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When ships meet ports

There is a phrase famous in maritime circles which refers to "the customs of the port" and which suggests that pretty well everything that goes on in one port will be different to that which took place in the previous port, and that which will go on in the next. The procedures, the documents demanded, the "ritual" visits of all the officials which need to visit the ship and all the inspections of paperwork will be slightly different, but all will be accorded great importance. The Master of the visiting ship would be unwise to suggest that the "customs of the port" are due an overhaul! Can the ship/port interface be made more efficient? This question forms the basis of the next Nautical Institute Command Seminar, to be held in Bristol on 4-5 November, organised by the London and Bristol branches of the professional mariners' organisation. BIMCO would undoubtedly answer the question very much in the affirmative, because greater efficiency in this area has for many years been part of the agenda for better facilitation in trade, with the smooth passage of a ship through a port forming an important element. And efficiency in this area is even more important if the logistics chain is to be kept taut and there is no wasted time in an area where the ship is not actually earning her keep speeding goods across the seas, but tied up at a terminal. There is, perhaps, much room for improvement in the amount of pre-planning that could be undertaken using the facility of modern communications, with too many ports in too many countries still employing the procedures which have been in place practically since the days of sail! Is it still necessary for so many people to visit the ship on arrival, when clearance in most cases could be given against an electronic interchange of all the documents that are necessary?

The requirements put in place to file bills of lading and itemise contents with the authorities in a destination country before a ship even loads the stuff may have been implemented for security reasons, but it has shown it can be done and most are by now quite used to this formality. Can customs and the various authorities not see the advantages of modernised procedures? There is surely no reason why clearance needs to be delayed while people clamber on board on arrival to pick over the paperwork and tick their boxes. The same applies to clearance for departure, where there is sometimes the nuisance of a ship all ready to sail waiting for some official who might have been delayed.

Behind all the "customs of the port" will be history in the shape of "the way we have always done things in this port", bureaucracy, the protection of jobs and petty fiefdoms, with efficient despatch of a ship sometimes very secondary to these matters. But as BIMCO has always advocated, there is a case for shining a light on inefficiencies and for the promotion of best practices around the world. There are places which do things very well, which try hard to make the whole interface between ship and port smooth and seamless. It is spreading this around the world and convincing the laggards that nobody benefits from inefficiency and delay that must be the job in hand.

Highlights

Requirements for Eligibility of U.S.-Flag Vessels of 100 Feet or Greater in Registered Length to Obtain a Fishery Endorsement

Expiration Date of Approval: Three years from date of approval by the Office of Management and Budget. Summary of Collection of nformation: In accordance with the American Fisheries Act of 1998, owners of vessels of 100 feet or greater who wish to obtain a fishery endorsement to the vessels' documentation are required to file with the Maritime Administration (MARAD) an Affidavit of United States Citizenship. Need and Use of the Information: The information collection is necessary for MARAD to determine that a particular vessel is owned and controlled by United States citizens and is eligible to receive a fishery endorsement to its documentation. Description of Respondents: Vessel owners, charterers, mortgagees, mortgage trustees and managers of vessels of 100 feet or greater who seek a fishery endorsement for the vessel. Annual Responses: 500. Annual Burden: 2,950 hours. Comments: Comments should refer to the docket number that appears at the top of this document. Written comments may be submitted to the Docket Clerk, U.S. DOT Dockets, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590. Comments also may be submitted by electronic means via the Internet at http:/ / www.regulations.gov. Specifically address whether this information collection is necessary for proper performance of the functions of the agency and will have practical utility, accuracy of the burden estimates, ways to minimize this burden, and ways to enhance the quality, utility, and clarity of the information to be collected. All comments received will be available for examination at the above address between 10 a.m. and 5 p.m. EDT (or EST), Monday through Friday, except Federal Holidays. An electronic version of this document is available on the World Wide Web at http:// www.regulations.gov. Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.).

R&D Advances in Hydrogen Fuel Storage Technology Promise Green Benefits

Hydrogen is an excellent, carbon free, water-bound (and thus cheap) fuel-source easily convertible to electricity through fuel cells, ideal as a power source for workboats, barges and recreational craft. But storage of the gas is a problem. In gas form hydrogen has to be stored either at high pressure or else at a very low temperature. Researchers seek a more convenient, safer alternative storage solution for this ideal fuel; one, already proven effective, is to store the hydrogen in chemical form and two developments in the field are highlighted here.

Hydrogen-fuelled Barge Ross Barlow

Three years' development work on the canal longboat Ross Barlow by a team at UK's University of Birmingham was recently spotlighted in news released by The Swiss Federal Laboratories for Materials Science and Technology (EMPA - German acronym for 'Eidgenössische Materialprüfungs- und Forschungsanstalt').

Ross Barlow, an 18 m long canal barge was converted to carry hydrogen for the fuel cells in hydride storage modules, developed by EMPA. The modules contain sealed storage

tubes packed with powdered alloys of titanium, zirconium, manganese, vanadium and iron, a mixture that readily absorbs hydrogen and acts as the storage medium. The shortcoming of this system is that the modules must be kept in temperature-regulated water tanks in order to dissipate heat generated when the modules are being 'charged up' with hydrogen or, conversely, to warm the water when necessary.

The technology itself was well tested durning a 105 km, four-day summer test cruise along Britain's inland waterways. During the voyage a total 106 kWh of electrical energy was consumed (a quarter came from the hydrogen fuel-cells, the rest from lead-acid batteries and solar panels) meeting all energy needs, including electical power for the barge's 10 kW permanent magnet motor propulsion system.

Reportedly, crew aboard the all-electric Ross Barlow appreciated their silent, exhaust-gas free progress through the locks and green inland waterways. The barge produced zero carbon dioxide emissions during the four-day test voyage, whilst a conventionally fuelled accompanying barge with a diesel engine emitted approximately 133 kg.

ThyssenKrupp has received offer for Blohm + Voss from Luerssen

The European Commission has adopted a proposal to bring the European Union directive on the training of seafarers in line with recently updated international rules. International rules set minimum standards, while EU rules ensure their enforcement in the EU. The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers was concluded in 1978 among the countries that are members of the International Maritime Organization (IMO), a UN agency. The convention deals with the requirements for training of seafarers (mainly officers) and the relevant certification. The convention was integrated into EU law for the first time in the 1990s and updated later when the convention was amended.

From the Editor's Desk

"The execution of laws is more important than the making of them". — THOMAS JEFFERSON

"Everywhere there is one principle of justice, which is the interest of the stronger." — PLATO

(i) "Lawyers are alive, but, laws are dead and judges are alive, but, justice is dead".

(ii) "Unless a Country adopts a foolproof justice delivery system, it cannot prevent internal conflicts and violent self-help of its citizens to secure justice".

(iii) "Indian citizens are forced to end their lives either by retaliatory attacks or by sudden deaths of stress related diseases thanks to the diluted justice delivery system in India". — Advocate S.JEEVAGAN (www.jeevaganadvocate.com)

Innovate and drive the change in a global shipping environment by ensuring that all the essentials are put together, considering valid feedbacks for improved quality and implementing the best, putting into early practice, thereby having a uniform and updated improved standard of curriculum into maritime training institutions/academy, as Shipping is international. Seafaring, needs men who are physically and mentally fit of the highest order, a calibre and willingness to perform with an undisturbed mindset, to give their best in performance in quality, with optimised utilisation of resources. primarily valuing the precious 'time'.

STCW, now to contain new comprehensive "Competence Tables" for training in oil, chemical and gas tanker operations, at both basic and advanced levels, with the new guidance developed, inclusive for crew on offshore support vessels, dynamic positioning operators and all ships in polar waters, considering new "Seafarer Grades and Certification", and these address some extensive training and certification requirements for new grades of 'Able Seafarer' for Deck and Engine Services onboard'. Also introducing new competence certification standards for the position of "Electro-Technical Officer" and "Electro-Technical Rating. "Allied to the training requirements, there are new medical standards too, and an attempt to prevent "Unsafe Alcohol Use". These include a specific limit of 0.05% blood alcohol level or 0.25mg/l alcohol in the breath. There will be a phased entry commencing by a couple of months time, as seafarers holding STCW certificates issued prior to 1 January 2012, will have to meet the new requirements, including new refresher training, in order for their certificates to be revalidated beyond 1 January 2017. From 1 January 2014, all seafarers will have to be trained and certified in security matters in accordance with the new 2010 provisions, which include new antipiracy elements. After January 2017, all medical certificates must be issued in accordance with the 2010 standards, though in practice some administrations may require the new standards before 2017.For a full view of this excellent new guide see www.marisec.org/ quickguide. htm.pdf The more esoteric aspects of the new standards - Fatigue and leadership. The battles against shipboard fatigue have been fought (fairly unsuccessfully) for years. Given that the record for the longest period without sleep is 18 days, 21 hours and 40 minutes, set during a rocking chair marathon in the UK, perhaps seafarers have it too easy. Mind you, the record holder, Maureen Weston reported hallucinations, paranoia, blurred vision, slurred speech and concentration lapses as she rocked her way to victory - and a possible early grave. So the changes to the minimum rest hours to prevent fatigue and ensure that seafarers are fit for duty are now harmonised with the work hour requirements adopted by the International Labour Organization including the ILO.

The new IMO rest hour requirements-Maritime Labour Convention (MLC), will enter into force in January 2012 and introduce stricter minimum requirements than those currently in force. The main changes are as follows:

- ***Minimum amount of rest in any 7 day period is increased to 77 hours from 70 hours;***
- ***Seafarers must always have 10 hours rest in any 24 hour period with no exceptions, except during an emergency;***
- ***It is now mandatory to maintain records of each individual seafarers' rest hours, which may be inspected during Port State Control inspections; and***
- ***The rest hour limits now apply to most seafarers on board, including masters, not only watch keepers as had previously been the case.***

From January 2012, seafarers will need to review and sign a record of their work/rest hours periodically (typically at least once a month) to ensure they comply with the minimum rest hours stipulated. Like many of these things there will always be some individuals who think they are super-heroes and try to work longer, while there will be some unscrupulous companies who try to gloss over the whole sleep affair. As we mentioned, STCW now has a new "Leadership and Teamwork" emphasis. Deck and engine officers have substantial new competence requirements related to leadership, teamwork and managerial skills to contend with. While "Assertiveness" training for all seafarers has also been included to ensure that even seafarers in lower grades at sea are able to communicate confidently and clearly on issues such as safety with senior officers, the master and/or shore personnel.

Leadership, teamwork and assertiveness... the three pillars of a confident professional, engaged and engaging seafarer, seeing from differing perspectives, the changing relationships between ship and shore-based. With the rise of fast communication, emails for instance, freely exchanging views, an awakening brought out to better the situation. Enlightened Leaders at sea are now, expected to also be followers of the shore regime, which was managed by retired naval personnel(non-commercials) and ill-conceived old timers without learning and not keeping abreast with updates. Computer Age, has created an unusual dynamic, and strategic change, which these new training standards assist with some of our messages having been heard. Planned curriculum with a good foresight drawn out with this type of training, for the seafarers of today and into tomorrow, is clear that terms such as leadership and teamwork are actually more simply summed up as "Relationship Management", the bedrock of human existence - and perhaps even more so in the isolation and stress of the maritime "pressure cooker" of life at sea. We need to ensure that they understand relationships, so that they can relate to other people and to the means of getting tasks performed safely and efficiently. Senior "people at sea" haven't (usually) been promoted because of their relationship skills, or their vision - they have been promoted because they have been to college and sea while ashore, often enough to have hopefully accrued some learning-experience. This is perhaps the first hurdle - we are now expecting qualified, expert navigators and engineers to keep developing more extra skills etc., just because they have to now manage sophisticated vessel with enlightened people, while squeezed manning. We need, "people at sea" become skilled in creating effective relationships, and so we need to start thinking differently about so many of the usual ways in which they were schooled, trained and nurtured. If we want the end products to be different, it would seem sensible to effect the needed timely changes. Leadership should be born out of understanding the essential needs. Officers need to have great advantage by knowing how the tasks to be performed efficiently knowing their vessels and their people - but knowledge is not enough, it takes commitment and application of the relevant knowledge gained. Awareness and understanding are vital, as are the tools and ability to constantly be on the alert with activeness for changes in the quality of their leadership. Most senior officers do have an advantage, as it has been said that the only real training for leadership is leadership itself by initiation. While that may be true to an extent, being a successful leader is about more than being thrown in at the deep end. We have to reinvent the old established image of what it was to be a maritime leader?.The very essence of leadership is its purpose, and the purpose of leadership is to accomplish a task efficiently. That is what leadership does-and what it does is more important than what it is or how it works. At sea this is perhaps even more so - the task at hand is to get people, cargo and vessel safely, efficiently and with as little damage to the environment as possible to the right destination in a given time- frame. This is the same as the tasks at sea everywhere - there may be fancy new names for what we have to do, but there is also much to learn from the past too. With these new requirements we have a chance to aid the "people at sea" today, while ensuring we have a chain of command which is worthy of the "people at sea" of the future.

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Armed Pirates Hijack a Fuel Tanker Off Benin: Armed pirates commandeered a fuel tanker off the West African nation of Benin on Wednesday and took its 23 crew members hostage, an international piracy monitoring group reported. The hijacking was the latest in a series of increasingly brazen assaults on commercial shipping in a coastal region of Africa that had been considered relatively safe until this year. The attack on the tanker, a Cyprus-flagged vessel laden with oil, came as it was trying to transfer some of its cargo to a Norwegian-flagged vessel, according to the monitoring group, the International Maritime Bureau in London.

