



To promote, develop and support in the spirit of cooperation, the common interests of its members in all matters concerning the development and quality of maritime education and training.

# NEWSLETTER

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## TRAIN, TRAIN, RETRAIN, RETAIN!



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# Editorial

These pictures feature ship design and technology of the 21st century and of a quarter of a millennium ago, as well as modern port technology. This newsletter mentions several 21st century items - air-lubrication, ECA's, KPI's, EEDI's as drivers, LNG engines, innovative echo tankers – as it should.

We, the MET providers, should ask 'what are the implications for MET of the enormous change depicted and which is continuing at an increasing rate?'. On the sailing ship of a quarter of a millennium ago safety at sea demanded practical seamanship in it's truest sense, a profound feeling for the sea in all its moods and the competence essential to ensuring survival. While the technology in use at the time – eg magnetic compass, sextant, telescope, capstans, blocks and tackles, marlin spikes – was fundamentally important, awareness of the natural environment and exercise of the 'ordinary practices of seamen' was critical.

With 21st century technology situational awareness continues to be critical, but increasingly it is perceived through glass or an electronic screen. The navigation watch on the three modern ships pictured will be kept in the highly protected environment of the fully enclosed bridge packed with electronic instruments. The open bridge wings on the small chemical tanker are likely to be little used. The crew of the large container vessel in port will have little awareness of the cargo being handled. The shore-side operations will be largely in the hands of modern slaves – computers! - programmed to complete cargo operations as quickly as possible. And more so in future.

The task is increasingly operation of a highly automated vehicle, designed equipped and programmed to operate as efficiently as possible. Cargo is to be delivered 'just in time'. The passenger ship to keep her ETA as her schedule requires her to be turned around in a few hours, often with a complete change in the 'guests' being carried. The berth must be vacated as quickly as possible, other vessels are waiting and use of the expensive handling equipment must be optimised.

There is little that is 'human' about a modern port. Container terminals are huge, so that huge ships look relatively small. The equipment is also huge and expensive. Thousands of containers are being handled per hour, yet few people are to be seen. Tankers are often berthed at the end of long jetties, or at off-shore terminals. Security is very tight and it can be difficult for crew members to go ashore for a break from the claustrophobic, industrial atmosphere on board. It can be

difficult to communicate with loved ones – a very high price to pay and one that reflects why many leave seafaring.

Achieving agreement on the Manila Amendments to STCW in 2010 was a step into the future by the global industry, including the regulators, particularly the greater focus on the human element in ship operations. Fundamentally though, it was not a large enough step. The provision of MET, even if it accords with STCW 2010, often falls far short of the needs of the modern industry. Apart from many courses being delivered in a highly traditional manner reflecting past industry requirements and teacher-student relationships, there is inadequate focus on modern developments, such as those mentioned above. The gap between the MET delivered and needed to ensure competence in the industry continues to widen.

A fundamental objective of MET is preparation of seafarers to cope with the many aspects of ship operations. The crew - the vehicle managers, operators and support staff - are responsible for the efficient operation of an investment, which when the vessel is laden, could total in excess of USD 1 billion. There may be several thousand people on board. The management of such a valuable investment on an industrial estate would be thoroughly prepared and very carefully selected. A ship does not have the security of plant on an industrial estate. It is a large vehicle that can cross the globe, often in very demanding natural circumstances. If an accident occurs, especially if there is pollution, the total cost could be in billions of USD. Responsibility is very heavy.

Yet much MET is in a mess. There are many small providers unable to deliver what is needed. Trainers often lecture, are not student centred and are stuck in obsolete methodologies. Training berths on ships are insufficient. Trainees may not be able to obtain the sea service required and if they do the training received while on board is often substandard. The certificate of competency they are required to have may not have been obtained through effective assessment and, even if it was, there is a lot more to learn if the holder is to be competent in the true sense of the word.

Recognising this, GlobalMET will continue to advocate for a review of the existing MET situation and for improvements in its delivery.

