should note the following important design principles suggested for implementation:

- A risk assessment should be performed to verify that securing operations can be safely carried out in all anticipated container configurations including implications of lashing 2.9 m high (or higher) containers and mixed stows of 12.2 m and 13.7 m containers
- Personnel should be provided with a safe place to work so as to eliminate the need for container top work particularly when lashing containers at the outer most positions and to allow for a clear sight of twist-lock handles and for manipulating lashing gear
- There should be a minimum clearance for transit areas of 2 m height and 600 mm width
- The minimum width of the lashing positions should preferably be 1,000 mm but not less than 750 mm
- Permanent lashing bridges should have a minimum width of 750 mm between the top rails of fencing with a 600 mm clearance between storage racks, lashing cleats and any other obstruction and, if elevated, be provided with toe boards of at least 100 mm to 150 mm
- Fixed ladders giving access to a lashing position should not slope more than 25 degrees from the vertical and be provided with handrails if the slope exceeds 15 degrees; fixed vertical ladders exceeding 3 m in height or located in way of a hold should be fitted with guard hoops
- The different types of twist-locks used should be minimized and the types should minimize the need for

working on the tops of container stows by using semi- and fully-
automatic designs
• Illumination of access ways (at least 10 lux) and at work
stations (at least 50 lux) should, where possible, be a permanent
installation with protection against breakage
The guidelines also call for the preparation of a cargo securing manual for all existing vessels and those whose keels were laid before 1 January 2015.
Vessels with keels laid after 1 January 2015 will also require a cargo safe access plan approved by an Administration.
The revised guidelines are detailed in IMO Circular MSC.1/Circ.1353 and are available for public access on the IMO website at www.imo.org.

**Applicability of the CSS Code Revisions & Cargo Securing Manual**

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**Riyadh MOU to Target Navigation Safety**

The Riyadh MOU implemented a three-month concentrated inspection campaign (CIC) on safety of navigation starting on 1 October 2010. The six participating maritime authorities, United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar and Kuwait, will be guided by the criteria set in the Riyadh MOU which is available on the organization’s website.

The campaign has two primary aims. First, the campaign will focus on navigation safety by verifying that related navigation equipment and documentation are in compliance with SOLAS Chapter V. Additionally, the Master and watchkeeping officers will be evaluated on their familiarity with the bridge equipment.

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New Caribbean ECA on the Horizon

A proposed new Caribbean Emission Control Area (ECA) is expected to be adopted by the IMO in mid-2011. If put into force, ships operating in the designated area may be subject to tougher pollution limits as early as January 2014.

The proposal for the latest ECA was adopted during the Marine Environment Protection Committee’s (MEPC) most recent session. Approved regulations set limits on the emission of sulfur oxides (SOx), nitrogen oxides (NOx) and particulate matter from ships. The area of the proposed US Caribbean ECA includes waters adjacent to coasts of the Commonwealth of Puerto Rico and the US Virgin Islands. These surrounding waters vary between 20 and 40 nautical miles.

By 2015, fuel oil sulfur content for ships transiting this area will be required to meet the 1 percent limit which is the standard for the three existing ECAs. In 2016, new engines on vessels operating in these areas must use emission control to achieve an 80 percent reduction in NOx emissions.

MEPC is also investigating whether steamships may be exempt from the new Caribbean ECA and the existing US/Canada ECA. If passed, steamships will be allowed to use fuel oil with a sulfur limit of 3.5 percent m/m until 1 January 2020 whereupon the limit will be reduced to 0.5 percent m/m.

FIND IT ON EAGLE.ORG
The ABS Fuel Switching Advisory Notice provides a comprehensive review of IMO and regional regulations for sulfur limits and offers operational guidance for owners to properly carry out the changeover from heavy to marine gas oils for both the main engine and the auxiliary boilers. The Advisory Notice is available for free download from the ABS website at www.eagle.org. Navigate to Resources, Booklets & Bulletins, ABS Advisories.

MEPC to Require Ship-to-Ship Operations Plan

All owners, operators and charterers of oil tankers 150 gross tons and above involved in the ship-to-ship transfer (STS) of oil cargo will be required to carry on board an approved STS operations plan starting 1 January 2011. Oil transfer operations associated with fixed or floating platforms are excluded.

The new Regulations 40, 41 and 42, under MARPOL 78/73 Annex I will require the STS operations plan to be approved by the applicable flag Administration no later than the date of the first annual, intermediate or renewal survey. ABS can provide this review, where so authorized on behalf of the Administration, and issue the new supplement to the IOPP Certificate, Form B.

This approved plan is required to prescribe how to conduct STS operations and be written in the working language of the ship. Operators are urged to take into consideration the information provided in IMO’s Manual on Oil Pollution, Section 1, Prevention as amended and the ICS and OCIMF’s Ship-to-Ship Transfer Guide, Petroleum, 4th edition, 2005.

FIND IT ON EAGLE.ORG
A model STS plan and additional information concerning the new regulations may be found on the ABS website at www.eagle.org. Navigate to Resources, Regulatory Information, Regulatory Newsroom.
Dynamic Positioning Systems: ABS Looks to Safety

At the recent Dynamic Positioning Conference in Houston, Texas, ABS Managing Principal Engineer George Reilly used the opportunity to explain the class society’s approach to issuing Dynamic Positioning System (DPS) notations and address some of the common misunderstandings with regard to operational issues relating to the DPS categories. Extracts from his presentation are below.

"Over the past five years, the number of vessels with DPS notations coming into ABS class rose from about 10 to 15 percent, signaling a greater acceptance of DP technology in the industry. ABS has approximately 1,000 vessels with the DPS notation in its fleet. This more widespread use of DP systems has brought many newcomers who have less experience with these systems and limited experience in dealing with ABS on the subject."

"From our perspective, the issue is not only about accommodating what the industry wants but also focus on safety. While it is tempting to design a ship for a specific environment, the changing circumstances the vessel is likely to encounter over its operational life make finding a useful measure to suit each client elusive."

"Clarifying misunderstandings is vital to our role as a class society. One common misunderstanding is linking increasing DPS numbers to system performance whereas the basis of the range of DPS notations is the provision of increasing levels of redundancy in the vessels’ equipment and compartmentalization."

Another source of confusion is that the IMO makes references to ‘Class 2 operations’ and ‘Class 3 operations’. ABS does not recognize an equivalent ‘DPS-2 mode’ and ‘DPS-3 mode’ of operation even though clients frequently use such language. An ABS-classed vessel maintains the notation assigned at the time of build. The notation of a vessel does not change from DPS-3 to DPS-2 or DPS-1 depending upon the condition or availability of machinery any more than a traditional ship’s class is changed or suspended if it suffers some kind of mechanical failure."

"With respect to combined operations (a DPS-classed vessel operating in close proximity to other vessels or structures), the Rules are framed on the basis of a single vessel. The risks, hulls and thruster interactions or sensor interactions of two or more vessels have not been considered. It is not possible for classification Rules to envisage every conceivable operational scenario for each vessel over its life. Furthermore, it is expected that operators will have an established framework for identifying and systematically addressing such risks in their planning and operating procedures."

"The most important point is that classification is a means by which the industry has established self-regulation standards. This process does not happen in a vacuum. ABS develops and modifies its Rules based on research, input from owners, operators, builders, equipment manufacturers, academia, acknowledged leaders in specific fields and government regulatory bodies. ABS is open to meaningful discussion with all these entities."

"O"
Arctic Analysis May Lead to New Analytical Tools

ABS and Samsung Heavy Industries, Ltd. have conducted a joint project to study the impact of hull girder responses of a large Arctic ore carrier. The initial results of the experiment were recently presented in a technical paper at the IceTech Conference in Anchorage, Alaska.

The project concerned the optimal design of an ore carrier on the trans-Atlantic trading route which poses numerous challenges for ore carriers performing year-round operations. “It is one of the most difficult routes for mariners,” says Han Yu, ABS Manager, Shared Technology. The region is characterized by both very harsh ice conditions in the Foxe Basin off Baffin Island and very harsh wave conditions in the Northern Atlantic. Vessels must also navigate ‘Iceberg Alley’ off Newfoundland and Labrador. “This requires the designer to optimize the hull form for both good icebreaking performance and good seakeeping characteristics,” adds Yu.

A series of scaled model tests were conducted at the state-of-the-art Samsung Ship Model Basin (SSMB) to compare the seakeeping performance of three bows: the icebreaking bow, the moderate bow and the bulbous bow. The large bow flare of the icebreaking bow can induce severe wave impact and whipping responses of the hull girder which becomes an issue for the vibration-induced fatigue of the hull structure.

Traditionally the bulbous bow has been used due to good open water performance. “However, the bulbous bow is not a candidate for this route. We are especially interested in the moderate bow for this trade route which can perform well in both the ice and heavy seas,” says Yu.

Yu also pointed out that ABS has been developing analytic tools to evaluate the seakeeping performance as well as vibratory hull girder responses. ABS was able to simulate the model test results with ABS software NLOAD3D. “Since scale model tests are very expensive and have limited test conditions, we need to have analytic means, such as software, to investigate the seakeeping performance and structural integrity of different hull forms in different conditions,” says Yu. “This project demonstrated the capability of certain ABS analytical tools.”

It is anticipated that the software program can be applied to alternate ship types, assisting designers in developing optimal hull form and structures.