Oil Tanker Newlead Avra Fails to Load Libyan Cargo: The oil tanker Newlead Avra, which had been traveling to the port of Mellitah in western Libya, failed to load a cargo and is now heading to Cyprus, the vessel's owner said. The vessel, which has a carrying capacity of 73,400 deadweight tons, was instructed to sail to Limassol, Cyprus without having collected a cargo, Elisa Gerouki, a Piraeus, Greece-based spokeswoman for NewLead Holdings Ltd. told Bloomberg.

Boskalis clinches • 30 million cable contract: Royal Boskalis Westminster N.V. has been awarded a contract worth approximately • 30 million to provide and install a submarine fiber optic cable across the Strait of Magellan, Argentina. The contract was awarded by the state-owned corporation AR-SAT (Empresa Argentina de Soluciones Satelitales S.A.). The fiber optic cable, which will be used for internet and digital television, will connect the city of Rio Gallegos in the province of Santa Cruz with the city of Rio Grande in the province of Tierra del Fuego.

Horizon Lines clarifies exchange offer documents: Horizon Lines, Inc. (NYSE: HRZ) announced that it filed on September 13, 2011, an amendment to its Registration Statement on Form S-4 and an amendment to Schedule TO relating to its previously announced exchange offer and consent solicitation for its $330.0 million of existing unsecured 4.25% convertible senior notes. The exchange offer documents were revised in response to comments received by the Securities and Exchange Commission (SEC) to (i) further clarify what exchange consideration holders of the 2012 convertible notes who are non-U.S. citizens will receive, (ii) provide additional terms of the redemption notes, (iii) revise the summary of the material terms of the new convertible secured notes to be issued in the exchange offer, (iv) update the pro forma financial statements and (v) other updating and conforming changes. The company also provided the form of U.S. citizenship questionnaire as an exhibit to the Registration Statement on Form S-4. The SEC is continuing to review the company's Registration Statement on Form S-4 relating to the exchange offer and consent solicitation and has not yet declared the Registration Statement effective, which is a condition of the exchange offer, among others.

As part of the exchange offer, the company is also seeking consents from all holders of the 2012 convertible notes to remove substantially all of the restrictive covenants and certain events of default from the indenture governing the 2012 convertible notes.The company will exchange the 2012 convertible notes for shares of the company's common stock and new 6.0% series A convertible senior secured notes and 6.0% series B mandatorily convertible senior secured notes.The company said that it continues to work with the financial and legal advisors to the informal committee of noteholders to finalize the documentation and terms of the recapitalization plan, of which the exchange offer and consent solicitation are a part. The company expects to complete the exchange offer of the existing 2012 convertible notes by the end of September, at which time it expects to close the entire refinancing.

As discussed in the exchange offer documents, each participating holder in the exchange offer must confirm their U.S. citizenship by completing a questionnaire and certifying that such holder is a U.S. citizen prior to the company accepting such holder's tender and consent of its 2012 convertible notes in the exchange offer.

Important Information about the Exchange Offer

This release is for informational purposes only and is not an offer to buy or the solicitation of an offer to sell any security. An exchange offer will only be made by means of a prospectus, a letter of transmittal and other offer documents, as described below. In connection with the exchange offer by Horizon Lines, Inc., the Company previously filed a Registration Statement on Form S-4 (which contains a preliminary prospectus), amendments to the Registration Statement, an exchange offer statement on Schedule TO, as amended, and other related documents and materials with the SEC. Investors and security holders are strongly urged to carefully review the registration statement, amendments to the registration statement, the preliminary prospectus, the exchange offer statement, the amendments to the exchange offer statement and the other related documents and materials filed with the SEC, including the final prospectus described below, when available, as well as any amendments and supplements thereto because they will contain important information about the Company, the exchange offer and related transactions and are the sole means by which any offer to exchange or sell, or any solicitation of any such offers, will be made.

The registration statement contains a preliminary prospectus and related transmittal materials that were delivered on or around August 26, 2011 to holders of the 4.25% convertible senior notes. Investors and security holders may obtain a free copy of the registration statement, amendments to the registration statement, preliminary prospectus and transmittal materials, as well as other documents filed by the Company with the SEC, at the SEC's website, www.sec.gov. Prior to the completion of the exchange offer, the registration statement must become effective under the securities laws, and after effectiveness, the Company will file with the SEC the final prospectus. Investors and security holders are strongly urged to carefully review the final prospectus when it is available. Free copies of the exchange offer documents,

the U.S. citizenship questionnaire and other filed documents will be available for free at the Company's website, www.horizonlines.com, or by making a request to Horizon Lines, Inc., 4064 Colony Road, Suite 200, Charlotte, North Carolina 28211, (704) 973-7000, Attention: Jim Storey, Director, Investor Relations & Corporate Communications.

About Horizon Lines

Horizon Lines, Inc. is the nation's leading domestic ocean shipping and integrated logistics company. The company owns or leases a fleet of 20 U.S.-flag containerships and operates five port terminals linking the continental United States with Alaska, Hawaii, Guam, Micronesia and Puerto Rico. The company provides express trans-Pacific service between the U.S. West Coast and the ports of Ningbo and Shanghai in China, manages a domestic and overseas service partner network and provides integrated, reliable and cost competitive logistics solutions. Horizon Lines, Inc., is based in Charlotte, NC, and trades on the New York Stock Exchange under the ticker symbol HRZ.

Russian Maritime Register and Greek ship-owners suffered from the deceit:

Russian Maritime Register of Shipping (RS) will officially inform that having no authorization to carry out ships' surveys and to issue the RS documents, RS HELLAS LTD, the former RS agent in the Republic of Greece, has issued false classification certificates using forms of documents similar to the RS ones. RS has never provided RS HELLAS LTD with the RS forms of documents, stamps and protection marks used for drawing up ship's documents. The fact of deceit was reported to RS by Greek law enforcement authorities.

RS has withdrawn the RS HELLAS LTD authority to assume any liabilities or to act as an agent and representative to the Maritime Administration of Greece and shipowners on behalf of RS.

Information agencies reported that documents on instituting criminal proceedings against Antonios Petridis, RS HELLAS LTD Director, were referred to the prosecution agency by the Coast Guard of the Republic of Greece. On 31 August 2011, RS notified RS HELLAS LTD of withdrawing the authorities to represent any RS interests and of avoiding all agreements concluded. The Maritime Administration of Greece was informed of these actions.

The issue of referring to the court of justice is under the RS consideration.

RS states its readiness to assist Greek authorities in investigating the illegal acts committed by RS HELLAS LTD and by A. Petridis personally.

RS is ready to promptly review class assignment requests of all the shipowners suffered from the above deceit, as well as to perform all the necessary actions and surveys for class assignment under the RS procedures.

International Maritime Organisation's new emission norms to hurt shipping companies:

MUMBAI: Indian shipping companies, reeling under low freight rates and high fuel prices, will face further cost pressure due to new emission norms set by International Maritime Organisation (IMO).Shipping firms, including the country's largest - Shipping Corporation of India - may have to spend more than 1 crore per ship to lower sulphur content in bunker fuel.

"We have to spend more than 1 crore per ship to convert the fuel type to adapt to the requirements in Europe and US. We have a number of vessels and cost of conversion per ship could be large," said Sunil Thapar, head of tanker and bulk division, SCI.

Life aboard navy ship includes lots of hard work and adventure:

Latest Breakthrough by UCS Research Team.In the September 2011 issue of the Journal of the American Chemical Society a team of researchers at USC (University of Southern California) led by Assistant Prof. Travis Williams published breakthrough findings on the use of a nitrogen-boron complex, ammonia borane (an innocuous chemical material) as a new chemical storage medium for hydrogen.

The USC team claim their ammonia borane based storage system is safe, robust, air-stable and re-usable, releasing sufficient hydrogen from storage to make it viable as a fuel source for hydrogen fuel cells. 'Ours is the first game in town for re-usable, air stable ammonia borane dehydrogenation' Prof. Williams reportedly said, going on to add that the USC Stevens Institute is in the process of patenting the system. Horizon Lines announced that it filed on September 13, 2011, an amendment to its Regist-ration Statement on Form S-4 and an amendment to Schedule TO relating to its previously announced exchange offer and consent solicitation for its $330.0 million of existing unsecured 4.25% convertible senior notes. The exchange offer documents were revised in response to comments received by the Securities and Exchange Commission (SEC) to (i) further clarify what exchange consideration holders of the 2012 convertible notes who are non-U.S. citizens will receive, (ii) provide additional terms of the redemption notes, (iii) revise the summary of the material terms of the new convertible secured notes to be issued in the exchange offer, (iv) update the pro forma financial statements and (v) other updating and conforming changes.

Riding the waves on the open sea on a Royal Canadian Navy ship is made up of long days, lots of work and cramped quarters that can often lead to aggravated crew members.

But it is not all work and no play as those on board get to travel to different parts of the world that many never see.The Royal Canadian Navy's HMCS Shawinigan and HMCS Summerside were in Owen Sound on the weekend where they welcomed the public aboard for tours of the Canadian Forces' Maritime Coastal Defence Vessels.The majority of the time these Kingston class ships, based at CFB Halifax, spend their time patrolling the east coast of Canada where they undergo operations such as mine countermeasures, search and rescue, control of shipping, resource protection and fisheries and environmental monitoring. But for about the past 20 days the ships have been traveling inland, up the St. Lawrence River and through the Great Lakes where it is taking part in a deployment with its main purpose being public education and to highlight the many career opportunities in the naval service available in Canada.After the stop in Owen Sound the ships were then to travel to Little Current on Manitoulin Island, Goderich, where the crew was going to take part in some tornado cleanup work, Sarnia and Kingston before leaving the Great Lakes. On Saturday a Sun Times

reporter was invited along for a day sail aboard the Shawinigan shortly after the ships arrived in the city and berthed at the Federal Dock on the east harbour wall. After boarding, the maneuverability of these ships was put on display immediately. The ship was reversed towards the city's Rainbow Boat Club launch where it came within inches of the harbour wall before thrusting forward and making its way past the grain elevators and out into Owen Sound Bay. Once out of the harbour it was a two-hour trip aboard the ship that provided an opportunity to see the crew at work as visitors were provided guided tours throughout the vessel.The tour guide for the media on Saturday was Master Seaman Andrew Vardy, an engineer and a native of Hickman's Harbour, NL. Vardy's normally deployed on the HMCS Preserver, an auxiliary oil replenishment ship, designed to carry large amount of fuel, provisions and dry stores for the support of naval operations far away from port.At three times the length of the Shawinigan and with a displacement of 24,700 tonnes, compared to the Shawinigan at 970 tonnes, a lot less motion is felt on the Preserver, Vardy explained."On the supply ship we are carrying 15 million litres of fuel so we are pretty stable in the water," Vardy said. "This thing here rides every centimetre of the waves. Luckily I don't get seasick."While the motion of the ship wasn't too noticeable on Saturday, when the bay was choppy as a brisk wind blew on an otherwise sunny and warm day, it was soon evident Vardy had developed sturdy sea legs. As the land lovers on board stumbled down the hallways whenever the ship rocked slightly, Vardy hardly noticed the motion. While others carefully made their ways up and down the many flights of stairs, Vardy zipped up and down with ease, sometimes riding the handrails to the floor below. Vardy explained that in large swells you can go up multiple steps at a time as the ship rocks in the waves.

One noticeable aspect of the Shawinigan was the amount of safety gear on the boat. Damage control is such a big part of life for these sailors, as was evident by the gear strapped to every corner of the ship. Life rafts and life jackets lined the sides of the ship, firefighting gear, oxygen tanks and respirators lined the hallways down below and at the back of the ship sat a dummy named Oscar, used by the crew to practice man overboard drills.The halls of the ship were tight, even more so than usual with guided tours moving throughout the underbelly of the ship as it churned along out in the bay.The sleeping quarters in the ships were tight as well. With two sets of bunkbeds per room there was barely enough space to stretch out in the morning. The rooms also served double duty as offices at times, Vardy explained."If you were up all night and tired, too bad, so sad," said Vardy. "Someone needs to use your bed as a chair."The crew's eating quarters were tight as well. Vardy explained that at times people can be crammed in to eat, using every little space they can to put their plates.

"In rough weather you can have food flying off the tables," Vardy said.As for the food on the Shawinigan, Vardy described it as phenomenal. On Saturday the cook was making up pizzas with all the toppings including, pepperoni, ham and even pineapple."You are so tired and beat up you will eat anything and think it's delicious," said Vardy.After touring the rest of the ship, including the master control room with its panels of red and green lights and the laundry facilities - two washing machines onboard for the entire crew - the tour made its way back up to the bridge where Vardy chatted for a while.He explained that the day is broken up into watches that the crew works. Most of them are four-hour slots, with two two-hour "dog watches.""I was lucky last night because I had the first watch which is what everyone wants. It goes from 7:30 at night to 11:30, so then you can go to bed by 12 and actually get a good night sleep," said Vardy, who explained in some situations you can be up until 3:30 a.m. and then up in the morning at 7 a.m."We always have to be up during the day to do whatever work, clean the ship or an maintenance on anything that is broken," said Vardy.Vardy said the tour of the Great Lakes is taxing on the crew since they are hopping from port to port with no consistent schedule to follow."I would rather leave a jetty, go out in the ocean for a couple months and come back in," said Vardy. "This coming from port to port, going up through the locks and these tight channels and stuff, there are a lot of people not getting a lot of sleep."Vardy said the length of time you are at sea depends on the situation and the ship you are on. He has only been home two weeks since February, but in the past he has been ashore for almost a year doing regular maintenance."It all depends what ship you are on, what your trade is and how much demand there is in the fleet for your trade," said Vardy.Vardy said in the military they try to be accommodating to your personal situation, such as if you are married with a family they try to keep you close by."But at the end of the day, you join the military so pack up your bags and go," said Vardy. "They do it different ways. Sometimes they will move your entire family."