*Rod Short*  
Executive Secretary



## Japan: Air-lubrication System on Two Module Carriers Reduces CO<sub>2</sub> Emissions by 6 Pct



**N**ippon Yusen Kaisha and two NYK Group companies, the Monohakobi Technology Institute (MTI) and NYK-Hinode Line Ltd., have completed two years of experiments on the air-lubrication systems installed on two of the group's module carriers, Yamato and Yamatai, and resultantly confirmed an average 6 percent reduction in CO<sub>2</sub> emissions during actual sea passage.

The air-lubrication system effectively reduces the frictional resistance between a vessel's bottom and the seawater by means of bubbles generated by supplying air to the vessel's bottom. In fact, this was the world's first permanent installation of a system using an air-blower. The system was installed on the two vessels when they were built, and the experiments were conducted during actual sea passage. This project has been subsidized through Japan's Ministry of Land, Infrastructure, Transport and Tourism's "Support for Technology Development from Marine Vessels for Curtailing CO<sub>2</sub>" project from fiscal 2009, and has also been supported by the ship classification society Nippon KaijiKyokai (ClassNK).

The experiments were designed to verify fuel reduction, examine the behavior of the air bubbles supplied to the vessel bottom under various operational and sea conditions, confirm the relationship between the amount of air supplied and its effect, and validate CO<sub>2</sub> reduction.

After reviewing the data obtained by the two vessels for two years under various weather and sea conditions,



the optimal control mode of how the bubbles behave in actual sea conditions was confirmed. Compared to the 10 percent reduction measured during sea trials, the reduction of CO<sub>2</sub> emissions was confirmed to average 6 percent under various weather and sea conditions. This project was done as a challenge toward the world's first permanent installation of such a system, and we are proud to have confirmed such meaningful energy savings during actual sea voyages.

The project has been completed, but NYK, MTI, and NYK-Hinode Line will continue to conduct performance analyses on actual vessels and device reviews during dry docks to achieve optimal operation. At the same time, the NYK Group will strive to install the system on other types of vessels for greater energy-saving operations.

The NYK Group will continue to encourage initiatives that address climate change.

July 16<sup>th</sup>, 2012

"The key that opens all doors ... Trust."



## Videotel and BIMCO Extend Joint E-learning Initiative Oceanwide



Officer VOD

**Videotel Marine International and BIMCO are delighted to announce the extension of its ground-breaking venture offering the BIMCO eLearning Diploma Programme (BeDP) throughout the entire Videotel on Demand (VOD) fleet. This new facility allows ship officers on board to study the same BeDP modules as their shore based colleagues, whatever their on board duties and sailing schedules.**

*"Since linking up with BIMCO the BeDP has proven extremely popular", says Nigel Cleave, CEO of Videotel. "The programme enables students to build on their knowledge, acquire professional competencies and contribute to their continuous professional development. Now, with VOD on over 10,000 vessels worldwide, we can extend this opportunity to maritime students wanting to study in a flexible and user friendly way whilst serving on board a vessel."*

The BIMCO eLearning Diploma Programme, delivered as a stand-alone course on board, is a highly-focused, e-learning package enabling maritime students the world over to access training encapsulating the more commercial aspects of the shipping industry. TorbenSkaanild, BIMCO Secretary General, says:

*"The creation of a unified training system for both seagoing and shore based personal is immensely important in creating a common understanding of the commercial and practical issues facing the maritime industry and for preparing and planning the training of ships officers, eventually continuing their careers in shore-based functions"*

The first two modules are already available, with more modules to be added later in the year.

**BeDP Module 1:** Introduction to Shipping – an entry level introduction to the shipping industry, not only explaining how it works, but also showing how it is interdependent with international trade.

**BeDP Module 2:** Bills of Lading – dealing with the commercial legal issues surrounding Bills of Lading and enabling students to make sound commercial decisions without being exposed to liability or litigation.

Videotel's VOD system is a unique training delivery platform for seafarers, carrying over 400 Computer-Based Training (CBT) in interactives, videos and courses.

In addition to ship's officers wanting to broaden their knowledge, the diploma course is aimed at students and young people entering a trainee or internship programme; staff from shipping companies, agents, brokers, banks and other financial institutions; legal firms; and insurance companies or government organisations wishing to learn more about the shipping industry. The BeDP also benefits shipping practitioners wishing to refresh and revise their shipping knowledge. It is backed-up by online forums and workshops, also providing networking opportunities for young shipping professionals.