The NLOAD3D system uses a 3-D nonlinear time domain solution of wave-body hydrodynamics with a potential flow panel code.
Joint Project Examines Hull Integrity Under Ice Loads

ABS has partnered with Daewoo Shipbuilding and Marine Engineering (DSME) in Seoul, South Korea for a joint project to examine hull integrity under ice loads. The experiment was conducted on local structural models of a 107,000 dwt aframax Arctic crude oil tanker developed by DSME in compliance with the IACS Polar Class PC4 requirements. The results of the experiment were presented in a technical paper, “Structural Integrity Assessment for a Polar Class Arctic Tanker under Ice Loads” at the IceTech Conference in Anchorage, Alaska.

John Dolny, ABS Engineer, Shared Technology, who participated in the project, anticipates that structural integrity assessments considering scenario-based ice loads will help fill a gap in the IACS Polar Class Rules. The premise is that conducting nonlinear finite element analysis (FEA) and plastic grillage analysis will give a practical application to address a number of outstanding issues.

“The Polar Class Rules provide a minimum requirement for ice strengthening. By considering scenario-based ice loads that are not explicitly addressed in the Rules and examining hull integrity, ABS is taking one step toward completing the gap in the Polar Class Rules. This provides a practical approach to polar ship design,” says Dolny.

One aspect of the experiment aimed to determine the optimal mid-body configuration with respect to ultimate strength. During the project, a simple procedure was developed as an alternative to time consuming nonlinear FEA for predicting the limit loads or carrying capacity of ship grillages subjected to ice pressure. “The new plastic grillage analysis tool is effective on simple and contiguous aspects of a ship such as mid-body grillages and is simple to use,” says Dolny.

Coatings Resource Center Serves as ‘Coatings Helpdesk’

Shipowners, shipyards and manufacturers looking for guidance on marine coatings can turn to ABS’ Coatings Resource Center (CRC) for assistance. The current marine coating regulation, Performance Standard for Protective Coatings Resolution MSC.215(82), applies to ballast water tanks for all new ships of greater than 500 gross tonnage and double-side skin spaces arranged in bulk carriers of 150 meters in length and above.

The CRC maintains information on brands, types, ISO standards and national standards and clients may request assistance from this ‘network’ of information at anytime. ABS was one of the first class societies to initiate guidance on coatings establishing the CRC in 2008. Coating is very important, “especially if you want to have a long life for your ship,” says Edward Jansen, ABS Principal Engineer, Shared Technology, who oversees the Center. Coating the hull improves speed and prevents corrosion and shipbuilders have taken note. “Owners of shipbuilding sites often have more painters on staff than anyone else,” Jansen remarks.

Developing software that could help resolve the difficulty of applying coatings in awkward or tight spaces could, in turn, help improve the longevity of vessels. Jansen is working with Safinah Ltd. (UK) in cooperation with Newcastle University on the concept of a coating-friendly ship structure. “Safinah’s software program, which illustrates the best way to build and weld blocks has promising application for coatings,” says Jansen. Jansen hopes the concept may resolve some of the real life application issues not fully covered by the current IMO testing standards such as testing for salt beneath the coating or in finding a consensus to measure the degree of brittleness. “The CRC is working collaboratively with others in the industry to eradicate these concerns in the system,” says Jansen.

Shipowners, shipyards and manufacturers looking for more information on coating technology may email the CRC at CRC@eagle.org.
The importance of safety when developing cold ironing standards and designs cannot be overstressed, Yoshi Ozaki, ABS Director of Environmental Technology recently told participants at MarineLog’s annual Global Green Ship Conference in Washington, DC.

Cold ironing is the method of shutting down the vessel’s generators while in port and using shore power to supply all the electrical loads on the vessel. “The emphasis on cold ironing must be on safety,” Ozaki explains. “The most important issues are human safety hazards and mitigating risk.” Ozaki focused his presentation to two areas: highlighting the true nature of high voltage safety hazards; and the safe connection of plugs and receptacles on board vessels.

There are some industry standards and classification Rules addressing typical low voltage shore power connections (usually 450v). There is no universally-adopted standard for high-voltage connections of 6.6kv or 11kv, however. “Most ship crews are unfamiliar with the dangers of high-voltage which increases the chance of careless errors that may lead to serious harm,” says Ozaki.

Arc flashing, an electrical breakdown of air resistance, is the concern. Often the result of a breakdown of insulation material caused by a buildup of conductive dust, dirt and particles, these not-so-rare occurrences have resulted in arc flash releasing huge thermal energy hotter than the surface of the sun.

A collaborative working group comprised of representatives from the International Organization for Standardization (ISO), the International Electrotechnical Committee (IEC) and the Institute of Electrical and Electronics Engineers (IEEE) have been working for several years toward the development of an international standard that may mitigate these risks.

The State of California has regulatory requirements for cold ironing. Other port authorities around the world may follow suit. However, there is a pressing need for international standards that present solutions to the safety hazards inherent to cold ironing. “ABS is, however, ready to assist designers with its classification criteria for developing safe cold ironing system design and safe operational procedures,” notes Ozaki.

California Requirements

Cold ironing or other control technology should be used to reduce the NOx and particulate matter emissions of a fleet’s baseline by:

- 10% from 1 January 2010 to 31 December 2011
- 25% from 1 January 2012 to 31 December 2013
- 50% from 1 January 2014 to 31 December 2016
- 70% from 1 January 2017 to 31 December 2019
- 80% from 1 January 2020

Extruded aluminium saddle cleats have been designed specifically to restrain high voltage cables up to 400kv with a diameter range of 100 to 160 mm.

Photo courtesy Ellis Patents
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 5 July to 15 November 2010.

Recent Publications

**NEW** Guide for Ballast Water Exchange, July 2010 (Pub 171)
This Guide is provided for the use of designers, builders, owners and operators of ABS-classed vessels. It specifies the requirements for obtaining the optional classification notation Ballast Water Exchange (BWE). The BWE notation identifies a level of compliance with the applicable regulations contained in the IMO International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004 as well as those IMO Guidelines referenced in the Convention addressing ballast water exchange. This publication is only available for download.

**UPDATE** Guide for Vessels Operating in Low Temperature Environments, August 2010 (Pub 151)
This updated Guide contains ABS criteria that are intended to assist in the design, operation and maintenance of vessels when operating in low temperature environments and also specifies the ABS requirements and criteria for obtaining the optional notations: Cold Climate Operation, Cold Climate Operation-Polar, Cold Climate Operation Plus, Cold Climate Operation-Polar Plus and DE-ICE for vessels occasionally operating in ice. This publication is only available for download.

**UPDATE** Guide for Certification of Container Securing Systems, November 2010 (Pub 45)
This Guide has been revised to include the subsequent revisions and additions since its original publication date in 1988. The content has been expanded to include recent developments in container securing systems. The Guide provides requirements for the certification of the initial installation of container securing systems aboard vessels classed by ABS. Although the certification of these systems is not a classification requirement, ABS will issue certificates for container securing systems which have been constructed and installed according to the requirements of this Guide when requested by the owner.

**UPDATE** Rules for Building and Classing Steel Vessels, January 2011 (Pub 2)
Updated annually, these Rules are applicable to steel vessels of 90 meters (295 feet) and over in length intended for unrestricted ocean service. The requirements are applicable to those features that are permanent in nature and can be verified by plan review, calculation, physical survey or other appropriate means. The nine-volume boxed set includes a CD-Rom in Adobe Acrobat format will be available for purchase by mid-December 2010. The set includes:
- Notices and General Information
- Part 1 Rules for Conditions of Classification
- Part 2 Rules for Materials and Welding
- Part 3 Hull Construction and Equipment
- Part 4 Vessel Systems and Machinery
- Part 5C Specific Vessel Types (in two volumes)
- Part 6 Optional Items and Systems
- Part 7 Rules for Survey After Construction

**UPDATE** Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length, January 2011 (Pub 5)
This edition of the Rules has been revised to include the subsequent revisions and additions since its last publication date in 2006. The Rules apply to all self-propelled steel vessels under 90 meters (295 feet) in length which are intended for unrestricted ocean service (including firefighting, oil recovery and safety vessels). They cover hull construction, machinery equipment and systems, testing and survey. The seven-volume boxed set includes a CD-Rom in Adobe Acrobat format will be available for purchase by mid-December 2010. The set includes:
- Notices and General Information
- Part 1 Rules for Conditions of Classification (with supplement)
- Part 2 Rules for Materials and Welding
- Part 3 Hull Construction and Equipment
- Part 4 Vessel Systems and Machinery
- Part 5 Specialized Vessels and Services
- Part 7 Rules for Survey After Construction
Ballast Water Exchange Notation Offered by ABS  
New Guide Includes Sample Ballast Water Management Plan

ABS has released a new optional notation for vessels that are designed, equipped and intended to conduct ballast water exchange at sea. Based on the recently released ABS Guide for Water Ballast Exchange, the BWE notation identifies a level of compliance with the applicable regulations contained in the IMO International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004 (Ballast Water Management Convention), as well as those IMO guidelines referenced in the Convention addressing ballast water exchange.

The convention is designed to prevent the introduction of aquatic organisms and pathogens into local ecosystems through the discharge of ballast water and sediments. Ballast water exchange is the process of exchanging coastal water, which may be freshwater, saltwater or brackish water, for mid-ocean water.

“Ballast water exchange at sea presents numerous challenges related to the operation of vessels, specifically vessel structure, stability and machinery systems,” says Peter Tang-Jensen, ABS Senior Vice President of Technology. “This Guide gives designers, builders, owners and operators procedures and practical solutions to overcome challenges presented by their selected exchange method,” Tang-Jensen adds.

Three methods of ballast water exchange have been found acceptable by the IMO in reducing the spread of harmful aquatic organisms; the sequential method wherein ballast tanks are emptied and refilled with replacement water; the flow-through method during which new ballast water is pumped into the bottom of the tank until the old water has been pushed out through an overflow; and the dilution method which has new water flowing in from the top of the tank while simultaneously discharging water from the bottom of the tank.