Vardy said one of the perks of being in the navy is you get to see a lot of different parts of the world. "I've been a lot of places in the world," said Vardy, who added his last trip on the Preserver took him to Scotland. "It is a good perk, but then you end up going and spending a fortune there, but you have a good time."

The remainder of the tour was spent watching the crew at work. The efficiency of this well-oiled machine was evident as the ship returned to harbour and the crew prepared to dock back along beside the HMCS Summerside. Everyone knew their position and was ready to do their job as the HMCS Shawinigan gently came to a stop and the Maritime disaster-hit Tanzania.

Dar es salaam.Saturday night's tragedy off the coast of Zanzibar is the latest of a string of maritime accidents in Tanzania. In 1996, a similarly overloaded vessel, the MV Bukoba, capsized in Lake Victoria, killing at least 890 people. That accident was also blamed on the failure to abide by maritime regulations, including boarding capacity and seaworthiness standards.On May 29, 2009, a cargo ship owned by Seagul Company, MV Fatih, capsized off Zanzibar's Malindi port, killing six people on board.

The same year, three passenger ships-MV Pemba, MV Aziza I and MV Aziza II-caught fire in Dar es Salaam and Zanzibar ports, respectively. They had no insurance cover. No one was harmed in the blaze, but MV Serengeti, which at the time was moored off Zanzibar Town, was completely destroyed.MV Aziza I and MV Aziza II had the capacity to carry up to 1,000 passengers each and were plying the Dar es Salaam, Zanzibar and Pemba routes. Fire gutted the two ships as they were undergoing maintenance at Mtoni in Zanzibar.

The MV Pemba, owned by the Azam Marine Company caught

fire on Monday morning while the vessel was undergoing maintenance at the dock in Dar es Salaam harbour. There were no injuries, but the ship was been badly gutted despite the efforts of the fire department to extinguish the blaze.

The Zanzibar shipping registrar Abdallah Mohamed and the police said the fire broke out as workers were welding in the engine room. An investigation was opened thereafter.Director of Zanzibar Insurance, Mr Hajj Idd told the press that MV Aziza I and MV Aziza II operated by Zanzibar Mkunazini caught fire in March 2009 at Zanzibar port while MV Pemba was gutted at Dar es Salaam port a week before. Both vessels had been operating without insurance for a long time, he said.

In March last year, a passenger and cargo vessel christened MV Serengeti caught fire about two hundred metres from the Malindi harbour and was badly destroyed. Fortunately, the fifteen crew members were rescued. In January this year, a Tanzanian freighter Ras Kigomasah sank in heavy seas in the Indian Ocean off Seyshelles, while on its way to Dubai, where it was to be overhauled. The vessel, with a capacity for 1500 metric tonnes cargo and 750 passengers, was built in 1974 and it used to ply between Tanzanian ports, under the name of Mapinduzi.In July this year one of the engines of MV Serengeti ceased while it was sailing from Unguja to Pemba with 810 passengers on board. The ship managed to reach its destination five hours later.

In the wake of the continued accidents there has been a constant outcry to the authorities to effectively enforce maritime safety standards.For their side, passengers have been complaining about the poor state of some of the ships, including those plying between Zanzibar's two main islands, Unguja and Pemba.After the sinking of MV Bukoba in Lake Victoria many people expected to see an end to sea tragedies involving passenger ships and ferries.However, people who spoke to The Citizen on Sunday following the Zanzibar ship disaster said it was unfortunate that the county continued to witness maritime catastrophes claiming so many lives and property.

How Ship Security Reporting System (SSRS) helps to Improve Maritime Security?:

Due to the rising piracy activities, a vessel at sea has become highly vulnerable to attacks. Moreover, there are also other forms of dangers both natural and manmade that a ship at sea has to deal with. However, undoubtedly, maritime piracy remains one of the biggest concerns for both ship personnel and owners.

Dealing with armed human attack is a big challenges faced by maritime industry today. An earlier system that existed to deal with such attacks - Ship Security Alerting System, enabled a ship to send distress signals to a ship's control center. Seemingly an efficient system, it has many drawbacks, the biggest one being that it cannot offer enough security.

This system of maritime security is slow and slightly inadequate for handling immense security breach situations that arise from pirate attacks. As an upgrade for this system, the ship security reporting system is a more precise system that allows quicker backup for a ship in distress.

What is SSRS and how does it work?

SSRS is the ship security system which derives its roots from the earlier existing ship security alerting system. Under SSRS, a distress signal from ship is sent directly to Maritime Security Center- Horn of Africa (MSCHOA) and UK Maritime Trade Operations (UKMTO).

This system has been introduced especially to curb increasing pirate attacks in region of Gulf of Aden and off Somalia Coast. As such, along with the above mentioned centers, a distress signal is also sent to the naval forces responsible for maritime security in these regions.

This system is better as opposed to SSAS where the signal is sent to the ship security officer and the flag alone. Since it's not always possible to ensure full security of ship through this system, SSRS offers a much better option for maritime security.

The effectiveness of ship security reporting system is a multifaceted advantage offered to vessels againstmaritime piracy. For one, this system allows a continuous monitoring of the vessels within the specified range i.e. there is a continuous reception of signals. When the MSHAO or UKMTO receives a distress signal, there is a verification of the signal as genuine. Then the vessel information is retrieved like the vessel name,IMO number, MMSI, location etc. and further transferred to the task forces associated. The forces spring into action immediately.

Benefits of SSRS

The need for a better system to thwart maritime piracy in hotspots of piracy like Gulf of Aden and Somalia coast was imminent. As such, with introduction of ship security reporting system in January 2010, the maritime security has gone up a notch. Some of the major benefits of this system are:

This is a system developed especially to curb maritime piracy - Thus it's a dedicated system

The localized task forces offer an impressive backup

The transmission of signals is quick. The mercury system through which signals are transmitted from the SSRS center to the task forces takes less than five minutes for transmission of signals

Naval forces assigned for this job can reach the spot quickly and offer a much better chance at warding off a pirate attack or hijack

The maritime security is at an all time high especially in the most vulnerable regions

The economic setbacks especially due to maritime piracy in these regions can be lowered

This is a cost effective system with an operating cost as low as $500 per ship per year. The ship owners can conveniently bear this cost

It is a very effective hassle free system

Integration with SSAS and other database centers like UKMTO allows wider access

This system is an upgrade of an earlier existing system. As such, it can easily fit into the already in useISPS ship security plan and other management systems

The ship security reporting system allows ships to sail through the most vulnerable channels with a reassurance of much better maritime security than was offered before.

Shipping reforms will make us a maritime player once more: Our industry has declined from 55 ships in 1995 to just 22 today. This is despite the fact Australia accounts for 10 per cent of the world's sea trade. But while 99 per cent of our international trade is carried by ships, only 0.5 per cent of that is carried by vessels displaying the Australian flag. Those 22 Australian ships that still service our ports average 20 years old, about eight years older than the world average. Our seafarers are also getting on, with half of them older than 45.

With so few ships, an ageing fleet and a declining workforce, our industry is facing extinction. Such a collapse is not just an economic tragedy. There are security and environmental reasons an Australian shipping industry is essential. We watched with dismay when Chinese bulk carrier the Shen Neng 1 ran aground on the Great Barrier Reef. Cleaner, better maintained Australian ships would provide greater environmental certainty for our precious marine ecosystems. More Australian ships would also improve our broader maritime security, particularly at our ports.

In 2008, the newly elected Labor government commissioned a parliamentary inquiry into coastal shipping. It recommended revitalising Australian shipping. During last year's election campaign, a commitment was given that a re-elected Gillard government would revitalise not just the coastal sector but the Australian shipping industry as a whole.

Last December, I released a discussion paper with a list of proposed reforms. Since then, separate industry groups have tackled the complex tax, regulatory and workforce elements of the package. They represent the breadth of the maritime industry: ports, shipping operators, regulators, unions and training providers. Bringing together the collective intelligence of people from across the maritime sectors has paid great dividends with a bold package that follows no precedent or formula. It is crafted to suit the complexities of a sector that employs Australians but, for the most part, operates internationally. At the heart of the package is tax reform. We recognise foreign operators enjoy very competitive rates. We want not simply to catch up but to lead them. Thus the tax arrangement agreed to includes a proposed zero tax rate. In other words, Australian-based companies with vessels registered here, including those that will operate internationally, will pay no company tax. There are conditions: ships must be Australian-flagged, they must embark on training new mariners, once they elect into the exemption they must remain there for 10 years and there will be a 10-year lock-out period to curb tax avoidance. To encourage cleaner, younger vessels, we are also halving the depreciation rate from 20 to 10 years. There's an economic benefit here because the cost of operating a 20-year-old bulk carrier is at least 40 per cent more than for a five-year-old ship. This will also encourage shipbuilding in Australia with the flow-on benefit of jobs.

We are creating an Australian international shipping register to address the cost disadvantage faced by Australian ships. This will bring us into line with other successful maritime nations. Under the new deal, crews operating via this register will work according to the terms and conditions of the International Maritime Convention. When vessels work the domestic coastal route, Australian workplace laws will apply.

Toxic ship Ctg-bound. Environment dept, watchdogs ring alarm bell: A highly toxic Chinese ship, detected with at least "79 deficiencies since 2010" at different ports, is now on its way to a ship-breaking yard in Chittagong for dismantling. The Asia Union, formerly known as MV Humber and MV Cast Otter, is due to enter Bangladesh maritime boundary anytime tomorrow, said sources in international maritime watchdogs.The Chinese ship is reportedly possessing hazardous substances including asbestos, polychlorinated biphenyl, toxic paints and chemical residues that have a wide range of adverse effects on humans, wildlife and the environment. If dismantled, the ship would expose workers and the environment to hazards.The Department of Environment (DoE) in Chittagong has alerted the port authority and the coast guards about the hazardous ship and urged them not to allow it enter the country for dismantling, said Tajminur Rahman, senior assistant director of the DoE.Bangladesh Environmental Lawyers Association (BELA) in a letter to the DoE, the Mercantile Marine Department and the Chittagong Customs yesterday warned them about the hazardous ship's arrival.Bela said Indian ship breakers rejected dismantling the Chinese ship for having hazardous substances. The organisation urged the offices concerned not to issue any NOC or environmental clearance for dismantling the ship in Bangladesh.Sources said Global Marketing System (GMS), a US company that negotiates sales of vessels, brokered the deal for purchasing the Chinese ship for RS Shipping, a Chittagong-based company.Parimal Sharma Barua, operation manager of RS Shipping, said they had been in talks about the deal and the ship was yet to arrive. He declined to comment further.An official of Robins des Bois, a Paris-based watchdog for protection of people and the environment, said that surprisingly, the ship was never detained despite being detected with many deficiencies by Port State Controls at different ports."This is a 29 year-old ship coming to the end of her life. She is in a very bad state," said Christine Bossard, in-charge of campaign at Robin des Bois.

Sources in the ship-breaking industry said the entire process of procuring a ship is done dubiously. Pre-cleaning certificates, environmental clearance and other documents necessary to purchase ships are obtained instantly.Sometimes pre-cleaning certificates are faked and other clearance certificates are obtained in package deals, said a source in the industry.The source said there is a plan to purchase a total of 300 ships in a short time for dismantling.India, China, Pakistan and Bangladesh are the leading ship-breaking countries in Asia. In the international ship breaking business Bangladesh is considered a dumping ground for older ships and vessels with hazardous substances due to lack of laws in the country.The authorities have given permission to dismantle more than 100 ships in ship-breaking yards in Sitakundu since the High Court on March 7 conditionally relaxed restrictions on purchase of ships for dismantling.

Piracy watchdog: 23 sailors kidnapped in tanker attack off the coast of Benin near Nigeria: LAGOS, Nigeria - Armed pirates raided a tanker off the West African coast and kidnapped 23 sailors Wednesday, taking off with the vessel in waters that are increasingly at risk of piracy, an international monitoring group said. The International Maritime Bureau, which tracks piracy worldwide, said pirates boarded the tanker as it idled about

62 nautical miles from Benin's capital of Cotonou. Pirates struck as the Cyprus-flagged vessel tried to transfer its cargo of crude oil to a Norwegian-registered ship, said Cyrus Mody, a manager at the bureau. The pirates sailed off with the crew to an unknown location, Mody said. The ship, called the Mattheos I, had a Filipino crew with Spanish, Peruvian and Ukrainian officers, said Serghios Serghiou, the director of Cyprus' Department of Merchant Shipping. Serghiou said Cyprus authorities and the ship's Spanish management company had not been able to confirm Wednesday whether a hijacking took place.