**IT and Communications,  
Maritime Education and Training, News —  
July 3, 2012**



World Maritime News 20 July

## UAE: More Donations for Seafarers Support Vessel 'Flying Angel'



**The Flying Angel, the first purpose built seafarers support vessel in the world, is gaining more prominence as donations keep coming in from various companies that recognize its importance.**

One of the companies that recognized the potential of the Flying Angel is Smit Lamnalco, provider of safe and efficient towage and associated marine services to the oil and gas terminal industry. Namely, the company assigned a donation worth USD 50,000 for this and the upcoming year respectively, intended for the upkeep of the vessel, gCaptain news site writes.

While commenting on the donation, **Andrew Brown, Smit Lamnalco Group Business Development Manager** referred to the difficulties of seafarers' life at sea by saying:

*"We are only too happy to help offer them the things that we take for granted. These can help change their lives at sea. Virtually all imports into the United Arab Emirates come by sea so there is a clear need to support the seafarers who are responsible for bringing these in."*

The idea behind the Flying Angel's mission to the Fujairah Anchorage, where around 3,000 seafarers are at

anchorage off the east coast of the United Arab Emirates, is to provide seafarers with a refuge from the everyday life, many nautical miles away from home, offering them a wide range of services.

Since her first deployment in 2007, on average 75 seafarers a day embarked on the Flying Angel. Once on board they can call home, send an email, look at pictures of family and friends on the internet, or talk to a welfare officer. It is said, that over 80,000 seafarers benefitted from her operations.

Being aware of the fact that long periods at sea, contribute to a sense of isolation of seafarers, the Flying Angel enables them to have a taste of home, relax and flee from their ordinary routine.

Speaking on behalf of the Angel Appeal, Theresa Dommett expressed her gratitude to Smit Lamnalco's support, adding that it will be more than welcome in ensuring the vessel's continuation of operations which are taking place due to the generosity of the sponsors. The Flying Angel costs approximately USD 1,000 a day to run.

"A man who doesn't trust himself can never really trust anyone else."



## Effective Enforcement of MARPOL Annex VI

### Impacts on Stake Holders Technical Challenges and Proposed Solutions

By

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#### Abstract

There is a fervent on-going debate between ship owners and relevant stakeholders about the upcoming low sulphur standards coming in effect from 01 January 2015 in ECAs. Many ship owners will have considerable financial constraints to address the new sulphur standards as they will have to invest in new technologies or turn towards the more expensive fuels with lower sulphur. Even though there are several proposed alternate solutions, such as LNG as fuel, SCR & Scrubbers for marine oil fuels, emulsified fuels and bio-fuels etc; however presently the true option is Marine Fuel Oil (MFO) and solutions relevant to it in order to comply with MARPOL Annex VI. This is especially so for ship owners having old tonnage and financial constraints.

Besides the many debates focussing on the economical impact on stakeholders, the **real Positive Impact** of enforcement of MARPOL Annex VI will be on human health, the worsening condition of oceans and its inhabitants and the perpetual cycle of ozone depletion phenomena and global warming contributed by maritime operations.

Just to take a notice on significant damage, the finding of research conducted by the Danish Centre of Energy, Environment and Health (CEEH) states that air pollutant emissions in the year 2000 alone caused around 50,000 premature deaths in Europe, and was responsible for health damages of around € 22 billion. These numbers are often not stated prominently and really need to be boldly pushed forward so that everyone understands the urgent need for enforcement of the MARPOL Annex VI regulations.

It is well known that the maritime industry transports 90% of all goods worldwide and it is the most cost effective mode, regardless of business sector. Thus any major transformation of the maritime industry would cause a ripple effect, from the ship-owners all the way to the companies that manufacture those goods, supporting industry and finally the end users.

The following key issues have to be addressed with full intent:

- ◆ **Scrubbers** – Is there an infrastructure in place to handle the wastes produced? Will ports be regulated to handle the sludge or will it be an extra charged-for service?
- ◆ How will the increase in demand affect the price of **MFO/MGO**? Are European producers able to supply enough by 2015, or will they be forced to import at extra cost?
- ◆ **LNG** – Where are infrastructures developed and how will that affect trade routes? How will the industry assess the real costs once demand rises?
- ◆ How are the current **Sulphur and future Carbon Disputes** to be resolved, and what parties are to be involved? What are the consequences if discrepancies arise with 0.1% standards?