In addition to specifying the requirements for obtaining the BWE classification notation, the Guide offers a sample ballast water management plan for use by vessel operators. The example includes overall guidance on ballast water exchange methods, definitions, templates and appendices of regulatory requirements. Following the example, operators can quickly develop a vessel-specific plan that meets the requirements stipulated in IMO Resolution MEPC.127(53).

The notation is the first of two developed by ABS to reflect the fact that the IMO Convention could soon be ratified and prepared for entry into

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Proper sediment treatment and removal is important,” stresses Dorchak. “Studies have shown that organisms trapped within the sediment are capable of surviving for long periods of time even after a ballast water exchange has occurred.” Dorchak adds.

The pending 2004 International Convention for the Control and Management of Ships’ Ballast Water and Sediments calls for vessels to minimize the uptake of undesirable entrapments of sediments and to safely facilitate their removal. While ratification of the Convention has been slow, with only 27 member States representing 25.3 percent of the world’s gross tonnage signing on, the Convention is likely to enter into force in late 2011 or early 2012.

This prolonged entry into force has made it difficult for owners, builders and manufacturers to plan for necessary equipment and enhancement aimed at controlling the sediment on board vessels. Until the Convention is ratified, regulation is occurring at national, regional and local levels and a small number of jurisdictions may prohibit the discharge of ballast water entirely.

Even though the Convention has not yet entered into force, many port States, including Brazil, Canada and the United States, have established national regulations mandating the exchange of ballast water and will require evidence to support the exchange has taken place. The BWE notation is thus an important tool for owners trading to these regions seeking to demonstrate compliance.

In addition to the recently released ABS Guide for Ballast Water Exchange, ABS offers a Ballast Water Treatment Advisory that provides a comprehensive summary of the current ballast water treatment regulations and available technologies in order to provide useful guidance to shipowners, operators and builders in their decisions about suitable treatment options. The Advisory Notice is available for free download from the ABS website at www.eagle.org.

Navigate to Resources, Booklets & Bulletins, ABS Advisories.
Recent Updates to ABS Rules & Guides

GENERIC RULES NOTICES & CORRIGENDA

Part 1  Rules for Conditions of Classification – Offshore Units and Structures (2010)
  • Rule Change Notice 5, November 2010

NOTICES & CORRIGENDA

Pub 2  IACS Common Structural Rules for Double Hull Oil Tankers (2010)
  • Corrigenda, September 2010

IACS Common Structural Rules for Bulk Carriers (2010)
  • Corrigenda, September 2010

Pub 3  Rules for Building and Classing Aluminum Vessels (1975)
  • Rule Change Notice 10, November 2010

Pub 4  Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways (2007)
  • Corrigenda, November 2010
  • Rule Change Notice 9, November 2010

  • Corrigenda, November 2010
  • Rule Change Notice 4, November 2010

  • Corrigenda, November 2010
  • Rule Change Notice 1, November 2010

  • Rule Change Notice 2, November 2010

Pub 10  Rules for Building and Classing Steel Barges (2009)
  • Rule Change Notice 3, November 2010

  • Rule Change Notice 7, November 2010

  • Rule Change Notice 2, November 2010

  • Rule Change Notice 1, November 2010

Pub 22  Rules for Materials and Welding 2006 Part 2 Aluminum and Fiber Reinforced Plastics (FRP) (Chapters 5-6)
  • Corrigenda, November 2010
  • Rule Change Notice 5, November 2010

  • Rule Change Notice 2, November 2010

  • Rule Change Notice 4, November 2010

  • Rule Change Notice 2, November 2010

  • Rule Change Notice 5, November 2010

  • Corrigenda, November 2010
  • Rule Change Notice 1, November 2010

  • Corrigenda, November 2010

  • Rule Change Notice 1, November 2010
NOTICES & CORRIGENDA

• Corrigenda, November 2010

• Rule Change Notice 2, November 2010

• Corrigenda, November 2010
• Rule Change Notice 6, November 2010

• Corrigenda, September 2010
• Rule Change Notice 1, November 2010

• Rule Change Notice 3, November 2010

• Rule Change Notice 10, November 2010

• Corrigenda, November 2010

• Rule Change Notice 1, November 2010

Pub 139 Guide for the Classification Notation Tailshaft Condition Monitoring (TCM) (2005)
• Corrigenda, November 2010
• Rule Change Notice 1, November 2010

• Corrigenda, November 2010
• Rule Change Notice 5, November 2010

• Rule Change Notice 1, September 2010

• Rule Change Notice 2, November 2010

Pub 162 Guide for the Class Notation Comfort - Yacht (COMF(Y)) and Comfort Plus - Yacht (COMF+(Y)) (2008)
• Corrigenda, November 2010

• Rule Change Notice 1, October 2010

Pub 166 Guide for Compliance with the ILO Maritime Labour Convention, 2006 Title 3 Requirements (2009)
• Rule Change Notice 1, October 2010

• Corrigenda, September 2010
• Rule Change Notice 1, September 2010
• Rule Change Notice 2, November 2010

• Rule Change Notice 1, October 2010

NOTICES & CORRIGENDA – SUPPLEMENTAL GUIDES

Guide for the Class Notation for Bow or Stern Loading and Unloading (BLU or SLU) for Oil Carriers, Liquefied Gas Carriers or Chemical Carriers (2008)
• Rule Change Notice 1, November 2010

Guide for the Class Notation Helicopter Decks and Facilities (HELIDK and HELIDK(SRF)) (2008)
• Rule Change Notice 1, November 2010

Guide for the Class Notation Moveable Platforms (Decks) for Vehicle Loading (MOVDK) (2007)
• Rule Change Notice 1, November 2010
The ABS Academy recently delivered a specialized training course in Port Arthur, Texas at the US Coast Guard (USCG) Liquefied Gas Carrier National Center of Excellence (LGNCOE). Established in 2009, the LGNCOE enhances the USCG Marine Safety Program by bolstering the consistency of marine inspections, expanding technical competencies and developing marine safety career paths and training opportunities.

“The ABS instructors’ knowledge was the equivalent of an encyclopedia for LPG practice,” said Randal Ogrydziak, LGNCOE Supervisor. The two-day course provided practical advice on design, inspection and safety issues from a new construction and operational perspective, referring to the International Gas Code requirements and the ABS Rules for gas carriers which can be found in Part 5C, Section 8 of the Steel Vessel Rules.

Twenty-three inspectors and officers from the LGNCOE as well as Marine Safety Units located in Lake Charles, Houston and New Orleans attended the customized course. “The inspectors came away with a greater appreciation of the efforts a mariner goes to in preparing an LPG ship for US port entry,” said Ogrydziak. “This course exposed our inspectors and officers to practical industry experience that will help them in the effective execution of their tasks in PSC and flag State inspections of LPG vessels.”

Michael Odom, LGNCOE Lieutenant Commander, commented that the course “has enhanced our inspectors’ understanding of the reasoning behind the Rules and requirements and this is a valuable contribution to being able to conduct inspections professionally.”

The LPG course is among many programs offered by the ABS Academy that provide a technical and operational overview of the more sophisticated ship types such as LNG carriers, chemical tankers and containerships.

To schedule a course, request a session or find out more information check out the ABS Academy website at www.absacademy.org.
Offshore Seminar Enhances Professional Improvement

A team of ABS panelists recently gave a one-day topical offshore seminar in Busan, Korea to address current offshore market conditions and upcoming regulatory issues for offshore units. Presenting topics relevant to shipowners, operators, designers, shipyards and other marine personnel, the seminar attracted 65 participants from across these disciplines.

Drawn from the ABS Pacific Division management team the panelists included: Thomas Kirk, Vice President, Engineering; Suck-Hwan Lee, Principal Engineer; Joseph Rousseau, Director, Offshore Technology and Business Development; Jang-Ho Yoon, Director, Technology and Business Development; and Soo-Hong Yang, Senior Engineering Specialist. They addressed the increased scope of the ABS Eagle Offshore Structure Assessment Program (OSAP) and new ABS Eagle FLGT and FPSO analysis software tools. The seminar also included updates within the ABS Guide for Building and Classing Floating Offshore Liquefied Gas Terminals, ABS Guide for Building and Classing Floating Production Installations and ABS Guide for Building and Classing Mobile Offshore Units.

The presentations included six topical modules:

- Offshore Outlook: Business and Regulatory Environment
- Floating LNG FPSOs as Offshore Gas Terminals
- Wind Power Support: Jackups for Offshore Turbine Installation
- Updated Offshore Structure Assessment Program (OSAP) Software
- 2009 IMO MODU Code: Changes Affecting Builders and Designers
- Developments in FPSO Hull Structuring and Mooring

The attendees expressed an interest in future workshops and external training to remain informed of regulatory changes and environmental issues. Participants said they would return to a future ABS Offshore Technology and Development Seminar. “ABS aims to do its utmost to assist in professional improvement.

The number of offshore facilities is increasing. Offshore development accounts for 35 percent of the world’s hydrocarbon production. It is important for ABS to continue to advise its clients about the changing regulations to help optimize offshore operations,” says Yoon.


For more information about obtaining ABS Eagle FLGT, FPSO and OSAP 2.0 analysis software tools, contact your local ABS office.
The ABS London office has reorganized responsibilities to provide better coordination of activities. Keith Lilley moved from Director of Engineering to Manager of Special Projects, Engineering. He will be supporting Vice President of Engineering, Dimitrios Kostaras. From London, Lilley will focus at the division level on improved response rates and financial issues including coordinating fee quotes and service delivery. Additionally, he will take on responsibilities for divisional Rule development activity, technical committees and ABS divisional scholarships.