"The ship sent out the initial security alert, but unfortunately, we haven't been able to communicate with the ship," Serghiou said. A spokeswoman for Spain's Foreign Ministry said Spaniards accounted for less than five of the hostages. She spoke on condition of anonymity because of the sensitivity of the matter. A telephone number registered to Spanish management Consultores de Navegacion rang unanswered Wednesday night. The pirates attacked the Norwegian ship at the same time, though the crew was able to lock themselves into a strong room and wait for the attackers to leave, Mody said. Over the last eight months, piracy in the Gulf of Guinea has escalated from low-level armed robberies to hijackings and cargo thefts, according to the Denmark-based security firm Risk Intelligence. Last month, London-based Lloyd's Market Association, an umbrella group of insurers, listed Nigeria, neighboring Benin and nearby waters in the same risk category as Somalia, where two decades of war and anarchy have allowed piracy to flourish. West African pirates also have been more willing to use violence - beating crew members, and shooting and stabbing those who get in the way. Analysts believe many of the pirates come from Nigeria, where corrupt law enforcement allows criminality to thrive.

Those operating in the region have been warned not to stay too close to the shoreline and work only during daylight hours, Mody said. However, the attacks keep happening, as pirates in the region seem to favor the oil vessels now sailing through the waters. "This is an area of risk," Mody said. "There's no doubt about it." Analysts believe some of those oil tankers carry crude stolen from Nigeria's oil-rich southern delta, where thefts run into the hundred of thousands of barrels of oil a day. The maritime bureau says Nigeria and Benin reported 18 pirate attacks in the first half of 2011. While smaller than figures attributed to Somali pirates, shipping industry officials say the number of attacks off Nigerian waters is underreported because some ships carry the illegal oil cargo and others fear their insurance rates will rise. A spokesman for the Nigerian navy did not immediately respond to a request for comment Wednesday. Authorities in Benin could not be immediately reached.

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"unconscious performance of a stated desirable act. According to Synergistic Solutions, headed by Capt Ajay Achuthan, the shipping community has so far been used to referring to STCW code for the Desired Functions, tasks and acts, and the examination system of the Mercantile Marine Department / Director General of Shipping, government of India, has created a control measure for the assessment, and finally certification of candidates.According to international research this certification only contributes for 7% to 8% of the overall competence of an employee and as much as 65% is provided by Behavioral Competencies.

These factors were lucidly brought out in various presentations made at the seminar on "Demystifying Behavioral Competencies" wherein heads of leading manning, ship management companies and training institutes participated in big numbers.The seminar was enriching because it took on a new dimension highlighting the need of the hour and something which has been neglected all through by the shipping industry and seafaring fraternity. Behavioral Competency requirements had not been thought of and taken for granted. It is a clear indication that things will change radically in the near future and some amount of formal training will be introduced in course of time.

So far International Maritime Organization (IMO) has only been looking at leadership. Ultimately, Behavioural Competence is the atom that goes into making up the ship operations. It is now being used more and more for the recruitment of right persons. Thus a selected seafarer can be conditioned by being put through a mentoring mode - training - and then placed on the ship where he will better perform as planned.

Dr S. Pandey, Managing Director of Corporate Comprehensive management informed that when you get an applicant you have to see what the person is like and ascertain whether he is suitable for the job. There may be a candidate who responds promptly but this is possible that he is impulsive type or good decision maker. One will have to dig deeper and find out what he actually is. In another scenario there could be a person who does not responds to a question immediately. You find him thinking and thinking. How does one interpret that? If the person is thinking he may be weighing all the options and deciding on what is the best way forward. There are different competency model and it is important to get the right behavioral framework in order to recruit the right person.

In the presentation by Dr Manavi Pathak from DDI India Pvt Ltd, (a premier assessment provider) the present status and future trends of competency assessments were highlighted. She stated that application of Behavioral Competence not only helps in selection but also for promotions. In the latter the usage of assessment centre shifts from mostly selection to development. She saw wide spread usage of this system being affordable and cost effective and applicable to various industries.

Capt A Dasgupta, General Manger of Anglo Eastern Ship Management spoke on User perspective on Behavioral Competence. He touched upon the behavioral interview of candidates which help to indentify the strengths and shortcomings of an individual, his or her potential, the gaps and the training which can help to improve performances and also to indentify the team that they will be suitable for.

Case studies and narrations about findings along with two workshops helped participants understand how the system works and how assessment can be made considering the Behavioral Competence. The truth is out. Behavioural Competence can help to drive higher performance by helping employees understand how they make decisions and relate to others. It also enables the user to assess, appreciate and calibrate similarities as well as difference among individuals.

Security cost is the legacy of September 11: The world's supply chains are safer than they were before the 9/11 attacks, but it hasn't come cheap. On a bright September morning in New York 10 years ago, transportation's age of innocence came to a crashing end. From that point on, the efficient transport of passengers and cargo from country to country vanished, replaced by costly and cumbersome security systems that continue to frustrate. It was not only aviation that suffered. In ocean shipping, an array of container security measures and shipper assessment initiatives were introduced to prevent potential "bomb in a box" attacks.

There is no doubt that the shipping of freight by sea and air is safer now than before 9/11, but that security has come at tremendous cost to the transport industry. Much of that cost was initially a result of the lack of collaboration between US security agencies and industry bodies on the shape and direction of security initiatives. This led to an uninformed US Congress pushing security goals that were unattainable or prohibitively costly.

Security measures cost airlines US7.4 billion in 2010, according to The International Air Transport Association, which last week reiterated its position that aviation security was a national issue and the tab to secure cargo and passengers should be picked up by governments.

The security tab in the maritime sector did not come out of petty cash, either. To implement security legislation, America's ports and terminal operators invested billions of dollars into security personnel and training, enhancing perimeter security, access control and technology, and upgrading waterside security by adding patrol boats, vessel tracking and underwater threat detection systems.

Since 9/11, the US has implemented the Container Security Initiative to examine high-risk, US-bound containerised cargo at foreign ports; the 24-Hour rule, which requires cargo manifests be submitted a least a day ahead of ship arrivals; C-TPAT which provides expedited inspections for US importers that voluntarily work with Customs and Border Protection to improve baseline security standards for supply chain and container security; and large-scale X-ray, gamma ray and radiation detection devices at US ports to scan the contents of inbound cargo containers. However, austerity measures have seen a cut in port funding that will make it difficult for US ports to meet the requirements of security legislation. And just to complicate everything, there are a dizzying number of agencies and departments involved in securing the US with the FBI and Department of Homeland Security (DHS) at the top. Then there is the US Coast Guard, Customs and Border Protection (CBP), Transportation Security Administration (TSA), Federal Emergency Management Agency (FEMA), Immigration and Customs Enforcement and the Domestic Nuclear Protection Office.

As the US remembers that awful morning 10 years ago, Homeland Security needs to ignore the election rhetoric of politicians and continue to collaborate with the transport industry to refine a risk-based approach to securing the country's borders.

With a recession looming, the last thing the US needs is for security to come at the expense of trade.

Getting set for the Ballast Water Convention: Setting the stage to usher in the Ballast Water Convention, ForumMaritime took a proactive step by holding a seminar to bring into focus the obligations and responsibilities which the industry will have to comply with once the convention comes into force. Held this morning (14th September, 2011) representatives from every section of the maritime industry made it a point to attend the event at the famed MCA, Bandra Kurla Complex in Mumbai. Strangely, the presentations seem to have caught several participants unaware of the implications, the liabilities and the bearing it will have on their operations. Very symbolically the question posed by the former Nautical Advisor to the Government of India, Capt S S Naphade at the fag end of the program was 'If the convention comes into force in a year's time, why then is no training programs being conducted? How else will every seafarer, stakeholder and others get ready to shoulder the responsibilities?'

From the International Maritime Organization (IMO) Dr. Jose Matheickal, Head - Technical Cooperation Coordination & Major Projects, and Chief Technical Advisor (GloBallast Partnerships), MED came all the way to be present and deliver the keynote address. He averred that bio ecologic threats to marine environment due to invasion of alien species could take on frightening dimensions. One can't predict when, where and with what destructive magnitude alien species could surface from our surrounding waters and take a toll on our environment. "The livelihood of the fishing community along the Caspian Sea coast has been totally wiped out as a result of species from the Black sea finding their way through ballast water that was discharged in the Caspian sea," he pointed out. He also informed that 30 member states comprising 35 per cent of the world tonnage was required to ratify the convention which will result in the convention coming into force a year later.

The Director General of Shipping, Union Ministry of Shipping, Government of India, Dr. S. B. Agnihotri advised that we need to give up the 'crab mentality', and if one common goal was to be achieved the maritime community needs to come together and take up the challenges and determine the best way forward to protect our planet. "Testing facilities for inspecting the ballast water samples will be needed whether India has it or not. The cost for testing ballast water needs to be determined and surveyors will have to fast track establishing the testing facilities.

Dr Agnihotri also welcomed the initiative of the Jawaharlal Nehru Port Trust (JNPT) to develop port specific ballast water management plans and hoped that all ports would come together and work along the same lines. "We are already late in this power play but it does not matter," he said.

Mr N N Kumar, Deputy Chairman of JNPT informed that his port was set on keeping ahead in ballast management. "Ballast Water risk assessment was also being done by the Visakhapatnam and Mormugao ports. Each year over two million tons of ballast water was being discharged at the JN port.

"The Indian National Shipowners' Association (INSA) has asked the government for early ratification of the Ballast Water Convention," pointed out I. N. Bose, General Manager of Great Eastern Shipping Co. Ltd. "Once this comes into force the port state control will ask, 'Where is your ballast water treatment. If not, punitive action will be taken against the defaulter." He cautioned stakeholders about the possibility of bottle neck phenomenon taking place once the convention comes into force with all rushing in to gearing up to meet the requirements. Do we have the manufacturing capacity from now on? The US is asking for ballast water treatment which is several times more stringent."

"If treatment equipment is to be installed in ships it takes four months for big vessels and one month for the smaller ones. Today over 4000 ballast water systems have to be installed worldwide. The worst is that there is confusion about how the sampling of ballast water is to be done to ensure that the water is in compliance with the Convention requirement." From the Directorate General of Shipping S. S. Gadkari presented the Administration's views, sampling / Port State Control and policy impediments in implementing the convention. He explained the initiatives underway under the Ballast water Management Program funded by the Ministry of Shipping, Government of India.

There were also Hyuck-Man Park from Daewoo Shipbuilding and Marine Engineering to present the ship yard perspective while Andreas Rosebrock of Bremen, Germany spoke on the manufacturers' perspective on marine water technology which covered the various technologies being developed with regard ballast water system.

SCI acquires Supramax Bulk Carrier: The Shipping Corporation of India Ltd. (SCI) took delivery of a Supramax Bulk carrier, m.v. Vishva Nidhiover the weekend - on 9th September, 2011. The vessel is first vessel of SCI's six nos. Supramax bulk carriers ordered at STX (Dalian) Shipbuilding Co. Ltd., China, which is part of the world renowned STX Offshore and Shipbuilding group of Korea. Orders for these vessels were placed in December 2007. The remaining five vessels are scheduled to be delivered to SCI in a phased manner by March 2012. According to SCI's spokesman the company is in the process of phasing out their Daewoo series Handymax bulk carriers which were built in 1986/87 and the Supramax Bulk carriers will partly meet this replacement program. With induction of these vessels the overall age profile of SCI's bulk carriers would improve significantly.

M.V. Vishva Nidhi has a gross tonnage of 33,170 tonnes and deadweight of 57,145 tonnes. The vessel has been classed with DNV and IRS and has been built to comply with the latest and most stringent international regulations. The world economy is presently reeling under the recessionary pressure. However, India has been continuing its growth trajectory and industrial and infrastructural development plays a major role to sustain this growth. As a National carrier, SCI has been aiming to increase its presence in India's ever increasing dry bulk trade and strengthening its bulk carrier fleet would help SCI contribute to this growth.

With addition of this vessel, SCI's fleet strength has increased to 82 vessels of 5.87 million dwt which is a new historic high

for SCI in terms of dwt. Acquisition of the vessel is in line with SCI's strategy of maintaining a modern and young fleet of vessels. The Company has 29 vessels on order at present and 9 of these are scheduled for delivery by the end of 2011.

The Company has 29 vessels on order at present and 11 of these are scheduled for delivery by the end of 2011. The 29 vessels being built are:

Four Anchor Handling, Towing & Supply Vessels (AHTSV's) are under construction at the Bharathi Shipyard Ltd., India. Five Supramax Bulk Carriers, four Panamax Bulk Carriers and three Cellular Container vessels are being built at the STX (Dalian) Shipbuilding Co. Ltd., China. Four more AHTSVs, as well as two Platform Supply Vessels (PSV's) are being built at the Cochin Shipyard India Ltd in South India. SCI has placed order for four Kamsarmax Bulk Carriers being built at the Jiangsu Eastern Heavy Industries. Co. Ltd., China. Besides, two Very Large Crude Oil Carriers (VLCCs) being constructed at the Jiangsu Rongsheng Heavy Industries. Co. Ltd., China. Further a Supramax Bulk Carriers is being built for SCI at the Guoyu Shipyard China.