MARPOL Annex VI has to address the critical insight into all the possibilities for ship owners to meet IMO sulphur requirements in 2015. A close co-operation system for sharing the technical information to be formulated by the stake holders, whose vessels are frequently plying in ECA and who have already turned to LNG as fuel or exhaust gas cleaning systems with their impending results. The LNG infrastructure development around



ECA and other regions would be helpful for luring the ship owners to switch over to such an alternative fuel at the earliest opportunity in their new-building plans.

Most importantly, experts from industry, oil and gas producers, academic gurus, researchers, and bunker suppliers will analyze the future outlook of the heavy fuel oil, marine gas oil, and LNG market. They will monitor the demand

and supply reactions to the regulations, and the consequently affected prices these will bear on ship owners' finances and their freight rates.

#### Enforcement of MARPOL Annex VI and the USA Perspective

In light of a new enforcement memorandum of understanding (MOU) between EPA and the U S Coast Guard (USCG), owners and operators of U.S. flagged and non-U.S. flagged ocean-going vessels operating in U.S. waters should review their compliance status under international air pollution requirements to which the U.S. is a party. The MOU outlines a cooperative approach to ensure that each agency operates according to a single set of protocols in areas such as inspections and sharing of information regarding enforcement of Annex VI air pollution regulations issued by the International Convention for the Prevention of Pollution from Ships (MARPOL).

The MOU attempts to harmonize the federal approach to onboard inspections under Annex VI, which are largely the responsibility of the USCG.

However, EPA bears significant responsibilities regarding multiple Annex VI provisions. Accordingly, the MOU explicitly states that the USCG may request that EPA attend or assist on any ship inspection, examination, or investigation relevant to Annex VI. Moreover, EPA may request that it be allowed to attend or assist the USCG on any ship inspection, examination, or investigation.

In other words, managers of vessels may find that compliance inspections may be more thorough than in the past. Compliance strategies may need to be adjusted accordingly.

Annex VI took effect on January 8 2009, and requires that vessels of a certain tonnage (mainly 400 gross tons or more) operating within 200 miles of the United States meet minimum requirements to control emissions of nitrogen oxide (NOx) and sulphur oxide (SOx). The first tier of NOx limits applies to any diesel engine with a power output of more than 130 kilowatts (kW), which is either installed on a ship constructed on or after January 1 2000, or which underwent a major conversion on or after January 1 2000. Two progressively more stringent tiers of limits apply to engines built or converted on or after January 1 2011, and January 1 2016.

The Annex VI sulphur standards limit the percentage of sulphur in marine fuel. The standards are also progressively more stringent, with three "global" limits taking effect before January 1 2012; on and after January 1 2012; and on and after January 2 2020. Moreover, within 200 nautical miles of the U.S., called the emission control area (ECA), progressively more stringent fuel sulphur requirements apply before July 1 2010; on and after July 1 2010; and on and after January 1 2015.

Vessel operators must also obtain an Engine International Air Pollution Prevention Certificate (EIAPP) from EPA, which documents that the engine meets Annex VI NOx standards. Certain vessels are also required to have an International Air Pollution Prevention (IAPP) certificate, which is issued by the USCG following an initial survey. The EIAPP certificate must



be kept onboard along with other information and records, including engine specifications for compliance with the NOx limits, a record of adjustments made to engine components and settings, and notes on bunker fuel delivery and representative fuel samples.

Under the MOU, EPA will develop protocols for inspection of engines installed on ships, review of and retention of documents, and other matters specifically within its expertise provided for in the Act to Prevent Pollution from Ships (APPS, the U.S. statute that implements Annex VI). The MOU also indicates that the USCG has the primary responsibility for creating procedures and guidelines for adapting appropriate EPA protocols in the USCG's established ship and facility examination and investigation programs.