Pier Carazzai, formerly Director, Offshore Engineering in London, will take on full responsibility for the London Engineering department. Carazzai will be supported by Mike Bell as Manager of the Ship Engineering department and David Morgan as Manager of the Offshore Engineering department. The London management team will be responsible for the local control of response rates, revenue, service delivery and training of engineers.

As a further strength within the Ship Engineering department, Senior Engineers Neil Hopkins and Victor Crockett will lead newly formed sections within the Hull and Statutory team.

Steve Sexstone, Senior Engineer will lead the section responsible for Machinery including MED, NOx and Pressure Vessels reporting to John Morgan, Managing Principal Engineer. Mark Penfold is now working for the Environmental Technology team as a Senior Engineer.
Peter Tang-Jensen Awarded SNAME’s Prestigious David W. Taylor Medal

The Society of Naval Architects and Marine Engineers (SNAME) awarded their highest honor, the David W. Taylor Medal for notable achievement in naval architecture or marine engineering, to ABS Senior Vice President of Technology Peter Tang-Jensen at the society’s Annual Banquet during the SNAME Annual Meeting and Expo in Seattle, Washington.

A well-respected member of the maritime community with more than 35 years of experience in shipbuilding design and engineering, Tang-Jensen has been providing strategic leadership for the classification society’s research and product development efforts since 2006.

“It is an honor to recognize Peter for his notable achievements in naval architecture and marine engineering as well as the ABS organization for its continued leadership in technology advances for our industry,” says SNAME President Keith Michel.

The ABS technology leader and former Executive Vice President of Odense Steel Shipyard, Ltd. is a member of numerous boards and committees including: Member of the Technical Advisory Committee for the Joint European Shipbuilding Organization, Deputy Chairman for Odense University College of Engineering and Member of the Board for the Independent Scandinavian Technical Research and Investigation Institute, Force Technology.

“With Peter’s guidance, he has built upon our strong foundation of Rules and transformed our Technology team into a practical and commercially-driven research and development shop,” says ABS Chairman and CEO Robert D. Somerville. “ABS has a deep tradition and reputation for its technology leadership and Peter has been a guardian of that legacy.”

Tang-Jensen becomes the second ABS staff member to receive this award. In 2004, SNAME bestowed the award to then ABS Executive Vice President and Chief Technology Officer Donald Liu, who pioneered the dynamic loading approach (DLA) to assess the structural strength of vessels.

Realignment Enhances Engineering Capabilities

ABS has restructured its engineering responsibilities to provide enhanced services to its customers. The appointment of Wei-Biao (Bill) Shi to the newly-created position of Chief Engineer, Structures marks strengthened structural analysis capabilities within the ABS Technical Consistency department. Shi will be responsible for the structural Rule applications, policies and consistency and interpretations of these Rules. Stationed in Singapore, Shi will be supporting Vice President and Chief Engineer, Robert A. Giuffra.

Transitioning into Shi’s role as Assistant Chief Engineer for the Pacific Division is Yasuyuki Adachi. Adachi most recently served as Manager within the Division’s Engineering Services, Machinery, Electrical and Control Systems Department (ESD) in Yokohama. Kouichi Sugiyama, Senior Principal Engineer, will replace Adachi as Manager of ESD.

Fumio Uetsuhara (photo, page 4) has been appointed Assistant Chief Engineer for the new ABS Greater China Division based in Shanghai. Kazuo Fukahori, Manager of Ship Engineering, Hull (SED), Yokohama, replaces Uetsuhara as Director of Engineering for the ABS Shanghai office. Replacing Fukahori as Manager of SED is Makoto Oba, currently Senior Principal Engineer.

Robert Spencer will assume new responsibilities as the ABS Vice President, Project Director for the new ABS-Lloyd’s Register joint venture for developing the software for the evaluation of tanker and bulk carrier structures in compliance with the IACS Common Structural Rules. Martyn Cooper has replaced Spencer as Assistant Chief Engineer for the ABS Europe Division.
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<td>1 – 3 February 2011</td>
<td>TOPSIDES Exhibition &amp; Conference</td>
<td>Galveston, TX, US</td>
<td>Sponsored by ABS <a href="http://www.topsidesevent.com">www.topsidesevent.com</a></td>
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<td>7 – 9 February 2011</td>
<td>Arctic Technology Conference</td>
<td>Houston, TX, US</td>
<td><a href="http://arctictechnologyconference.org">http://arctictechnologyconference.org</a></td>
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<td>21 – 24 March 2011</td>
<td>Gastech</td>
<td>Amsterdam, The Netherlands</td>
<td>Stand #CO55 Sponsored by ABS <a href="http://www.gastech.co.uk">www.gastech.co.uk</a></td>
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<tr>
<td>29 – 31 March 2011</td>
<td>Offshore Asia</td>
<td>Singapore</td>
<td>Sponsored by ABS <a href="http://www.offshoreasiaevent.com">www.offshoreasiaevent.com</a></td>
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Thomas H. Gilmour, ABS Americas Division President and COO, presents an ABS membership plaque to G.S. Tan, Keppel AmFELS President and CEO.

Mark A. McGrath, ABS Pacific Division President and COO, presents an ABS membership plaque to Wong Weng Sun, Sembcorp Marine President and CEO.

John Gallagher, ABS Regional Vice President, North America presents an ABS membership plaque to Allister Paterson, Seaway Marine Transport President and CEO.

Joseph Rella, Austal Shipyard President receives an ABS membership plaque from Brian Barton, ABS District Manager, Central United States.
Christopher J. Wiernicki, ABS President and COO, presents an ABS membership plaque to Frangiskos Kanellakis, Principal of Alpha Tankers and Freighters International Ltd., while his father Christos Kanellakis looks on.

Todd W. Grove, ABS Europe Division President and COO, presents an ABS membership plaque to Leonidas Polemis, owner of Remi Maritime.

Thomas H. Gilmour, ABS Americas Division President and COO, presents an ABS membership plaque to Dalton Schmitt, Astro Internacional President.

Mark A. McGrath, ABS Pacific Division President and COO, presents an ABS membership plaque to Suhartoko, Pertamina Shipping Senior Vice President.

John Gallagher, ABS Regional Vice President, North America presents an ABS membership plaque to Chris Bollinger, Bollinger Shipyard President, while John McDonald (left) ABS Regional Vice President, Northern Europe and Africa and Brian Barton, ABS District Manager, Central United States look on.

Todd W. Grove, ABS Europe Division President and COO, presents an ABS membership plaque to Dimitris E. Patrikios, Springfield Shipping Co. Panama S.A. General Manager.
ABS recently held a luncheon with fourteen of its Members at the India House in New York. In attendance were, first row, from left: Basil Karatzas, Compass Maritime Services; Tim Donney, Allianz Global Corporate & Specialty; Frank Costa, Berkley Offshore Underwriting Managers; Jim Colman, Sea Star Line; Peter Shaerf, AMA Capital Partners; and Tom Gilmour, ABS; second row: John Gallagher, ABS; Ian Lennard, National Cargo Bureau; Martin Dempsey, Travelers; Craig Stevenson III, Diamond S Management; Gerard H. Potier, B&H Shipping Group; RADM John Craine Jr., State University of New York Maritime College; David Wamsley, ABS; and Joe Breglia, Horizon Lines.

Mark A. McGrath, ABS Pacific Division President and COO, presents an ABS membership plaque to Widihardja Tanudjaja, PT Berlian Laju Tanker Tbk President Director.

John McDonald, ABS Regional Vice President, Northern Europe and Africa presents an ABS membership plaque to William Scott, Tidewater Inc. Manager, Engineering and Technical Services, while Brian Barton (left) ABS District Manager, Central United States and John Gallagher, ABS Regional Vice President, North America look on.

Charles Chen, Yang Ming Lines, Vice President, Engineering receives an ABS Technical Committee membership plaque from Robert D. Somerville, ABS Chairman and CEO.

ABS recently held a luncheon with fourteen of its Members at the India House in New York. In attendance were, first row, from left: Basil Karatzas, Compass Maritime Services; Tim Donney, Allianz Global Corporate & Specialty; Frank Costa, Berkley Offshore Underwriting Managers; Jim Colman, Sea Star Line; Peter Shaerf, AMA Capital Partners; and Tom Gilmour, ABS; second row: John Gallagher, ABS; Ian Lennard, National Cargo Bureau; Martin Dempsey, Travelers; Craig Stevenson III, Diamond S Management; Gerard H. Potier, B&H Shipping Group; RADM John Craine Jr., State University of New York Maritime College; David Wamsley, ABS; and Joe Breglia, Horizon Lines.
Newly Classed Vessels and Recent Contracts

OOCL LUXEMBOURG, an 8,063 teu containership, SH, SHCM, ES, NIBS, RRDA, built by Samsung H I for Newcontainer No. 43.