Sea snakes – Venomous, but non-aggressive, aquatic reptiles: Sea snakes are venomous snakes that, as their name implies, spend all or most of their lives in the water. Almost all sea snakes reside in marine or brackish environments. Some occasionally swim up rivers for several miles and two species are found exclusively in fresh-water lakes (one in the Philippines and the other in the Solomon Islands). Sea snakes are found in warm tropical waters of the Indian Ocean and the western Pacific. They are common in the Persian Gulf, but rare in the Red Sea. While sometimes found on the west coast of the Americas between Mexico and Peru, they do not inhabit the Atlantic Ocean. Sea snakes are so adapted to their aquatic environment that most are unable to move on land. They lack gills, but their lungs can extend for almost their entire body length, allowing them to remain submerged for up to four hours. Adults generally grow to between four and five feet in length, but one species, found from Australia to Southeast Asia, can reach almost ten feet. Almost all sea snakes are ovoviviparous, with the female giving birth to live young. Most sea snakes feed on fish. Their venom is extremely potent, immobilizing or killing their prey shortly after biting. Humans, though, are not at high risk. First, sea snakes are not generally aggressive and seldom bite anything other than a potential food source unless provoked. Secondly, the fangs of most sea snakes are small and can penetrate the human body only with difficulty. It is thus rare for much venom to be injected into a human. Native fishermen frequently find sea snakes in their nets. They grab the snakes with their bare hands and throw them back into the sea. This practice is not recommended, but does illustrate the point.

New Journal of Ship Hull Performance and White Papers launched by Hydrex Group: Antwerp, Belgium and Tampa, USA - January 25, 2011. A new quarterly Journal of Ship Hull Performance and series of White Papers has been launched by Hydrex Group with a view to informing shipowners, ship operators, navies, interested government officials, port authorities, maritime institutions and media of the latest developments and state of the art in underwater ship hull protection, hull coatings, hull maintenance, underwater ship repair and all matters related to maintaining the underwater hull at optimum performance while protecting the marine environment and reducing GHG emissions.

Hydrex Group, with main offices in Belgium and the USA, has over 35 years of experience in all aspects of underwater hull fouling control, hull maintenance and underwater ship repair. Hydrex has developed and tested a system, Ecospeed, which combines a completely non-toxic hard coating which lasts the lifetime of the ship, with routine, advanced in-water hull cleaning. The coating is classified as a Surface Treated Composite (STC) which consists of relatively large glass platelets in a vinyl ester resin base. It is applied in two coats on a grit-blasted hull to a dry film thickness of 1000 microns. Once conditioned by an in-water brushing process, the coating provides a very smooth, extremely hard yet flexible protection lasting the life of the ship, requiring only minor touch-ups. The surface improves in hydrodynamic performance with each in-water cleaning.

The quarterly Journal of Ship Hull Performance was launched in January 2011 as a vehicle for information from Hydrex and from leaders in the sphere of underwater hull performance, academics, researchers and other experts on related subjects: hull coatings, hull monitoring and inspection, cleaning, repair; business issues such as how to keep a hull at optimum performance and garner huge savings in fuel; environmental issues such as the effects of biocides on the marine environment and the food chain, the control of non-indigenous species, and how to reduce GHG emissions from shipping through best practice fouling control methods.

A new series of White Papers on underwater hull performance was launched by Hydrex Group at the end of 2010. The first two White Papers in the series have been published: Hydrex White Paper No. 1, Ship Hull Performance in the Post-TBT Era: How to save money while improving hull performance and dramatically reducing environmental impact; Hydrex White Paper No 2, The Slime Factor: Shipowners/operators can gain enormous savings through advanced underwater hull maintenance technology. These two White Papers have already been circulated widely and received instant acclaim from maritime industry leaders and professionals. Upcoming White Paper subjects will cover such subjects as in-water cleaning in ports, a comparison of hull coatings, avoiding drydock, biocides in antifoulants, reducing NOx, SOx and CO2 emissions, corrosion and cavitation protection, coatings for the ice, protecting inland waterways, eliminating the spread of non-indigenous species and other related issues.

LEGAL:

Call for UN Armed Guards: Courtesy of our good friends at Tanker Operator comes this story. With the progress of the private security initiatives in the field, we feel it is getting rather late for these kinds of ideas:-

09SEP11--The Round Table of international shipping associations has called for the establishment of a United Nations force of armed military guards to tackle the current piracy crisis.

In a hard hitting letter to UN secretary-general Ban Ki-Moon, the International Chamber of Shipping (ICS), BIMCO, INTERTANKO and INTERCARGO demanded a "bold new

strategy" to curb rising levels of piracy, which have resulted in the Indian Ocean resembling "the wild west".

The letter stated: "It is now abundantly clear to shipping companies that the current situation, whereby control of the Indian Ocean has been ceded to pirates, requires a bold new strategy. To be candid, the current approach is not working."

Regretting the increasing necessity for shipping companies to employ private armed guards to protect crew and ships, the letter continued: "It seems inevitable that lawlessness ashore in Somalia will continue to breed lawlessness at sea."

The shipping industry organisations - which represent more than 90% of the world's merchant fleet - said that they fully support the UN's long-term measures on shore aimed at helping the Somali people but were concerned that these "may take years, if not decades, to have a meaningful impact on piracy."

Asking the UN to bring the concept of a UN force of armed military guards to the attention of its Security Council, the letter said: "The shipping industry believes that the situation can only be reversed with a bold approach that targets the problem in manageable pieces. We believe that an important element in this approach would be the establishment of a UN Force of Armed Military Guards that can be deployed in small numbers on board merchant ships.

"This would be an innovative force in terms of UN peacekeeping activity but it would do much to stabilise the situation, to restrict the growth of unregulated, privately contracted armed security personnel and to allow those UN member states lacking maritime forces - including those in the region most immediately affected - to make a meaningful contribution in the area of counter-piracy," the letter concluded.

Dominican Fines Danger Reduced: Friends who are members of the Wista branch in the Dominican Republic have sent in word of recent ruling:-

Your readers may recall that ships calling at Dominican ports have been facing serious inconveniences involving environmental issues. There were cases concerning fines imposed by the Ministry of Environment against ships which lacked any legal basis and evidence.

The Ministry of Environment imposed a fine to the M/V "Rio Bravo" alleging the same had polluted Dominican waters, however the case was not properly substantiated. E&M International Consulting handled this case and presented a claim before the Highest Administrative Court and due to the lack of evidence the Administrative Court condemned the Ministry of Environment to refund the amount paid as fine by the owners/underwriters of the M/V "Rio Bravo". This ruling sets forth a precedent which may well prove beneficial to the maritime industry in the Dominican Republic, especially since in frequent cases, shipowners are forced to pay fines for damages that were not caused by them or the extent of the damages do not correspond to the fines imposed by the Environmental Authorities.

Slime Factor: The international underwater hull performance, protection, maintenance and repair organisation Hydrex Group, recently published a White Paper of the same title explaining that the harmful growth of an invisible slime coats any untreated, immersed surface within days if not weeks, depending on several factors such as temperature, location and movement. The invisible slime causes friction to increase with a commensurate decrease in performance.

The effect of biological growth on submerged objects has been well documented for many years. In the case of ships this has a marked effect on its performance as illustrated in the post World War II British Admiralty tables showing decrease in speed and the associated increase in fuel required to compensate. Test results published in 2004 show that despite the technological advances in anti fouling treatments, little has changed in the last 50 years concerning performance loss and the values in the table are still valid. As the cost of fuel increases the escalation in fuel consumption becomes more and more significant to any ship operator, be it commercial or military.

Beach Launching & Recovery System: The UK Royal National Lifeboat Institution (RNLI) has struggled for over a century to find a solution to the problem of launching a lifeboat into the surf from a beach location. Many brave attempts in early days some even using horse driven carts have ended in tragedy. More recent solutions have shown good results and the latest launch and recovery system announced, following recent tests, offer a safer and more practical solution.

EFFECT OF FOULING ON MARINE HULLS

Type of Ship	Standard Displacement (tons)	Loss of Maximum Speed (knots)	Percentage increase in Fuel Consumption to maintain a speed of: 10 knots	20 knots
Battleship	35000	1.5	45	40
Aircraft Carrier	23000	1.5	45	40
Cruiser	10000	1.5	50	45
Destroyer	1850	2	50	35

Supacat Ltd, England has developed a special partially submersible tractor and powered carriage system with hydraulically operated cradle to ensure a rapid successful launch of the new Shannon Class rescue lifeboat in heavy surf conditions.The versatile system also allows swift recovery to the beach, if required.

To launch the lifeboat, according to the state of the tide, the tractor moves the combination down the beach into the surf. The angle of the cradle slipway is adjusted, the lifeboat engines fired up and the launch initiated. The angled launch provides sufficient momentum for the lifeboat to surge through the first waves until the impellers are submerged and able to provide sufficient propulsive force to drive the boat forwards and away from the dangerous beach surf.

The tractor is powered by a waterproofed 13 litre V8 Scania DC13 diesel engine of 450 hp (331 kW) powering four software controlled tracks. The direct coupled trailer with hydraulically angled launchway has a set of plastic keel rollers to carry the 17 ton weight of the lifeboat while ensuring rapid launching and recovery. An important feature of the trailer is that it has a 360 degree turntable allowing for bow on recovery yet after a 180 degree rotation can effect a bow launch.

The tractor carriage combination has an overall length of 67 ft (20.3 m) and width is 11.5 ft (3.5 m)

The prototype Shannon Class lifeboat has a crew of five and an LOA of 45 ft (13.6 m), beam 15 ft (4.6 m) and 2.5 ft (0.75 m) draft. Twin Scania DI 13M diesels rated at 650 hp

(485 kW) power two Hamilton waterjets giving a top speed of around 25 kt.

The full test program is expected to be completed by mid 2012 with delivery of the production launch and recovery system in 2013.

Gas-protected MTU Diesel Engines: Nordic's main propulsion engines are two specially equipped 20-cylinder MTU Series 8000 diesel engines rated at 17,200 kW, while two MTU type 12V 4000 M50A diesel generators are capable of meeting electrical needs as high as 2,280 kW.

Surprisingly, MTU found that a comparatively large amount of combustible gas entering the engines through the air intake is quite acceptable. The permissible amount of gas varies according to power output; for example, if less than 1,800 kW is produced then as much as 70% of the fuel in the combustion chamber can be gas. However, if the proportion of gas to diesel fuel becomes too high then of course the engine will auto-shutdown to avoid running out of control.

Temperatures are continuously monitored by MTU's integrated 'Callosum' electronic control system when operating in 'gas-safe' mode (power automatically reduced to a maximum 4,000 kW) so as not to exceed a cylinder intake air temperature of 135C; MTU say that self-ignition of the gas/air mixture is extremely unlikely below that temperature. Flame barriers are also fitted in the air intake ducts to prevent burn-back.

Automatic cooling of exhaust gas by water spray in order to avoid triggering an external explosion is an additional safety measure when the tugboat is operating in a gas contaminated atmosphere.

Engine Modification Approval and Testing

Propulsion system specialists at MTU were advised during development by the German Federal Institute of Physics and Metrology, which tested the engine components - flame barriers and air intake system amongst others - for their efficient operation. Classification society GL then finally approved the engines for operation in any area where intake air is contaminated with external gases. Notably at one point in the testing process, flammable gas was fed into the 8000-series diesel engine air intake system in an experiment conducted (understandably) under the supervision of the fire brigade, and outside working hours, on the MTU Friedrichshafen factory grounds.

Supreme Rudder Protection: The rudder of the Friedrich Russ before Eco-speed was applied, showing cavitation damage. The rudders were originally coated with a standard epoxy-coating. During the first intermediate docking, between two and three years from launch, extensive cavitation damage on the rudders was already observed.Ernst Russ successfully ends rudder cavitation amage problems on ro-ro fleet Magazine 179.qxd 01-09-2011 14:20 Pagina 12distance between the hub and the rudder. If that distance is not sufficient then the cavitation will be worse." It was.During that 2004 docking, the glassflake vinylester STC Ecospeed was applied experimentally on the Elisabeth Russ. The application was close to the end of the docking. There was only time to grit blast the rudder and apply two coats of Ecospeed. The pitting and damage from the cavitation was not repaired but the paint simply applied over it. This was the test.The trial was successful beyond allexpectations. When the ship nextcame out of the water in 2007 it couldbe seen that, despite the last minuteapplication, no further cavitationdamage had occurred. As a result, the rudders of the remaining four ro-ro ships were coated withEcospeed, all with similar results.Based on this the bulbous bows of allthe ships were also coated withEcospeed since these vessels trade inthe ice and the traditional coating inuse was not holding up in these conditions. The ships have the highest tinnish ice class. Ecospeed has alsobeen used to protect one of the stabilizers. Only budgetary constraintshave prevented the company from blasting the hulls of all five ships andcoating them all with Ecospeed. None of the rudders have sustainedany further cavitation damage. Theyhave been touched up where the paintwas chipped or scraped, but the cavitation damage to the rudders ended with the first application of Ecospeed. The most recent drydocking of the Elisabeth Russ, the first vessel to be so coated, in 2011, confirms that theoriginal Ecospeed protection applied in 2004 is still holding firm and the rudder is intact, free from any further cavitation damage.The Superintendent confirmed thatnot having to carry out hot work onthe rudders when the ships were indrydock has saved the company agreat deal of drydock expense.The rudder of the Pauline Russ after Ecospeed was applied.The most recent drydocking of the Elisabeth Russ in 2011,confirms that the original Ecospeed protection applied in2004 is still holding firm and the rudder is intact, freefrom any further cavitation damage.Grzegorz Girjat, Superintendent of Ernst Russ, shows the state of the rudder of the Elisabeth Russ in dry-dock in 2011. The original cavitation pitting from before the original Ecospeed application is still visiblebut no further cavitation damage hasoccurred in the intervening 7 years. Pagina 13ders has suffered cavitation damageafter the Ecospeed was applied andnone has had to be recoated with Ecospeed.The very long term problem of ruddercavitation damage (erosion followed by corrosion) has been solved as demonstrated by this large number of cases where cavitation damage was prevented from the moment Ecospeed was applied to the rudder.