The MOU emphasizes that either party "may" refer a suspected violation to the other if that violation falls outside of the expertise of the party that discovers it. The USCG's expertise covers IAPP certificates, certificates of adequacy, and the VOC management plan. EPA's expertise covers EIAPP certificates, NOx technical code, bunker delivery notes, fuel samples, fuel oil availability and quality, and reception facilities for ozone-depleting substances.

One of the main intents of the MOU is to encourage the prompt referral of a violation between the agencies, specifically within 5 days of the initial report or detection. Instructions on which agency will shoulder the enforcement process (eg preparation and delivery of the notice of violation) are also included.

Persons found to have violated Annex VI, APPS, or any implementing regulation may be liable for a civil penalty up to \$25,000 for each violation, and each day of a continuing violation may constitute a separate offense. APPS also provides for criminal liability for knowing violations of MARPOL.

Enforcement MOUs are a common device to attempt to get federal agencies to work in harmony, but the language in MOUs typically does not require absolute cooperation in all areas.

For example, while the EPA/USCG MOU appears to require that information be shared between the parties, there is no requirement that either party refer a suspected violation to the other.

However, regardless of the discretionary provisions in some areas of the MOU, vessel owners and operators are advised to regard the agreement as a signal that the rigor of inspections will probably not decrease and may very well increase.

## Role of EMSA

The Agency is closely involved in the work air pollution work within the Community. This work such as the cooperation with Member States in the form of workshops, participation in the inter-service work within the Commission as well as providing regular technical opinions to the Commission when requested. EMSA provided an overview regarding the enforcement of Directive 1999/32/EC on marine including reports on the fuel sampling of marine fuel bunker that Member States shall undertake under the Directive and in relation to the current revision of this Directive and studies related to the quality of fuel bunkered by ships.

In order to foster the development of alternatives fuels, and to contribute positively to the discussion on the impact of the 0.1% sulphur content in marine fuels to be used in SECA from 2015, EMSA co-organised two workshops with the main industry stakeholders to identify best practises and bottlenecks in the development of the LNG propelled ships.

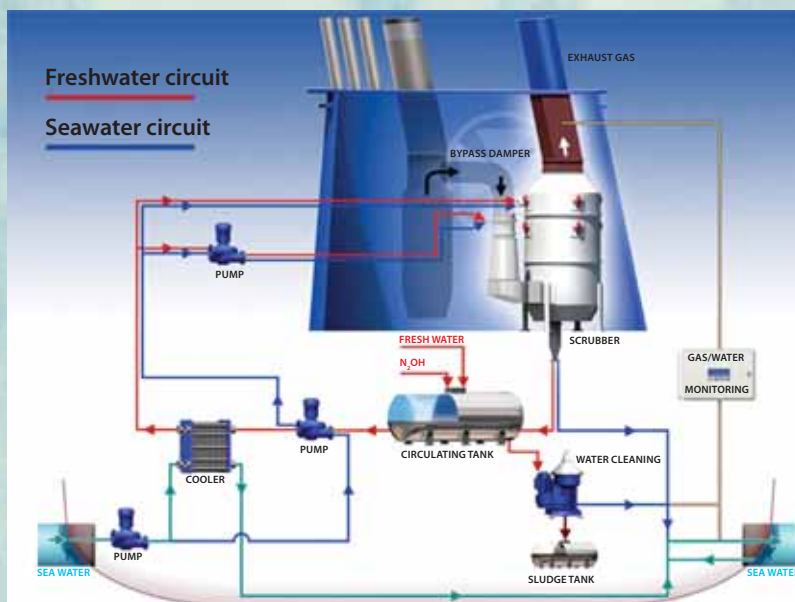
EMSA was closely involved in preparing the Commission decision on an equivalency methodology to allow LNG tankers to burn boil off gas when at berth instead of using 0.1% sulphur fuel. The Commission decision was taken in December 2010.

EMSA has also provided a technical report analysing the studies made on the implication by new sulphur requirements, 0.1% in SECA by 1 January 2015, that will have implication for the traffic within the SECA-areas and in addition listing the alternatives to reach the limits introduced by the 2008 MARPOL amendments was issued in 2010. The report was presented in early January 2011 at the EU Maritime Directors Meeting.