1 July to 30 September 2010
Newly Classed Vessels and Facilities

**TANKERS**

ADELE MARINA RIZZO, 62,683 gt / 108,835 dwt, SH, SHCM, VEC, TCM, built by Hudong-Zhonghua Shipbuilding for Rizzo-Bottiglieri-De Carlini Armatori

ALEXANDER THE GREAT, 156,915 gt / 297,958 dwt, SH, SHCM, VEC, TCM, built by Universal Shipbuilding for Alexander The Great Carriers

ALIGOTE, 42,225 gt / 74,192 dwt, AB-CM, RES, CSR, VEC-L, TCM, built by SPP Plant & Shipbuilding for Aligote

AL-NOUF, 54,916 gt / 97,135 dwt, AB-CM, CSR, VEC, built by Hyundai H I for Sea Sky Shipping

ALPINE CONFIDENCE, 60,205 gt / 107,600 dwt, AB-CM, CSR, VEC, TCM, built by Tauneishi Holdings for Poseidon Navigation

ALPINE LIBERTY, 29,826 gt / 50,171 dwt, AB-CM, CSR, RES, VEC-L, TCM, built by SPP Shipbuilding for Hermes Shipowners

ALPINE MEADOW, 29,826 gt / 50,171 dwt, AB-CM, CSR, RES, VEC-L, TCM, built by SPP Shipbuilding for Camelia Maritime

AMUR STAR, 8,537 gt / 13,019 dwt, VEC, GP, built by 21st Century Shipbuilding for Rigel Bereederungs

ANDROS, 3,212 gt / 4,605 dwt, VEC, built by Fujian Southeast Shipyard for Andros Marine

BOTAFOGO, 58,418 gt / 106,892 dwt, SH, SHCM, RES, VEC, TCM, built by Shanghai Waigaoqiao Shipbuilding for Cerise Shipping

BRIGHT FORTUNE, 28,777 gt / 48,008 dwt, SHR, VEC, RRDA, built by Iwagi Zosen for La Darien Navegacion

BUNGA BAKAWALI, 29,124 gt / 45,553 dwt, AB-CM, CSR, VEC, GP, built by SLS Shipbuilding for MISC Berhad

C ETERNITY, 160,619 gt / 298,984 dwt, AB-CM, CSR, VEC, built by Hyundai H I for Neptune Shipholding

C MIGHTY, 160,619 gt / 313,874 dwt, AB-CM, CSR, VEC, built by Hyundai Samho H I for Apollo Shipholding

C PRIMACY, 160,619 gt / 313,875 dwt, AB-CM, CSR, VEC, built by Hyundai Samho H I for Jupiter Shipbuilding

CAPE TALARA, 42,010 gt / 73,371 dwt, AB-CM, CSR, VEC-L, TCM, built by New Times Shipbuilding for Pasha Finance

CARPE DIEM II, 17,800 gt / 25,175 dwt, AB-CM, CSR, VEC, RRDA, built by Daesun Shipbuilding & Engineering for Nicholas G Moundreas Shipping

COLORADO STAR, 8,537 gt / 13,021 dwt, VEC, GP, RRDA, built by 21st Century Shipbuilding for Rigel Bereederungs

CORROSSOL, 58,418 gt / 106,898 dwt, SH, SHCM, RES, VEC, RRDA, built by Shanghai Waigaoqiao Shipbuilding for Pacific Bliss Marine

DUBAI CHARM, 63,294 gt / 115,514 dwt, AB-CM, CSR, VEC, TCM, built by Hanjin H I & Construction for Charm Maritime

E MEI SAN, 163,882 gt / 317,952 dwt, AB-CM, CSR, VEC, TCM, RRDA, built by Shanghai Waigaoqiao Shipbuilding for Hua Zhong Shipping

EPSILON SEA, 5,041 gt / 6,294 dwt, built by CSC Chingqing Dongfeng Shipbuilding for Epsilon Navigation Services

ESHIPS FALCON, 29,563 gt / 51,156 dwt, AB-CM, CSR, RES, VEC, TCM, RRDA, built by SLS Shipbuilding for Emirates Ship Investment

EUGENIE, 81,427 gt / 157,672 dwt, AB-CM, CSR, ES, RES, VEC-L, TCM, built by Samsung H I for Fontvielle Shipholding

EVA SCHULTE, 11,233 gt / 16,621 dwt, ES 2020, TCM, built by Jiangxi Jiangzhou Union Shipbuilding for Fort Canning Park Shipping

FOUR SKY, 61,241 gt / 115,708 dwt, AB-CM, CSR, VEC, TCM, built by Samsung H I for Four Jolly

AMUR STAR, a 13,019 dwt tanker, VEC, GP, built by 21st Century Shipbuilding for Rigel Bereederungs.

BOTAFOGO, a 106,892 dwt tanker, SH, SHCM, RES, VEC, TCM, built by Shanghai Waigaoqiao Shipbuilding for Cerise Shipping.
BRIGHT FORTUNE, a 48,008 dwt tanker, SHR, VEC, RRDA, built by Iwagi Zosen for La Darien Navegacion.

BUNGA BAKAWALI, a 45,553 dwt tanker, AB-CM, CSR, VEC, GR, built by SLS Shipbuilding for MISC Berhad.

COLORADO STAR, a 13,021 dwt tanker, VEC, GP, RRDA, built by 21st Century Shipbuilding for Rigel Bereederungs.
TRISTAR SPIRIT, 490 gt / 634 dwt, built by Mech Marine Engineers Private for Tristar Transport


UNITED GRACE, 62,775 gt / 112,777 dwt, AB-CM, CSR, VEC-L, TCM, built by New Times Shipbuilding for Trade Industrial Development

V8 STEALTH II, 62,775 gt / 109,991 dwt, AB-CM, CSR, ES, VEC, TCM, built by New Times Shipbuilding for Diablo Fortune

VALDARNO, 62,683 gt / 108,914 dwt, SH, SHCM, VEC, built by Hudong-Zhonghua Shipbuilding for Ishima

BULK CARRIERS

AGIA FILOTHEI, 34,374 gt / 58,802 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by SPP Plant & Shipbuilding for Stardom Maritime

AOM ELENA, 58,100 gt / 106,498 dwt, SHR, HCS, built by Oshima Shipbuilding for Compania Flor de Vapores

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

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

BALTIC COVE, 23,456 gt / 34,403 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, GP, RRDA, built by SPP Shipbuilding for Krystal Shipholding

BAO MAY, 91,385 gt / 149,983 dwt, BC-A, SH, SHCM, GRAB, TCM, built by Shanghai Waigaoqiao Shipbuilding for Bao May Maritime

BOTTIGLIERI AMBITION, 51,255 gt / 93,387 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, built by Jiangsu New Yangzi Shipbuilding for Giuseppe Bottiglieri Shipping

BOTTIGLIERI CHALLENGER, 51,255 gt / 93,353 dwt, BC-A, AB-CM, CSR, GRAB, PORT, built by Jiangsu New Yangzi Shipbuilding for Giuseppe Bottiglieri Shipping

BULK PEACE, 91,971 gt / 175,858 dwt, BC-A, CSR, AB-CM, GRAB(25), TCM, built by Zhoushan Jinhaiwan Shipyard for Well Far

CLIPPER HOPE, 19,831 gt / 31,883 dwt, SHR, GRAB, built by Hakodate Dock for Clipper Bulk Shipment

CLIPPER IZUMO, 17,002 gt / 28,050 dwt, BC-A, SHR, GRAB, built by Shimanami Shipyard for Shohei Kisen Kaisha

CLIPPER TERMINUS, 19,972 gt / 30,425 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Tsuji H I for Clipper Group

CMB EDOUARD, 20,846 gt / 32,648 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Jiangsu Lanbo Shipbuilding for Behandymar

CS CAPRICE, 19,972 gt / 30,424 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Tsuji H I for Caprice Shipping

FIVE STARS BEIJING, 93,385 gt / 181,417 dwt, BC-A, AB-CM, CSR, GRAB(25), TCM, built by Sasebo H I for Five Stars Beijing Shipping

FORTUNE APRICOT, 33,036 gt / 57,034 dwt, BC-A, CSR, GRAB(20), TCM, built by Taizhou Sanfu Ship Engineering for White Rhododendron Shipping

GENCO BAY, 23,456 gt / 34,296 dwt, BC-A, GRAB(20), AB-CM, CSR, TCM, GP, built by SPP Shipbuilding for Hesperos

GOLDEN BEIJING, 91,971 gt / 175,820 dwt, BC-A, AB-CM, GRAB(25), CSR, built by Zhoushan Jinhaiwan Shipyard for Golden Beijing

GOLDEN ECLIPSE, 43,498 gt / 79,471 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Zhoushan Jinhaiwan Shipyard for Golden Future

GOLDEN FUTURE, 91,971 gt / 175,861 dwt, BC-A, AB-CM, CSR, GRAB(25), built by Zhoushan Jinhaiwan Shipyard for Frontline Management

HSIN MAY, 91,385 gt / 178,076 dwt, BC-A, SH, SHCM, GRAB, TCM, built by Shanghai Jiangnan-Changxing Shipbuilding for HSIN Maritime

JIN AO, 33,036 gt / 56,920 dwt, BC-A, GRAB(20), AB-CM, CSR, TCM, built by Shanghai Shipyard for Jiaoao Marine

JIN MEI, 51,265 gt / 92,205 dwt, BC-A, AB-CM, CSR, GRAB(20), PORT, TCM, built by Jiangsu New Yangzi Shipbuilding for Jinmei Marine