Transforming Indian Ports into World Class Facilities: Roadmap for revamping ports in India for meeting challenges from overseas

Various factors including corporatization of ports to allow greater leeway in operation, taking on board other business models better than the present Public Private Partnership (PPP), enhanced port connectivity, greater focus on port operations and infrastructure developments were considered crucial for transforming Indian ports into world class facilities. These factors took center stage in the free and frank interaction that took place at the National Conference on Ports and Shipping 2011 held at Hotel International - The Lalit, in Mumbai last week.

A lot of stress was laid on the need for favorable regulations to encourage greater participation by private stakeholders as it would go a long way in promoting rapid infrastructure development. In particular, participants wanted draft enhancement in all ports to at least 14 meters and reduction in the average turnaround time in order to be in par with prevailing globally competing ports such as Singapore, Hong Kong, etc. Ramu S. Deora, Chairman of the All India Shippers' Council in his presentation stressed on the need for better

port connectivity. "With the prevailing road conditions it takes a full day to move a truck load from my factory to JNPT which is just 47 kms away," he said. Hemant Bhattbhatt, Sr.Director of Deloitte Touche Tohmatsu India Pvt Ltd pointed out that 352 projects that have been set out for developments of ports required an investment of $ 26.5 billion out which $ 16.2 billion would have to come from the private sector. From the public sector side L. Radhakrishnan, Chairman of Jawaharlal Nehru Port Trust called for greater flexibility in the model concessional agreement and expressed the need to revisit such agreements every 10 years. The government should not be restrictive as was the case in the present PPP model where it was more concerned about the financial aspect rather than being focused on bringing in superior technology."

He stated that JNPT is in the process of undertaking capital dredging work to enhance the draft of the port to 14 meters in the first phase and increase the draft further to 17 meters in the second phase. "When it comes to improving road connectivity JNPT does not have a say as it is a minority partner in the National Highway Authority," he said. "Also the rail connectivity has lagged behind because port sector is not allowed to participate." In the panel discussion on "Policy Reforms for Developing World Class Ports" chaired by Michael Pinto the former Union Secretary it was brought out that there was no mention of Cabotage law in the Major Port Act as such. In fact there is mere indication that foreign flag vessels are required to seek the permission from the Director General of Shipping, government of India if they want to move cargo from one Indian port to another.

However, with hub ports coming up in India if foreign lines were denied the permission to take cargo to more than one port there was all the possibility of them unloading in a big way the transshipment containers at foreign ports in the vicinity of India as was already happening. There was an agreement that as such time feeder vessels were available to move containers, the coastal trade could be restricted for Indian flag vessels except in the case of containerized cargo. But what was important was there should be guidelines which would indicate to the Director General of Shipping as to when the Cabotage law could be relaxed. Advocating the cause of the private players Mr. Radhakrishnan stated, "Captive berths will bring huge relief to private business serving also as an incentive for them to invest. The dredging policy needed to be rehashed in order to ensure that Indian companies get better options." He preferred the assured depth model for dredging in ports. However, he was very critical about the present policy of the Tariff Authority for Major Ports (TAMP) the present port regulator which chose to penalize terminal operators for showing outstanding efficiency and productivity. He felt corporatizing major ports would help in enhancing the quality of port operations and ensure their rapid development. The panel discussion on "Indian Shipping Industry, Progress, issues and the way Forward" as chaired by the Director General of Shipping, Dr. Satish B. Agnihotri touched upon taxation, measures to increase the share of Indian flag vessels, etc. It commenced with Arun Kumar Gupta, Director (Technical & Offshore Services), Shipping Corporation of India making a power point presentation. He brought out the facts that in India only 6 per cent of the cargo moves by water while the rest by road or railways. A glaring fact that was brought to the notice of the participants was that 70 per cent of the time of a coastal vessel was wasted in the port waiting for a berth. The lack of repair facilities in India for coastal ships further served as a deterrent.

Coastal shipping needed to be taken seriously and this could happen if this trade was restricted to only Indian flagged vessels. But the crucial issue namely the economics of transport was a matter of concern. A number of players pointed out that coastal shipping turned out to be expensive when one considered the cost from the point of origin to the point of final destination compared to road or railway transport. Thus there was little likelihood of being able to popularizing it. The factors that caused cost to rise making it unviable were customs, the last leg of the transport which was overland, multiple handling, etc.

The Chairman Dr. Agnihotri pointed out that there cannot be a standalone approach to coastal shipping as there were other factors to be considered. It is necessary to consider the road to port and port to road movement and work out the cost for each leg of the entire transport chain and then only considered how feasible coastal shipping can be. In other words the question of promoting coastal shipping can be considered in those sectors where it is viable.

JN Port gets final go ahead to set up SEZ: Special Economic Zone to come up in India's biggest container port - JNPT:

India's biggest container port, Jawaharlal Nehru Port Trust (JNPT) has finally got the green signal from the government of India this week for setting up India's first port based multi-product special economic zone (SEZ) to come up in a major port. Spread over an area of 400 hectares of land, which has already been developed, the SEZ is set to take shape at a rapid pace. Giving details about the SEZ the chairman of JNPT, L. Radhakrishnan stated, "Half the area will be for the processing industry and the other half for setting up supporting logistic units, housing, commercial complexes, due diligence and all that. Investment could be around $ 889 million but will not be on the public private partnership model so far the common route for development in the port sector in India. In fact the government has asked us to create a special model for setting up the SEZ at our port. This will be sent to the planning commission and we expect to commence operations by March 2010. We will complete all necessary arrangement ourselves and involve the private parties for the development soon." The SEZ will be inside the port as in the case of Jebel Ali and other similar ports abroad. The entire land has already been developed and ready for construction. The roads have already been constructed, arrangements for water supply and power distribution has been made, etc.

"We are in the process of appointing four consultants to undertake the various functions," stated Mr Radhakrishnan. "These four consultants will be for preparing the feasibility studies; another for preparing the detailed project report. A special consultant will be entrusted with the actual supervision of the work of the entire project - since I don't wish to involve our port engineers for this and the fourth for EPC related work. In a couple of months we expect to get things moving."

JNPT is also in the process of undertaking capital dredging work to enhance the draft of the port to 14 meters for which it is set to raise $ 333.3 million through a tax free bond issue. The money will fund the first phase of a $ 1.3 billion dredging project required to increase the draft of the

common approach channel for Mumbai harbor and JNPT. "We can issue infra bonds of up to $ 1.1 billion and we will be raising $ 333.3 million before March," informed Mr Radhakrishnan. "JNPT is undertaking dredging in two-phases which will increase the draft initially to 14 meters and then to 17 meters from the present 11 meters."

Five bids have already been received by the JNPT for the first phase of the dredging and work for this is expected to start by November. According to the Chairman the first phase of dredging is expected to be completed in two years.

Shipping Ministry seeks Nigerian help:

THIRUVANANTHAPURAM: The Ministry of Shipping, Road Transport and Highways has requested the Nigerian Maritime Administration and Safety Agency to carry out a safety investigation into the blast on board the vessel ITB Jacksonville which resulted in the death of five Indian crew members. The Director-General of Shipping, India, who is currently probing the blast on the ship manned by an all-Indian 15-member crew, has found discrepancies in the statement given by the master of the vessel Captain Rajesh Kumar and the information obtained by the Directorate through other sources pertaining to the flag of the vessel. According Rajesh Kumar's statement, the vessel, owned by Platinum Fleet Limited, Lagos, Nigeria, and managed by Tubbs Marine and Energy Limited, Lagos, was registered with the Federation of Saint Kitts and Nevis and bore the latter's flag. Earlier the ship authorities had told the media that the vessel was registered with more countries, including Panama, Liberia and the United States of America.

When contacted, the Panama administration confirmed that the vessel was not registered with them. St. Kitts and Nevis Administration informed that the vessel was provisionally registered with them in 2009 and the registry had expired in June, 2010. Liberia and USA are yet to respond.

As per the provisions of the International Maritime Organisation Code of Conduct on Casualty Investigation, the primary responsibility to investigate marine accidents rests with the flag state, i.e., the country in which the vessel is registered, based on which the DG Shipping forwarded the request to Maritime Administration and Safety Agency.The blast that occurred on board ITB Jacksonville on September 4 had claimed five lives, including an engineer hailing from Thiruvananthapuram, Manikuttan.

Shipping must learn to fly the green flag:

In the same way as other industries strive to reduce their carbon footprints, the sector that underpins 95 per cent of the world's trade - shipping - must do likewise. For this to happen, we need global collaboration and engineering innovation supported by regulation that applies to all vessels, regardless of their flag. 2011 is shaping up to be an important year for shipping. United Nations agency International Maritime Organisation (IMO) appears to have laid the groundwork with its recent Energy Efficiency Design Index (EEDI), a meaningful step forward for the industry and no mean feat, considering the challenge of finding agreement between developed and developing countries, as seen at the IMO and UN Framework Convention on Climate Change talks.

EEDI adoption signals real progress and sends a clear message that the IMO is serious about reducing emissions. This is no more than a first step, however. Now that the EEDI has been made mandatory, the path is clear for discussion of a practical approach to targeted emissions reduction via market-based measures, including the Emissions Trading Scheme (ETS).

An ETS is essential if shipping is to avoid following in the steps of the automotive industry, where improved efficiencies are being achieved, but actual volumes of emissions have steadily increased.

Another lesson we can learn comes from the aviation sector, whose well-documented difficulties in implementing the EU's aviation ETS are a stark warning of the political challenges presented by attempting to introduce a regional scheme to address a global issue. A shipping ETS must be global, rather than regional, and to deliver this we must work together - and that includes businesses and regulators, and both developing and developed countries.

Shipping must learn to fly the green flag. John Aitken of SEAaT argues an emissions trading scheme is the best way for the global shipping industry to become sustainable. 09 Sep 2011, 00:09

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The cornerstone of any attempt to reduce emissions must involve actual emissions measurement. These must be verifiable if meaningful emissions reduction targets are to be achieved. This is not just about the architecture of the future fleet, but also the operations of the existing one. Clearly, there are many discussions still to be had, and it pays all parties to be involved.

Success with the EEDI does not equate to any real-world success in reducing shipping's GHG footprint, given the sheer

volume of new-build vessels coming online before EEDI will be implemented. The young global fleet, with an average age of between eight and 10 years, contains latent efficiency that could be accessed now, using retrofit clean technology. Reports vary, but according to DNV, 15 per cent is generally considered a good estimate of efficiencies that can be delivered through existing technologies.

Basic economics means the search for profitability gains is already driving the industry towards ever-greater efficiency, and shipping companies are already applying their operational and engineering expertise to that end. A steady stream of efficiency technologies and strategies are being developed: hull coating systems, air lubrication, propeller designs, just-in-time virtual arrival and waste heat recovery.

These are all an increasingly viable means of delivering not only reduced emissions for ship owners but also significant cost savings from reduced fuel bills. Barriers to take-up of these are eroding as their costs fall and operational experience grows, making them more accessible to firms seeking competitive advantage.

But if there are commercial drivers for clean technology take-up, why is an ETS necessary? The reason is, an ETS will deliver carbon footprint reductions across the sector, while unregulated commercial drivers or levy-based schemes will produce only relative reductions, such as tonnes of CO2 per tonne mile. In the predicted shipping growth scenario, a tonnes of CO2 per tonne mile reduction less than the increase of tonne miles carried is simply not good enough.

Whichever form regulation takes, clear targets based on solid data are essential to solving the problem. This data must come from actual emissions, not based on a design index for new-build vessels. Incentives to build more efficient ships and operate them more efficiently can both be delivered by placing a price on carbon emissions.

These may be challenging commercial times for the shipping industry, but it is imperative it can demonstrate progress on climate change. With the appropriate regulation, global collaboration and the skill of engineers and innovators, we can achieve what is expected of us.

Republic of the Marshall Islands Maritime Administrator Media Statement: The Republic of the Marshall Islands Maritime Administrator issued the following media statement in response to the United States Coast Guard Report of Investigation into the Circumstances Surrounding the Explosion, Fire, Sinking and Loss of Eleven Crew Members Aboard the Mobile Offshore Drilling Unit DEEPWATER HORIZON in the Gulf of Mexico, April 20-22, 2010, as accepted by the Commandant's final action:

"The Republic of the Marshall Islands acknowledges the Commandant's conclusions. The United States Coast Guard's report, with final Commandant action, reinforces many of the findings contained in the flag State's report released previously," said Bill Gallagher, Senior Deputy Commissioner of Maritime Affairs. "The Marshall Islands looks forward to working closely with the United States and other member States at the International Maritime Organization to implement the lessons that can be learned from this casualty and improve maritime safety going forward," he concluded.