## Conclusion

The coming years will be interesting and challenging for each of the stakeholders in maritime industry. The full enforcement of IMO MARPOL Annex VI globally will have impact on all stakeholders according to their role and type of interest in the industry. The stakeholders are in general human beings, ocean inhabitants, shipping companies, ship owners, floating marine facility operators, coastal inhabitants, fishermen, technological innovators, flag state and port state control administrations and many more.

The maritime and offshore industry experts, academicians, researchers, training institutes and regulatory authorities have to play a leading role and convince each stakeholder that it is the responsibility of everyone to contribute towards environmentally excellent shipping in order to save our oceans and save our planet.



A typical Aalborg Exhaust Gas Scrubber System







## Marine Technology

## A Voyage of Discovery

**New technology can make ships more versatile, more efficient and cleaner, too**

In the days when Norsemen pillaged their way around the monasteries and villages of Europe, Norwegian shipwrights were at the forefront of naval architecture. They still are. Norway is an important centre of marine innovation and several foreign companies have operations there, too. One such is the marine division of Rolls-Royce, a British firm, which is collaborating with Farstad, a shipping company based in Alesund, and STX OSV, a shipbuilder. The result of their efforts is *Far Solitaire* (pictured above), the first of a new class of vessels which bristle with novel technology that promises to make shipping safer, cleaner and cheaper.

*Far Solitaire* has been designed as a platform-supply ship for the North Sea's oil and gas industry. This means she is not a large vessel. She is 91 metres long (one-third of the length of a typical container ship), has a deadweight of 5,700 tonnes and cost about \$70m. But some of the innovations she uses should be applicable to vessels of all sizes.

At the moment she is being fitted out by STX OSV at its Langsten shipyard on Tomrefjord. In October she will be delivered to Farstad, who will use her to supply rigs in the region's notoriously heavy seas. Crucially, she has to be able to hold her position while transferring cargoes that include various noxious materials which are employed in drilling or pumped into wells to improve the process of extraction. These have to be delivered to and removed from the platforms. Such transfers are potentially hazardous for the people involved and for the environment.

One of *Far Solitaire's* most important innovations is her wave-piercing hull. Below the waterline her bow has the bulbous drag-reducing nose that has become a familiar feature of modern ships. Above it, however, things are all new. Where a standard ship's bow would have a flat foredeck, *Far Solitaire's* flows up and over the vessel. This

means that instead of riding the waves, as most ships do, she can penetrate them.

That is a crucial change. When a ship rides the waves her engines slow down and then surge as her hull rises and falls. By piercing the swell, *Far Solitaire* will be able to maintain her engines at a constant speed. This will cut fuel consumption, reduce wear and tear, and make life for the crew safer and more comfortable.

### Future Shipshape

*Far Solitaire* is powered by a conventional diesel-electric system consisting of three engines connected to generators that run electric motors. The thrusters which those electric motors drive, however, are anything but conventional.

The main pair are stern-mounted Azipull propellers. These are similar to the azimuth thrusters already used on some vessels: propellers on pods that can be rotated to push the ship in different directions, making a rudder unnecessary. But the Rolls-Royce Azipull has the propeller at the front of the pod rather than the back. That means the propeller operates in a smoother flow of water, which improves efficiency and assists steering. This design has been made possible using computational fluid dynamics to perfect the shapes of the blades and pods.

Further control is provided by two bow thrusters. These are propellers mounted in transverse tunnels in the hull, to help position the craft and hold her stable while alongside a rig. And there is also an azimuth thruster that can be swung down from the forward part of the hull if an extra push is required.

All of these propulsion systems are handled by moving one of the joysticks next to the captain's chair in a bridge with a 360° view that looks more suitable for the starship *Enterprise* than what is, after all, a souped-up



freighter. The consequences of moving the joystick can, fortunately, be practised on shore without risk to ship or platform, courtesy of a new 360° bridge simulator in Rolls-Royce's marine-training centre in Alesund. The captain can also call on the assistance of an electronic positioning system that uses a combination of data from satellites, gyrocompasses, and wind and motion sensors to operate the thrusters automatically.

Solid freight is carried on a deck that has an area of 1,020 square metres. Liquids, meanwhile, are stored below deck in tanks, each of which is fitted with its own pumping system, in order to avoid the risk of mixing substances best kept separate.