KANARIS, 91,373 gt / 178,064 dwt, BC-A, SH, SHCM, GRAB, built by Shanghai Jiangnan-Changxing Shipbuilding for Maxpente Shipping
KM KEELUNG, 42,942 gt / 82,072 dwt, BC-A, AB-CM, CSR, GRAB(20), built by Tsuneishi Holdings for Kvang Ming
MINERAL OAK, 91,373 gt / 177,921 dwt, BC-A, SH, SHCM, GRAB(25), TCM, GP, built by Shanghai Waigaoqiao Shipbuilding for Ocean Wise
PING MAY, 91,385 gt / 178,076 dwt, BC-A, SH, SHCM, GRAB, TCM, built by Shanghai Jiangnan-Changxing Shipbuilding for Ping May Maritime
RBD SHANGHAI, 51,225 gt / 93,259 dwt, BC-A, AB-CM, CSR, GRAB(20), built by Jiangsu New Yangzi Shipbuilding for Chemikalien Seetransport
SEAOPE II, 33,036 gt / 56,894 dwt, BC-A, AB-CM, TCM, CSR, GRAB(20), ES, built by Taizhou Sanfu Ship Engineering for Online Shipping
SEAPACE, 33,036 gt / 56,894 dwt, BC-A, AB-CM, CSR, GRAB(20), ES, TCM, RRDA, built by Taizhou Sanfu Ship Engineering for Courtesy Shipping
SHIBUMI, 91,373 gt / 178,090 dwt, BC-A, SH, SHCM, GRAB, TCM, built by Shanghai Waigaoqiao Shipbuilding for Kingswood Marine
STEFANIA LEMBO, 42,930 gt / 82,117 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by Tsuneishi Holding for Deiulemar-Compagnia di Navigazione
THALASSINI AXIA, 34,374 gt / 58,608 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by SPP Plant & Shipbuilding for Strong International
THALASSINI NIKI, 34,374 gt / 58,609 dwt, BC-A, AB-CM, CSR, GRAB(20), TCM, built by SPP Plant & Shipbuilding for Seawater Investment
WADOWICE II, 24,055 gt / 38,061 dwt, BC-A, Ice Class "IC", SHR, TCM, built by Tianjin Xingang Shipbuilding H I for Ares Ten Shipping
ZOSCO TAIZHOU, 91,971 gt / 175,885 dwt, BC-A, AB-CM, CSR, GRAB(25), built by Zhoushan Jinhaiwan Shipyard for Zosco Taizhou Shipping

**CONTAINERSHIPS**
MAERSK WINNIPEG, 1,700 teu, SH, SHCM, built by CSBC Corporation, Taiwan for White Pomegranate Shipping
MAERSK WOLFSBURG, 1,700 teu, SH, SHCM, built by CSBC Corporation, Taiwan for White Nandin Shipping
MOL DIGNITY, 4,400 teu, SHR, built by Daewoo Shipbuilding & Marine Engineering for Castle Dignity
OOCL GUANGZHOU, 4,500 teu, SH, SHCM, built by Samsung H I for Orient Overseas Container Lines
OOCL LONDON, 8,063 teu, SH, SHCM, ES, NIBS, RRDA, built by Samsung H I for Newcontainer No. 42
OOCL LUXEMBOURG, 8,063 teu, SH, SHCM, ES, NIBS, RRDA, built by Samsung H I for Newcontainer No. 43

**GAS CARRIERS**
KIKYO, 82,000 m³, SH, SHCM, FL(30), TCM, built by Hyundai H I for Heroic Pyxis
METHANE JULIA LOUISE, 170,723 m³, SH, SH-DLA, SHCM, FL40, NBL, RRDA, built by Samsung H I for Methane Service
TANGGUH JAYA, 154,967 m³, SH, SH-DLA, SHCM, ES, NIBS, built by Samsung H I for Ocean 1919 Shipping No. 2
YAMABUKI, 85,432 m³, SH, SHCM, FL(30), TCM, built by Hyundai H I for Heroic Draco

**OFFSHORE**
**Fixed Platforms**
SGWA, SUWD, built by Cuel for Chevron Thailand Exploration & Production

**Drillships**
DEEP OCEAN ASCENSION, 60,105 gt / 60,861 dwt, SH-DLA, DPS-3, NBLES, built by Samsung H I for Pride International
SAIPEM 12000, 60,538 gt / 59,116 dwt, SH-DLA, CDS, DPS-3, built by Samsung H I for Saipem
**Column Stabilized Drilling Units**

ENSICO 8502, 19,377 gt, DPS-2, built by Keppel FELS for Ensco Worldwide

PETRORIG III, 30,923 gt, CDS, DPS-2, built by Jurong Shipyard for Rubicon Drilling Services

**Column Stabilized Units**

MAERSK DELIVERER, 37,756 gt, DPS-2, built by Keppel FELS for A P Moller-Maersk

WEST ORION, 30,147 gt, CDS, DPS-2, built by Jurong Shipyard for Seadrill Deepwater Units

**Self Elevating Drilling Units**

HAI YANG SHI YOU 937, 9,783 gt, built by Dalian Shipbuilding Industry Offshore for Drilling - China Oilfield Services

KS ENDEAVOR, 6,948 gt, built by Maritime Industrial Services for KSAM2 Petrodrill Offshore

OFFSHORE MISCHIEF, 7,410 gt, built by Lamprell Energy for Scorpion Offshore

RISING PHOENIX, 5,097 gt, built by Saigon Shipyard for Teras Offshore

ROWAN EXL-1, 7,279 gt, built by Keppel Amfels for Rowan Luxembourg

TUXPAN, 7,307 gt, built by Keppel Amfels for Perforadora Central

**Single Point Mooring**

KREUZ SPM, built by Swiber Offshore Construction for Kreuz Shipbuilding & Engineering

** MISCELLANEOUS **

**Barges**

A.M.S. ESPERANCE, 2,307 gt, built by Nanjing Lansheng Shipyard for Trito Offshore

BARGE 455 9, 7,913 gt, built by Gunderson Marine for Vessel Management Services

BMI 192, 1,078 gt, built by Basic Marine for Basic Marine

BUKIT EMAS 2311, 1,441 gt, built by P T Jasamarin Engineering for Pacific Radiance

CBR 793, 2,152 gt, built by Sneed Shipbuilding for Central Boat Rentals

CBR 794, 2,194 gt, built by Halimar Shipyard for Central Boat Rentals

CIB 721, 2,164 gt, built by C & C Marine and Repair for Cibco Barge Line

CREST 287, 2,314 gt, built by Taixing Sunhoo Shipbuilding for Pacific Crest

CREST 301, 3,924 gt, built by Nantong Tongmao Shipbuilding for Pacific Radiance

DELMA 9, DELMA 10, 2,305 gt, built by Nanjing Nanjiang Shipbuilding for National Marine Dredging

DOUBLE SKIN 508, 4,238 gt, built by Jeffboat for Vane Line Bunkering

ESMERALDA, 3,527 gt, built by Taizhou Sanfu Ship Engineering for Imi Del Peru

FINACIA 78, 3,145 gt, built by Nanjing Ding Feng Shipbuilding for P T Mitra Bahtera Segarasejati

FINACIA 80, 3,145 gt, built by Nanjing Asiapride Shipping Making for Du-Hope International Group

FORTUNA, 39,989 gt, built by Shanghai Zhenhua H I for Strategic Mileage

GLORY MARINE 3, GLORY MARINE 4, 8,526 gt, built by Jiangsu Huatai Shipbuilding for Harita Berlian Shipping

GOLTRA 3010, 3,233 gt, built by Yangzhou Hairun Shipping for Pemborong Bumijaya

JADE 1, 3,527 gt, built by Taizhou Sanfu Ship Engineering for Imi Del Peru

JASCON 34, 14,725 gt, DPS-3, PAS, built by Hantong Ship Machinery Equipment for Consolidated Projects

KATARUNGAN 2, 3,105 gt, built by Nanjing San Ding Li Shipyard for Inte Marine

KIM HENG 210, 1,092 gt, built by P T Bandar Victory Shipyard for Kim Heng Marine & Oil Field

OFFSHORE MISCHIEF, a 7,410 gt self elevating drilling unit, built by Lamprell Energy for Scorpion Offshore.

JIN AO, a 56,920 dwt bulk carrier, BC-A, GRAB(20), AB-CM, CSR, TCM, built by Shanghai Shipyard for Jinao Marine.
LINTAS SAMUDERA 57, 3,231 gt, built by Nanjing Yonghua Shipbuilding for PT Pelayaran Duta Lintas Samudera
LKH 1881, 3,111 gt, built by Yizheng Xinyang Shipbuilding for Kim Hock Tug and Barge
MARINA EXPRESS I, MARINA EXPRESS II, 3,151 gt, built by Taizhou Sanfu Ship Engineering for Ocean Express Marine
MARMAC 24, 2,152 gt, built by Southwest Shipyard for McDonough Marine
MCDERMOTT LB 32, 13,870 gt, built by Kim Heng Shipbuilding & Engineering for Hydro Marine Services
OMBLIN-3001, 3,233 gt, built by Yangzhou Hairun Shipping for PT Trans Energy
ORO, 3,527 gt, built by Taizhou Sanfu Ship Engineering for Imi Del Peru
OSG 350, 27,615 gt, SH, SHCM, RRDA, built by VT Halter Marine for OSG Delaware Bay Lightering
PB 2501, 2,212 gt, built by Nanjing East Star Shipbuilding for Putra Bulian Shipping & Trading
PB 3008, 3,233 gt, built by Yangzhou Hairun Shipping for Putra Bulian Shipping & Trading
PB 3301, 4,259 gt, built by Yangzhou Hairun Shipping for Putra Bulian Shipping & Trading
PERLA, PLATA, 3,527 gt, built by Taizhou Sanfu Ship Engineering for Imi Del Peru
PW NATUNA, 8,691 gt, built by Wuxue Janda Shipbuilding for Pacific Ocean Engineering & Trading
RTC 60, 2,212 gt, built by Southeastern New England Shipbuilding for Reinauer Transportation
RVR 3, 3,105 gt, built by Nanjing San Ding Li Shipyard for Maruti Logistic
SAVANNAH, 1,679 gt, built by Detyens Shipyards for Dredge Savannah
SHIUNN FATT 2301, 1,390 gt, built by Pacific Marine Shipbuilding for Shiunn Fatt Marine
SMS 250, 2,365 gt, built by Nantong Tongde Shipyard for Masin Maritime Services
TGH 2507, TGH 2508, 2,212 gt, built by Jiangsu Taixing Yuemei Shipyard for Putra Bulian Shipping & Trading
TOLL 3311, 2,212 gt, built by Nanjing Yonghua Shipbuilding for Toll Logistics
VM-1, VM-2, 2,907 gt, built by C & C Marine and Repair for Versabuild
WESTSEA 79, 4,938 gt, built by Lianyungang Helitong Shipbuilding for Westsea Marine