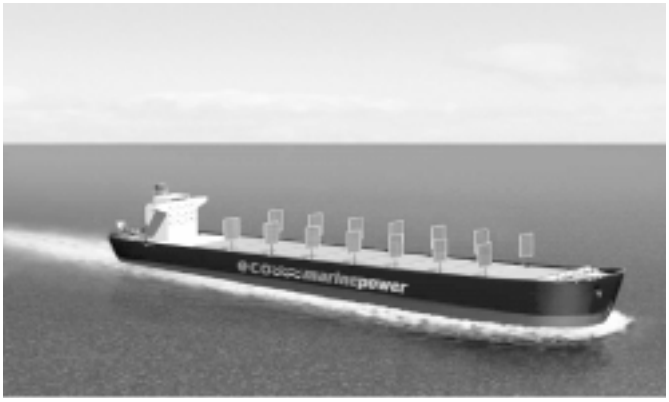
Background:

The Republic of the Marshall Islands Maritime Administrator published the DEEPWATER HORIZON Marine Casualty Investigation Report on 17 August 2011. When operating on the United States outer continental shelf (OCS), both the flag State, the Republic of the Marshall Islands in this case, and the coastal State, the United States, regulate vessel safety and marine operational standards of Mobile Offshore Drilling Units. When engaged in drilling operations on the United States OCS, regulation and oversight of the drilling operations are provided by the Bureau of Ocean Energy Management, Regulation and Enforcement (formerly the Minerals Management Service), an agency within the Department of Interior.

Aquarius: Just over a year ago Just over a year ago Ohori Capital Pty. Ltd. established a company in Fukuoka, Japan, called Eco Marine Power Co. Ltd. (EMP) with the aim of developing power and propulsion solutions using green technology for use onboard a variety of vessels and ships. The company is developing a wind power and solar energy system for use onboard ocean going vessels such as bulk carriers and cruise ships. Called the Aquarius System it is designed from the outset for ships that operate at sea/ocean and is not just a scaled up version of a solution designed for small inshore vessels. Another step forward in the development of the Aquarius System was made recently when work began on the detailed design of the wind and solar sail panels.

Caption: Impression of the Aquarius Wind and Solar Power System on a large bulk carrier vessel.The rigid sails and solar modules make the vessel part solar ship and part sailing ship.Image credit: Eco Marine Power Co., Ltd.

The Aquarius Wind and Solar Power System is an advanced integrated system of rigid sails and solar panels that will allow ships to use renewable, CO2 free sources at sea by utilizing



the energy provided by wind and sun. The array of rigid sails are also solar panels, always kept in optimum position by a computer control system developed by KEI System Pty Ltd of Osaka, Japan, whereby intervention by the crew is kept to a minimum. When wind conditions are not favourable the solar sails can also be positioned to offer little wind resistance and yet still collect solar energy. The sails may be used when the ship is at anchor or in harbour or can be lowered and

stored when not it use or in bad weather.

The Aquarius system is also being designed so that it will be relatively easy to install, will require little ongoing maintenance and offer an attractive ROI (Return on Investment) for shipping companies and ship owners. Despite being designed for large ships, much of Aquarius' technology will also be suitable for smaller vessels such as coastal freighters, passenger ferries and tourist boats. A study is also being conducted to determine if it would be feasible to use the system on naval and government vessel such as patrol ships.

Based on a conservative estimate which takes into account days when weather conditions are not favourable for using the system, EMP estimate that on an annual basis the system will reduce fuel consumption on a large ocean going ships of between 10% -20%. A prototype version of the system is planned to be ready by early 2012.

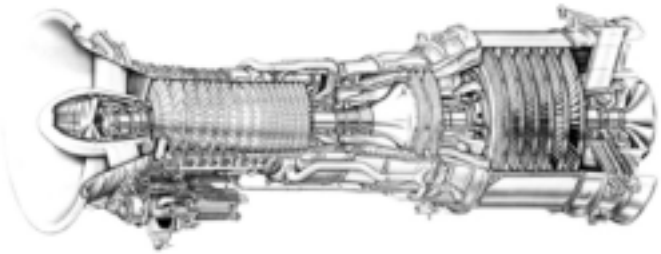
Gas Turbine Fuel Treatment Technology:

The presence of salt, calcium and other alkali metal substances in the hot section of marine gas turbines causes high temperature corrosion and ash fouling of major components. The resulting damage to components and blades causes a major reduction in the lifespan of the engine combined with associated costs for replacement of the engine and repair of the damaged components. In the cruise industry it is not unusual to carry a spare engine on board that can be switched in harbor during a cruise, the exchange taking between 8 and 18 hours. The damaged engine being returned for refurbishment when back in home port.

The salinity found in liquid fuel is a significant problem for all turbine engine operators, it reduces the Mean Time Between Overhaul (MTBO) of marine gas turbines or more specifically, the Hot Section Repair Interval (HSRI). The usual HSRI using fuel with an optimal salinity level of less than 0.1 ppm is approximately 25,000 hours. When the salinity doubles to 0.2 ppm, (the maximum concentration for commercial use), the HSRI is reduced by 50 per cent, in this example to 12,000 hours and at 1.0 ppm there is a 90 per cent reduction giving a lifespan of only 2,500 hours.

The company DITEC Marine offers a solution to the problems of contaminated fuel damaging marine gas turbines called DNS-100 using fuel polishing and scrubbing technology to remove sodium and alkaline metals from the fuel prior to injection.

Picture: Cutaway drawing of a GE LM2500 marine gas turbine, a popular engine providing propulsion of many cruise ships.



Find out some interesting facts about the Indian Ocean: 1. Covers 20% of the Earth Surface

Owing to its huge size, Indian Ocean has a whooping volume of 292,131,000 cubic kilometers, with an average depth of 3890 meters.

2. Several Continents by its sides/ Unique Location

Indian Ocean is bound by a number of continents on each side with Indian subcontinent towards the north, Africa towards west, The Sunda islands and Australian lands towards east and Antarctica towards south. The geographical facts about Indian Ocean depict the diversity of this Ocean through 57 islands groups, 16 African countries and 18 Asian countries being connected directly through its waters. Many other smaller ports or larger cities are connected indirectly through navigational options of this ocean.

3. The Highest Point is at the Sea Level Itself

Owing to the depth of this ocean, it is interesting Indian Ocean information that the lowest part this ocean is about 7,258 m deep lying on the Java Trench of the Sunda Shelf while its highest point is at the sea level.

4. Limited Marine Life

A rather interesting bit of information on the Indian Ocean is its limited marine animal life which is due to higher water temperature of this ocean. This ocean is the warmest ocean of the world and offers little scope to plankton and other species for growth.

5. Has Unique Chemical and Physical Properties

This ocean holds a unique place owing to its properties. As mentioned in the Indian Ocean facts, the water here has highest concentration of dissolved and floating hydrocarbons, has maximum negative water balance and is single source of water of highest and lowest salinity levels.

6. Has Several Tectonic Plate Boundaries

What is probably one of the little known facts about the Indian Ocean is that it bears many tectonic plate boundaries including the Rodrigues Triple Point where African, Indo-Australian and Antartic continental plates merge.

7. Has Lowest Oxygen Content

Waters in the Indian Ocean have one of the lowest oxygen content of the world owing to greater evaporation rate in this ocean than its run off or precipitation influx. This makes life growth in Indian Ocean rather unique.

8. 6000km of River Run

This ocean receives about 6000 km of river run off from various parts including rivers like Ganges and Brahmaputra-two of the largest rivers. Due to the closeness to equator, the evaporation rate here remains considerably high.

9. Has World's Most Important Ports

Indian Ocean has ports that belong to different continents.

Chennai, Mumbai and Kolkata are the Indian ports of this ocean while Colombo of Sri Lanka, Durban and Richards Bay in South Africa, Jakarta in Indonesia and Melbourne in Australia make the other important ports of this ocean.

These ports are important trade points in their respective countries and globally too. A part of this can be attributed to the Indian Ocean's store of heavy minerals and off shore deposits.

10. Oil Deposit that Accounts to 40% of World Production

Indian Ocean has its own contribution in the world trade. Besides the navigation routes and mineral deposits, this ocean also has many oil deposits which make about 40 percent of total world production.

11. Has a Submerged Continent

An interesting trivia from Indian Ocean facts is the discovery of a submerged continent in this ocean named- the kerguelen Plateau' which is believed to be of volcanic origins.

Shipbuilding Sector Shows Signs of Revival:

After recessionary trends over the last two years in shipbuilding across the world, the sector is showing signs of recovery and growth in many regions. While the number of ships being built in Brazil has doubled over the last three years and it is expected to continue to grow exponentially, South Korea's giant shipbuilding sector continues to dominate the global stage. In the first half of 2011, the Asian nation secured orders for 224 ships, representing more than half the compensated gross tonnes (CGTs) for orders placed worldwide. Between January and June, South Korean shipyards accounted for 65% of all containerships and three-quarters of those over 8,000 twenty-foot equivalent units (TEU) loading capacity, as well as 19 new LNG carriers and all but seven new drill ships commissioned globally. China, meanwhile, remained the largest shipbuilder with orders for 258 ships. The future for big build programmes at shipyards seems bright, with Andrzej Szadzinski, the commercial area director of North & South America for major European shipyard Remontowa SA in Gdansk, Poland, said: "Vessels supporting the offshore industry will stay in demand as long as oil prices remain above $70 a barrel, while highly specialised vessels made to order should continue to be in demand heading into the future." Mean while, South Korean shipbuilders' skill in constructing higher-value vessels helped them to win contracts worth almost four times those awarded to Chinese yards, Clarkson Research Services has said.

South Korea won $37.8 billion of orders in the first eight months of 2011, compared with $10.3 billion for China, Clarkson Research said in its latest World Shipyard Monitor. Shipowners are contracting this year for higher-value offshore, container and gas vessels, where South Korean yards have capabilities and expertise, according to the report. It cited a "significant worldwide reduction" in new contracts in 2011, particularly for dry-bulk ships and tankers, areas in which China specializes. "While Chinese yards are developing their capabilities, the lack of orders in their key sectors means that investment there is once more behind that in Korea," said Clarkson Research, a unit of the world's biggest shipbroker. China is still building more ships this year than South Korea, it showed.

Regulation of Vessel Discharges:

Regulatory burdens, those here and now coming, translate into a tale of many acronyms. By Matthew Valcourt (taken from our September 2011 MarineNews print edition).

Defining the Burden

The latest trend to further regulate vessel emissions and discharges will continue to give vessel owners and operators - already burdened with numerous regulations when plying international and inland waters - more sleepless nights. These include the Act to Prevent Pollution from Ships (APPS), the Clean Water Act (CWA), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and the Organotin Antifouling Paint Control Act (OAPCA), just to name a few. Plying international waters, a vessel may also be subject to several treaties, including the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), and the International Convention on Oil Pollution, Preparedness, Response and Cooperation (OPRC).

Just when you thought that all of the forgoing was quite enough, the EPA also inserted its regulatory tentacles into the mix. Public Law (P.L.) 110-299 (July 31, 2008) tasked the EPA to study vessel discharges and measure their effects on the environment. And now, the EPA now requires vessels to obtain permits to discharge certain materials and to give notice of intent to discharge.

A tale of many acronyms

This new area of regulation is burdened with endless acronyms, each of which a vessel owner must keep a weather eye on to assure compliance. After various studies, the EPA developed the National Pollution Discharge Elimination System (NPDES). The spine of the NPDES program is the Vessel General Permit, (VGP). In reality, the only thing the 2008 Vessel General Permit (VGP) regulates is discharges incidental to the normal operation of vessels operating in a capacity as a means of transportation. That's where it gets complicated. The VGP includes general effluent limits applicable to all discharges; general effluent limits applicable to 26 specific discharge streams; narrative water-quality based effluent limits; inspection, monitoring, record keeping, and reporting requirements; and additional requirements applicable to certain vessel types.

The VGP contains technology-based effluent limits for just about all vessel discharges except for black water. Blackwater is not covered because CWA § 502(6) leaves vessel sewage out of the definition of pollutant and CWA § 312 gives authority to regulate vessel sewage to the Coast Guard. The VGP specifies open ocean exchange as the standard requirement for ballast water management and provides for ballast water treatment only on an experimental basis. The VGP regulates ballast water management during coastal voyages and management of ballast tank sediments - and this is important - more stringently than current Coast Guard requirements.

Owners and/or operators of certain sized vessels must obtain a permit. Under the NPDES regulations, if a vessel is owned by one person but is operated by another, it is the operator's duty to obtain a permit (40 C.F.R. §122.21(b)). For the

purposes of the Vessel General Permit, (VGP) an "operator" is any "party . . . who (1) has operational control over vessel activities, including the ability to modify those activities; or (2) has day-to-day operational control of those activities that are necessary to ensure compliance with the permit or to direct workers to carry out activities required to comply with the permit."

Section 4.1.1 of EPA's Vessel General Permit (VGP) provides that at least once per week or once per "voyage," whichever is more frequent (but not more than once daily), permittees must conduct a visual inspection of safely accessible deck and cargo areas and all accessible areas where chemicals, oils, dry cargo or other materials are stored, mixed, and used, as well as verifying that monitoring, training, and inspections are logged according to VGP requirements. The routine visual inspections under this VGP section are intended to be measures of good marine practice that the prudent mariner is already employing to ensure vessel, crew, and environmental health and safety.