**Government Vessels**

MIKE HENDRICKS, 1,872 gt, built by Conrad Industries for US Army Corps of Engineers
THREE FORTY THREE, 522 gt, Fire Fighting Capability, built by Eastern Shipbuilding for New York City Fire Department
USNS MATTHEW C. PERRY, 43,758 gt, SH-DLA, Ice Class “C0”, R1, NIBS, VEC, built by General Dynamics NASSCO for Military Seafight Command
VISHWAST, 2,200 gt, Fire Fighting Vessel Class 1, NIBS, built by Goa Shipyard for Indian Coast Guard
YP 703, 305 gt, built by C&G Boat Works for Naval Sea Systems Command
YT 803, 352 gt, built by J M Martinac Shipbuilding for US Department of the Navy

**Tugs, Workboats and OSVs**

ACHEIVEMENT, 1,052 gt, built by VT Halter Marine for Vessel Management Services
ANDERSON TIDE, 2,441 gt, Fire Fighting Vessel Class 1, DPS-1, built by Jingjiang Nanyang Shipbuilding for Pacific Ocean Engineering & Trading
ARMADA TUAH 81, 2,183 gt, Fire Fighting Vessel Class 1, DPS-1, built by P T Drydocks World Pertama Shipyard for Bumi Armada Navigation
BAYAN, 1,299 gt, Fire Fighting Vessel Class 1, built by Guangzhou Hongsheng Shipbuilding for Gac Maritime Transports

**SEAPACE, a 56,894 dwt bulk carrier, BC-A, AB-CM, CSR, GRAB(20), ES, TCM, RRDA, built by Taizhou Sanfu Ship Engineering for Courtesy Shipping.**

**HELLESPONT CHIEFTAIN, a 16,851 dwt tanker, VEC-L, TCM, built by Sekwang Shipbuilding for Mt Hellespont Chieftain.**

**GANGES STAR, a 13,021 dwt tanker, VEC, GP, RRDA, built by 21st Century Shipbuilding for Rigel Bereederings.**
BJ BLUE DOLPHIN, 4,769 gt, WS, ΦDPS-2, built by North American Shipbuilding for Edison Chouest Offshore
BORCOS TASNEEM 8, BORCOS TASNEEM 9, 1,706 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Grade One Marine Shipyard for Borcos Shipping
BOUDREXAUS TIDE, 2,465 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Niigata Shipbuilding & Repair for Pan American Life Center
BORBON LIBERTY 117, BORBON LIBERTY 118, BORBON LIBERTY 119, BORBON LIBERTY 120, 1,517 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Yangzhou Dayang Shipbuilding for Bourbon Offshore
BORBON LIBERTY 218, BORBON LIBERTY 228, 1,733 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Zhejiang Shipbuilding for Bourbon Offshore Surf
BORBON LIBERTY 219, 1,733 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Zhejiang Shipbuilding for Bourbon Supply Asia
BORBON LIBERTY 221, 1,733 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Ningbo for Bourbon Supply Investissements
BORBON LIBERTY 223, BORBON LIBERTY 224, 1,733 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Yangzhou Dayang Shipbuilding for Bourbon PS Sasu
BORBON LIBERTY 225, 1,733 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Zhejiang Shipbuilding for Bourbon Offshore Greenmar
BORBON LIBERTY 227, 1,733 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Zhejiang Shipbuilding for Bourbon Offshore
BRITOIL 80, 2,049 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by PT Britoil Offshore Indonesia for Britoil Offshore Services
BUMBLE BEE, 1,786 gt, ΦDPS-2, built by Bollinger Shipyards for Bee Mar-Bumble Bee
CASPian POWER, 2,921 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Fujian Southeast Shipyard for Bue Caspian
CASPian PROTECTOR, 2,108 gt, Fire Fighting Vessel Class 1, Safety Standby Service GR.A (320), ΦDPS-1, built by Berjaya Dockyard for Team XIV
CASSANDRA VI, 1,084 gt, built by Sealink Engineering & Slipway for Sealink Shipyard
CHERAMIE BOTRUC NO.40, 1,751 gt, ΦDPS-2, built by VT Halter Marine for L & M Botruc Rental
COASTAL TRIUMPH, 1,291 gt, ΦDPS-2, built by Modest Infrastructure for Coastal Marine Construction & Engineering
COURTNEY TIDE, 1,678 gt, ΦDPS-1, built by Fujian Southeast Shipyard for Silver Fleet
DILOS, 3,212 gt, VEC, built by Fujian Southeast Shipyard for Dilos Marine
EVAY, 2,310 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by P T Batamec Shipyard for Otto Marine
GEMIA, 2,147 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Nam Cheong Dockyard for Gemia
GRANT CANDIES, 4,150 gt, ΦDPS-2, built by Dakota Creek Industries for Otto Candies
GULF TIGER, 1,659 gt, ΦDPS-2, built by Thoma Sea Marine Construction for Gulf Offshore Logistics
HAKO FORTRESS, 1,763 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Guangzhou South China Shipyard for Otto Offshore
HALUL 38, 1,896 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Sealink Engineering & Slipway for Halul Offshore Services
HILDA LAB, 2,287 gt, ΦDPS-2, built by Eastern Shipbuilding for Laborde Marine Services
HOS PINNACLE, HOS WINDANCER, 1,955 gt, ΦDPS-2, built by LEEvac Industries for Hornbeck Offshore Services
INGRID K, 1,731 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by P T ASL Shipyard for Asian Offshore
JAYA AFFINITY, 1,458 gt, Fire Fighting Vessel Class 1, built by Guangzhou Hangtong Shipbuilding & Shipping for Jaya Shipbuilding & Engineering

JAYA CONQUEROR, 2,558 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Tongfang Jiangxin Shipbuilding for Jaya Shipbuilding & Engineering
JEVOLI BLACK, 2,283 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Northern Shipyard Gdansk for Marnavi
JOE GRIFFIN, 2,998 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by North American Shipbuilding for Island Ventures II
KIRKCONNELL TIDE, 1,678 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Fujian Southeast Shipyard for Silver Fleet
KOMULAN, 2,310 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by P T Batamec Shipyard for Otto Marine
LAMNALCO MANAKIN, 1,290 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by ABG Shipyard for Lamlalco
LEBOUEF TIDE, 2,326 gt, ΦDPS-2, built by Quality Shipyard for Tidewater Marine
LECOMPTE TIDE, 1,678 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Fujian Southeast Shipyard for Aqua Fleet
LIM TIDE, 2,370 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Fujian Mawei Shipbuilding for Tidewater Marine International
MARTY QUIST TIDE, 2,301 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Northern Shipyard Gdansk for Tidewater Marine International
MMPL KESTREL, 2,369 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Fujian Mawei Shipbuilding for Minnow Marine Project
NETHERLAND TIDE, 2,301 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Northern Shipyard Gdansk for Silver Fleet
OSG VISION, 2,209 gt, built by VT Halter Marine for OSG Delaware Bay Lightering
PERIDOT, 2,428 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Universal Shipbuilding for Sea Glory Private
PETRA ADMIRAL, 2,921 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by P T Nanindah Mutiara Shipyard for Intra Oil Services
PETRA MAJESTIC, 2,921 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by P T Nanindah Mutiara Shipyard for Intra Oil Services
POSH ACHIEVER, 1,347 gt, Fire Fighting Vessel Class 1, built by Yuexin Shipbuilding for Starling Shipping
POSH VERDANT, 2,538 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Yuexin Shipbuilding for Starling Shipping
PRINCESS FATMA, 1,523 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Berjaya Dockyard for National Petroleum
REEDBUCK, 2,461 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Northern Shipyard Gdansk for Chouest Cyprus Marine
RT KRIS, 1,712 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by P T Marcopolo Shipyard for Rig Tenders Offshore
SANTOS SERVICE, 2,999 gt, Fire Fighting Vessel Class 1, ΦDPS-2, built by Estaleiro Navship for Bram Offshore Transportes Maritimes
SANTOS SOLUTION, 2,999 gt, ΦDPS-2, built by Estaleiro Navship for Bram Offshore Transportes Maritimos
SEASAFE SALVO, 2,042 gt, ΦDPS-0, built by Taishan Winde Shipbuilding for Otto Marine
SEGOVIA TIDE, 1,620 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Guangdong Hongsheng Shipbuilding for Aqua Fleet
SETIA AMAN, 3,404 gt, Fire Fighting Capability, built by Nantong Tongbao Shipbuilding for Alam Maritime
SK LINE 403, 3,265 gt, built by Fuzhou Liya Shipping Engineering for Nam Cheong Dockyard
SWIBER ATLANTIS, 3,389 gt, ΦDPS-2, built by Guangzhou Hangtong Shipbuilding for Thaumas Marine
TANJUNG DAHAN 1, TANJUNG DAHAN 2, 1,706 gt, Fire Fighting Vessel Class 1, built by Grade One Marine Shipyard for Tanjung Kapal
TOPAZ GLORY, TOPAZ LEGEND, 1,678 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by Fujian Funing Shipbuilding for Bovey Offshore
TRINE K, 1,731 gt, Fire Fighting Vessel Class 1, ΦDPS-1, built by P T ASL Shipyard for PK Offshore Management

GRANT CANDIES, a 4,150 gt offshore support vessel, ΦDPS-2, built by Dakota Creek Industries for Otto Candies.