The next acronym is of course the Notice of Intent (NOI) or the electronic version, the eNOI. The Electronic Notice of Intent system allows notices to be sent to the EPA from the operator regarding intent to discharge, and also allows the NOI form to be created by one entity and be certified by the operator separately. The EPA requires at least 30 days to process a complete and accurate NOI submittal and allow coverage under the VGP for vessels, which have not previously been covered under the VGP. The EPA may require additional time and paper submission of NOIs can take approximately 60 days to process. The key lesson to be learned here is that if a vessel is planning to operate in areas covered by the CWA, advance planning is critical.

Interestingly, the NPDES vessels program does not regulate discharges from military vessels or recreational vessels. Instead, those vessel discharges are regulated by other EPA programs under section 312 of the Clean Water Act. Incidental discharges from the normal operation of vessels include, but are not limited to ballast water, bilge water, graywater (e.g., water from sinks, showers) and anti-foulant paints. These discharges may result in negative environmental impact via the addition of traditional pollutants or, in some cases, by contributing to the spread of Aquatic Invasive Species.

Exceptions to the Rule?: not so fast...

Through intensive lobbying, Congress allowed exceptions to the permitting requirement for recreational vessels, fishing vessels, and commercial vessels under 79-feet in length. President Obama signed Public Law (PL) 111-215 (Senate Bill S. 3372) into law on July 30, 2010. This law amends PL 110-299 (Senate Bill S. 3298), which generally imposes a moratorium during which time neither EPA nor states may require NPDES permits for discharges incidental to the normal operation of commercial fishing vessels of any size and other non-recreational vessels less than 79 feet. As a result, the VGP does not cover vessels less than 79 feet or commercial fishing vessels, unless they have ballast water discharges in excess of a certain amount. And, PL 111-215 extended the expiration date of the moratorium from July 31, 2010 to December 18, 2013.

Of real concern to brown water and/or inland operators, the EPA is now studying the effect of discharges from these types of vessels as it related to the marine environment for potential further regulation. Congress directed the EPA, in consultation with the U.S. Coast Guard and other interested federal agencies, to conduct a study of discharges incidental to the normal operation of all fishing vessels and non-recreational vessels less than 79 feet in length (study vessels). Among other things, the study's charge directed EPA to include an analysis of the extent to which the discharges are currently subject to regulation under federal law or a binding international obligation of the United States. The EPA estimates there are as many as 140,000 domestic vessels subject to the permitting moratorium. Clearly, any further regulation would have a deep impact on this sector of the maritime community.

The EPA has found that commercial fishing vessels and non-recreational vessels discharge a wide variety of effluents during their normal operation. The Agency decided to focus its evaluation on discharges from engines, bilges, fish holds, decks, and graywater activities because such discharges can release oils, heavy metals, toxic organics, oxygen-depleting substances, nutrients, and endocrine-disrupting compounds to ambient waters in quantities that may exceed National Recommended Water Quality Criteria (NRWQC).

Through a sampling program of discharges from commercial fishing vessels and other non-recreational vessels less than 79 feet in length, the EPA sought to provide information to achieve the first two objectives of the study. The study specifically evaluated the impacts of the (1.) discharge of effluent from properly functioning marine engines; (2.) discharge of laundry, shower, and galley sink wastes; and (3.) other discharges incidental to these vessels' normal operation. In addition, the EPA supplemented sample collection and analysis with the collection of information regarding the shipboard processes, equipment, materials, and operations that contribute to the discharges, as well as the discharge rates, duration, frequency, and location.

The Bottom Line: potentially less than 79 feet long...

Some vessel discharges from commercial fishing vessels and commercial vessels less than 79 feet in length have the potential to impact the aquatic environment and/or human health. The EPA found that the sampled discharges with the greatest potential to impact surface water quality included deck washdown, fish hold effluent, graywater, bilgewater, and marine engine effluent. Though these discharges may have the potential to impact surface water quality, particularly on a localized scale, a screening level model of a hypothetical large harbor by the EPA revealed that most of these discharges in and of themselves would not exceed levels set forth within the national water quality criteria in large water bodies.

While environmental groups are lobbying to end the moratorium and exception for vessels under 79 feet, the hard data does not appear to justify additional regulation for small vessel operators, unless they are operating in restricted, sensitive waters. That said, and given the trend toward more environmental regulation, Congress may well utilize the EPA's recent study to reach the small vessel and workboat force before long. All of that inevitably will lead to more paperwork and more crew fatigue. And, yes, more acronyms.

NOAA to Deliver More Charts, Faster:

Revolutionary Change in NOAA Nautical Chart Production Means More Products, Faster, for Maritime Use.

NOAA's development of a new navigational chart processing system, designed to meet the changing needs of the maritime community, moves into initial limited production on September 21. The new system, which slims down the current map production process while it beefs up performance, represents a technological leap forward in creating the navigational charts used to speed ships and products safety through the nation's maritime transportation system. "NOAA regularly updates over a thousand nautical charts, adding data and making corrections that are critical to a wide use of applications," explains Capt. John Lowell, director of the Office of Coast Survey. "To produce more navigation products, faster, we developed a single source production system that produces all NOAA chart products from one central database instead of the two production lines used since charting technologies first started changing in the mid-1990s."

With greater efficiencies and versatility, the system speeds chart updates to users; presents opportunities for private industry development of customized products; and improves data exchange capabilities for multiple maritime uses. For instance, the system will integrate with other information for ocean planning and other coastal uses. Notably, with the efficiencies gained from the new system, Coast Survey can produce more navigation products, with flexible access to more data, without a corresponding increase in budget or personnel.

In October 2004, the Office of Coast Survey began the production improvement project with Fairfax, Va.-based ManTech International Corporation, and ESRI, a leading provider of GIS technology based in Redlands, Calif. Their goal, coming to fruition now, was to develop an integrated production system for NOAA chart production. "Technological advancements are spurring a revolution in nautical charts, and navigators need flexibility and increased access to data that mariners from the last century could only dream about," Lowell said. "The system we developed with ManTech and ESRI provides the platform for a wide range of new applications for commercial mariners, recreational boaters and, indeed, for coastal planners along the nation's 95,000 miles of coastline."

While the new system moves into initial production this month, the transition of data covering all U.S. waters will take several years, progressing in sets of charts as geographically located in U.S. Coast Guard Districts. As the data is transitioned to the new system, chart users will see more congruity between paper charts that are now produced on one system and electronic charts produced on another. Under the new system, cartographers will enter the same data into a single system and the changes will be sped along to all associated products.

ECDIS: Asset or a Liability? The second article in the series brings LP News and the UK P&I Club onto home territory as it considers the operational aspects of ECDIS and the intrinsic function that electronic chart and navigation systems have to play in the commercially operated ship of the future. As Karl Lumbers, a Director of Thomas Miller P&I Ltd, Managers of the UK P&I Club, explains, the mandatory requirement and introduction of ECDIS is seen by the regulatory bodies guiding the shipping industry as a major step forward in safe ship operation and protection of the environment. However, Lumbers points out that the transition to electronic navigation and the operation of a paperless bridge is being viewed differently by a significant part of the shipping community, which sees it meaning increased operational costs of new equipment and additional training requirements. More worryingly, Lumbers points out: "It is also becoming increasingly evident that far from reducing risk, ineffective operation of complex ECDIS systems resulting from poor management practices or training can actually increase the risk of incidents such as collision and grounding with the interface between computers extenuating the so called 'human element' reported as causative in almost every marine casualty. "Automation of traditional manual navigational tasks has been observed as delaying the opportunity for error detection and recovery, allowing a navigational single point failure to develop undetected into a single point catastrophic failure, ultimately resulting in an incident."

Given these facts, Lumbers believes that it is important to highlight and publicise the importance of establishing sound and effective ECDIS practices: "Only by establishing such practices can an owner expect to reap the potential benefits of ECDIS, namely the reduction of both management costs and navigational risks."

The article then goes into much more detail than the first did. Section headings include: 'The modern ECDIS system', which describes the various types such as retrofits - basically standalone PCs - and ntegrated bridge systems (IBS) now commonly found on newbuilds. 'Electronic charts', which addresses the confusion that surrounds the various types of chart available and the differences between them.

'Generic training' and 'Type specific training', which looks at the issues surrounding effective training and what is required to meet the mandatory requirements. Meeting the type specific requirements is proving a logistical nightmare for those owners with different manufacturers' products on different ships but who want their crews to be interchangeable. Reference is made to changes in bridge management systems with some companies adopting an airline-style 'navigator/co-navigator' arrangement. 'Passage planning' reveals the need to adopt different procedures when using ECDIS.

Finally the article comes to: 'Risk Analysis' where the UK P&I Club notes that given the increased technology available to the modern navigator, one of the conundrums must be why increased computerisation and automation has not removed, and perhaps not even reduced the potential for failure. It adds that instead of making things safer, new pathways to failure seem to have developed, centered on an initial miscommunication between man and machinery resulting in a misalignment in the reality of where the navigator thinks he is and where the automated system has actually taken him.

Research has shown that humans are poor monitors of automated systems and tend to rely more on system alarms than manual checks especially in relation to those systems which have proven themselves as highly reliable. In several casualty investigations it has been determined that automation has resulted in the navigator developing an 'operational bias' relying on the automated systems rather than the salient cues provided visually through the bridge window. Lumbers concludes: "An extensive risk assessment of ECDIS operation combined with a clear requirement of manual system checks of critical automated operations must

be established within the company Safety Management System, effectively identifying operational risk and introducing control measures to reduce the effect of single point failures."

According to Lumbers, the main areas of risk when considering ECDIS operation can be identified under three main categories:

1. The equipment itself may suffer from failure (both hardware and software) including power outages, sensor input failure and potential virus infection.

2. The charts are operated under permit which may expire, charts in use not corrected up-to-date, updates not correctly applied, ENC chart coverage unavailable, requiring the system to be used in RCDS mode without the appropriate paper chart folio being available.

3. The operation of the ECDIS system onboard carried out by poorly trained crew following poor navigational practices and operational procedures such as excessive zooming or operating the chart for navigation with base information only displayed. Effective risk assessment as a critical function of implementation of electronic navigation is rarely emphasised when the transfer from paper to digital navigation is considered.

Legal Implications of Getting it Wrong

The third article in the series, released in June, is entitled 'Legal implications' and considers the legal effect of failure to meet the statutory ECDIS requirements and the effect on claims where levels of operation or knowledge of ECDIS are considered to be a factor or fundamental link in the chain of causation leading to an incident. Since it drills down into legal and insurance details, reproducing it here is not practical, especially since the article is itself quite concise despite running to over 2,400 words. However one all-important fact should be noted above all others, says Lumbers: "We believe that the use of ECDIS and the management of systems associated with ECDIS will come in for great scrutiny both by State Port Control and other regulatory bodies. Shipowners and their crews will not only have to do things right, they must be in a position to show that they are doing it right. Otherwise the threat of detention will never be far away.

"Furthermore, casualty investigators will have yet another source of information when seeking causes for incidents such as groundings or collisions and woe betide any poor owner who can't produce it."

Legal disputes are always likely to arise especially when large sums are involved. The principle aim of the commercially minded shipowner, charterer and cargo owner is of course to settle any disputes quickly and cheaply. If however a dispute cannot be resolved between the parties then the matter may be referred to arbitration or the courts for determination.

The Spy on the Bridge

In hearing disputes between two parties, arbitrators and judges rely upon the evidence presented to them to establish the facts of the case. This evidence traditionally presented by the parties in the form of both oral and written statements of witnesses and contemporary log entries and documentation has in thepast provided the basis on which to decisions have been made. This evidence sometimes requires the courts to determine conflicting statements on a particular issue in dispute. To establish the facts of the case in such situations, the judge or arbitrator has tended to rely heavily on contemporaneous evidence such as photographic, video or electronic information. In this respect, electronic equipment designed with a recording facility such as ECDIS, voyage data recorders, AIS data and even GPS have become a crucial part of legal proceedings often used to determine disputed facts. With literally hundreds of different types of electronic systems with recording facilities operating different generations of software, the recovery of this information can however be a difficult task in itself.

As this critical and at times complex procedure of electronic data recovery has been identified, it may be questioned why many ship managers, owners and operators have failed to provide clear instructions relating to the preservation of such data in the event of an incident. Critical information may be lost due to lack of knowledge in relation to the storage space or memory of the equipment in question or by the data being simply overwritten if action has not been taken for its preservation. With this in mind it seems sensible for the ship manager or owner to establish not only what electronic equipment installed on board each vessel has recording facilities, but also provide clear instructions to the master regarding the actions required to download the data and safeguard this critical evidence. Failure to preserve evidence may be viewed with suspicion and adverse inferences drawn. It is important to understand that ECDIS systems are capable of recording not only the log of events but the parameters of operation set up by the operator at the time of the incident. This electronic data may play a crucial part in the litigation process especially during the transition period from paper to electronic navigation where questions relating to the effective operation of ECDIS systems may be raised. This will mean that in the case of a collision for example where vector charts are selected and overlaid on radars having a primary collision avoidance designation, it may be possible for the officer charged with the navigation duties to reach information overload especially if layers in excess of chart base levels are selected. If this ineffective mode of ECDIS operation resulted in a target going undetected, ultimately resulting in a collision, the failure of the navigator to act in accordance with the Collision Regulations in this mode of operation may not only result in criminal charges and civil negligence actions, but may render the vessel unseaworthy with questions as to the exercise of due diligence on the part of those responsible for the management of the ship raised by cargo interests or insurers.

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