HOS PINNACLE, a 1,955 gt offshore support vessel, ΦDPS-2, built by Leevac Industries for Hornbeck Offshore Services.

LEBOUEF TIDE, a 2,326 gt offshore support vessel, ΦDPS-2, built by Quality Shipyard for Tidewater Marine.
UOS DISCOVERY, UOS ENDEAVOUR, UOS EXPLORER, 2,922 gt, Fire Fighting Vessel Class 2, Oil Recovery Capability Class 1, ØDPS-2, TCM, built by Fincantieri Cantieri Navali Italiani for ATL Offshore

ZAMIL 62, 1,330 gt, Fire Fighting Vessel Class 1, built by Cheoy Lee Shipyards for Zamil Offshore Services

**Vehicle Carrier**

LIBERTY PROMISE, 57,030 gt, NBLES, TCM, built by Daewoo Shipbuilding & Marine Engineering for Liberty Maritime

**Yachts**

BACARELLA, 1,052 gt, built by Trinity Yachts for Ostrow Capital

IMAGINE, 459 gt, built by Trinity Yachts for Motor Yacht Imagine

LIONHEART, 121 gt, built by Claesen Jachtbouw for Marine Construction Management

MY SISA, 456 gt, built by Azimut-Benetti for Al Remaizan Saleh

PANTHALASSA, 496 gt, built by Perini Navi for Panthalassa

TAMARA RD, 206 gt, built by Cantieri Navali Lavagna for Mr Jose Luis Diaz-Varela

TANUSHA, 299 gt, built by Azimut-Benetti for Murray Marketing

VICA, 456 gt, built by Azimut-Benetti for Vica Maritime

**Others**

AQUILA, 81 gt, HSC pilot launch, ES, GP, built by Kvichak Marine Industries for Nederlands Loodswezen

C RACER, 454 gt, HSC crew boat, ØDPS-1, built by Midship Marine for Rangk

ESNAAD 811, ESNAAD 812, 544 gt, HSC crew boat, built by Pelican Offshore Services for ESNAAD

FOS ORION, 785 gt, HSC crew boat, Fire Fighting Capability, ØDPS-1, built by Sam Aluminum Engineering for P T Fast Offshore

K-AIR-003, diving system, built by Seanetics Asia Works for Kreuz Subsea

LTS 3000, 30,628 gt, heavy lift vessel, ØDPS-1, built by P T ASL Shipyard for Offshore International FZC

PENGUIN 163, PENGUIN 164, 236 gt, HSC crew boat, built by Penguin Shipyard International for Miclyn Express Offshore

TOLL FIREFLY, 1,120 gt, landing craft, built by P T Tunas Karya Bahari Indonesia for Toll Logistics

**MARTY QUIST TIDE**, a 2,301 gt offshore support vessel, Fire Fighting Vessel Class 1, ØDPS-2, built by Northern Shipyard Gdansk for Tidewater Marine International.

**OSG VISION**, a 2,209 gt tug, built by VT Halter Marine for OSG Delaware Bay Lightering.

**BACARELLA**, a 1,052 gt yacht, built by Trinity Yachts for Ostrow Capital.
ABS ACTIVITY

Recent Class Contracts

**TANKERS**

- Three 177,000 gt / 319,000 dwt for Ocean Tankers at Shanghai Waigaoqiao Shipbuilding
- One 166,000 gt / 291,600 dwt for Maran Tankers Management at Daewoo Shipbuilding & Marine Engineering

**BULK CARRIERS**

- Eight 40,500 gt / 76,000 dwt at Hudong-Zhonghua Shipbuilding
- Four 44,766 gt / 82,000 dwt for Fortune Ocean Shipping at CSSC Guangzhou Longxue Shipbuilding
- Four 40,500 gt / 76,000 dwt at Chengxi Shipyard
- Four 33,218 gt / 66,810 dwt for ADNOC at STX Offshore & Shipbuilding
- Three 105,000 gt / 206,000 dwt at Shanghai Waigaoqiao Shipbuilding
- Three 63,900 gt / 114,500 dwt at Shanghai Shipyard
- Two 201,000 gt / 400,000 dwt for Oman Ship Management at Jiangsu Rongsheng H I
- Two 107,000 gt / 205,500 dwt for COSCO Shipping at Nantong COSCO KHI Ship Engineering
- Two 95,000 gt / 180,000 dwt for Polembros Shipping at Sungdong Shipbuilding & Marine Engineering
- Two 87,600 gt / 175,000 dwt for Mitsubishi at Hyundai H I
- Two 51,000 gt / 93,000 dwt at Jiangsu New Yangzi Shipbuilding
- Two 42,868 gt / 79,600 dwt at Hudong-Zhonghua Shipbuilding
- Two 40,500 gt / 76,000 dwt for Cardiff Marine at Hudong-Zhonghua Shipbuilding
- Two 23,300 gt / 34,790 dwt for Matisse Maritime at SPP Shipbuilding
- One 63,900 gt / 114,500 dwt for Lomar Shipping at Shanghai Shipyard
- One 32,300 gt / 57,000 dwt at Taizhou Kouan Shipbuilding
- One 11,000 gt / 16,900 dwt at Taizhou Sanfu Ship Engineering

**OFFSHORE**

- Self Elevating Drilling Units
  - One 7,000 gt at Shanghai Zhenhua H I

**MISCELLANEOUS**

- **Barges**
  - Fourteen 2,300 gt at Taizhou Sanfu Ship Engineering
  - Four 5,500 gt at Huarun Dadong Dockyard
  - Three 2,340 gt at Yangzhou Hairun Shipping
  - Two 8,500 gt at Nanjing Yonghua Shipbuilding
  - Two 7,000 gt at Nantong Hongqiang Marine H I
  - Two 5,500 gt at Nanjing Ding-Feng Shipbuilding
  - Two 3,151 gt for Rich Marine at Nanjing Asiapride Shipping Making
  - Two 3,151 gt at Nanjing Nanjiang Shipbuilding
  - Two 3,151 gt at Nanjing Wu Jiang Shipyard
  - Two 3,151 gt at Nantong Jinjian Shipbuilding & Repair
  - Two 3,151 gt at Nanjing Yonghua Shipbuilding
  - Two 2,777 gt for Cashman Equipment at Lad Services of Louisiana
  - Two 2,308 gt at Nanjing Yonghua Shipbuilding
  - Two 2,139 gt at C & C Marine & Repair
  - Two 1,350 gt for Korea Engineering at Yizheng Xinyang Shipbuilding
  - Two 1,002 gt at Lad Services of Louisiana

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**OVERSEAS MYKONOS**, a 51,711 dwt tanker, AB-CM, CSR, ES, RES, VEC-L, TCM, built by Hyundai Mipo Dockyard for Brooklyn Product Tanker.


**KS ENDEAVOR**, a 6,948 gt self elevating drilling unit, built by Maritime Industrial Services for KSam2 Petrodrill Offshore.
One 8,500 gt at Jiangsu Huatai Shipbuilding
One 7,000 gt at Nanjing Yonghua Shipbuilding
One 7,000 gt at Nantong Tongcheng Ship Manufacturing
One 6,000 gt for Pacific Crest at Nantong Tongmao Shipbuilding
One 5,500 gt for Poet Shipbuilding & Engineering at Nantong Tongde Shipyard
One 5,500 gt at Poet Shipbuilding & Engineering
One 3,151 gt at Yangzhou Sanjiangying Shipbuilding
One 3,150 gt at Yangzhou Hairun Shipping
One 2,634 gt at Bourg D D & Service
One 2,400 gt at Nanjing Yonghua Shipbuilding
One 2,340 gt at Taixing Dongxing Shipping
One 2,340 gt at Yizheng Xinyang Shipbuilding
One 2,340 gt at Nanjing East Star Shipbuilding
One 2,340 gt at Yizheng Xinyang Shipbuilding
One 2,300 gt at Tongzhou Huaya Shipbuilding
One 2,300 gt for Misener Marine Construction at Tres Palacios Marine
One 2,300 gt for Global Marine Transportation at Trinity Marine Group
One 2,076 gt for Global Marine Transportation at Trinity Marine Group
One 1,900 gt at ETA Star Mar Sol India

Government Vessels
Three 2,610 gt for NYC Dept of Environmental Protection at Bollinger Marine Fabricators
One 419 gt for US Army Corps of Engineers at Conrad Industries
One 278 gt for US Army Corps of Engineers at Basic Marine
One 65 gt for US Army Corps of Engineers at Patti Marine Enterprises

Tugs, Workboats and OSVs
Six 2,994 gt at Thoma-Sea Marine Construction
Three 3,000 gt for Galliano Marine Service at North American Shipbuilding
Two 3,151 gt for CPC Crest at Taixing Sunhoo Shipbuilding

Yachts
One 500 gt at Azimut-Benetti
One 500 gt at Overmarine Due
One 500 gt at San Lorenzo
One 425 gt at Acico Yachts
One 290 gt at Heesen Yacht Builders

Others
Two 700 gt high speed craft for Gulf Offshore Logistics at Gulf Craft
One 496 gt high speed craft for Seacor Marine at Gulf Craft

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

SETIA AMAN, a 3,404 gt offshore support vessel, Fire Fighting Capability, built by Nantong Tongbao Shipbuilding for Alam Maritime.

PANTHALASSA, a 496 gt yacht, built by Perini Navi for Panthalassa.
We Welcome Your Thoughts

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ABS Chairman and CEO Robert D. Somerville discusses possible innovations in future ship designs, such as improvements in propeller design and the associated water flow using advanced computational fluid dynamics.