BorgeNakken, who is in charge of technology and development at Farstad, expects *Far Solitaire* to use about 40% less fuel than a conventional vessel of the same size that is carrying out similar tasks. This is a remarkable

saving, and although she is a small, specialist vessel, many of her features, particularly the new bow and the more efficient system of propellers, could help reduce fuel consumption and emission levels in larger ships as well.

Stricter regulations on ships' emissions are on their way—including, in particular, new controls for vessels in the North Sea and the Baltic, and off the coast of North America. That means shipowners who wish to ply these waters will have to stop using bunker fuel (the cheap stuff left over once petrol, diesel and aviation fuel have been distilled from crude oil) to power their vessels because burning it produces too much sulphur dioxide, nitrogen oxides and soot. That gives extra impetus for technology of the sort being tested in *Far Solitaire*. And this time no villages will have to be pillaged to pay for it.

July 14<sup>th</sup> 2012 | ALESUND |  
from the print edition of *The Economist*

## Watchkeeper: Where Practice Makes Perfect

**“O**ne can learn early on a simulator, but this will never replace experience at sea, alone, or in a team, confronting an unstable environment where a lot of additional problems arise”. The value of simulator training in a maritime context is indisputable, but these remarks by Captain Hubert Ardillon, in a thoughtful paper presented to the Confederation of European Ship Masters' Associations AGM in Rostock, certainly helped to put this important training aid in its proper context.

Representing the French shipmasters association AFCAN, Captain Ardillon gave a balanced assessment of simulator training, noting its enormous advantages in presenting to students extreme situations, particularly in the interpretation of Colregs, in absolute safety. He believes that such training is absolutely necessary, not least because it enables bad habits to be identified and corrected. There are so many huge advantages from the use of the best simulators on the market today.

But he also has doubts about the wisdom of using simulators to replace sea time, pointing out that even with the very best simulators offering astonishing realism, it is still a “game” and the untoward collision or “hard landing” can be laughed off in a way that is certainly not the case when translated to the real world. He also suggests that simulation should be improved to reflect the realities of ship operation today by replicating the effects of fatigue, endless interruption through communications, with telephones ringing and e-mails intruding into the officer's powers of concentration and other “human element” complexities. He expresses concern at some of these deficiencies and suggests that simulator

training needs to better reflect human factors and eliminate the subconscious feeling that the trainee is doing no more than “playing a video game”.

It is interesting to note that Captain Ardillon's views tend to coincide with the opinions of many senior officers and operational ship managers today, who are increasingly voicing concern about the “telescoping” of actual sea experience as part of the qualifying time for statutory certificates. There are also a growing number of experienced officers worrying about the time officers in training spend in college as opposed to that time spent actually doing the job at sea.

This opinion tends to be reinforced by the arrival aboard ship of newly qualified officers whose actual sea experience is extremely limited even though their paper qualifications appear perfect. There is perhaps no real appetite for a return to the “old days” where virtually all qualifying time was spent at sea prior to short periods “cramming” for certificates, but more a concern that the balance between sea time and college time has become skewed in favour of the latter.

There is also a growing concern that the syllabus for both deck and engineering qualifications is becoming overcrowded and that it needs to be refined to reflect the realities of 21<sup>st</sup> century ship operation. Some also suggest that it needs to take more notice of the technology available today in terms of distance learning. It is also interesting that this call for more practice is reflected in other professions, which have become, in the views of some professionals, rather too “academic”.

**Articles written by the Watchkeeper and other outside contributors do not necessarily reflect the views or policy of BIMCO.**

Bimco.org  
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## ICS: Shipping's Environmental Impact is Well Regulated by IMO, and Unclos should be Left Alone



**T**here is no shortfall in governance so far as the international regulation of shipping is concerned, which responsibly utilises the excellent facility that the sea provides for international transport – about 90% of world trade is carried by sea. This is the view of the International Chamber of Shipping (ICS) whose Secretary General, Peter Hinchliffe, took part in a major debate about oceans governance in New York on 13 July.

The ICS Secretary General was addressing an international academic conference on “Developing a New International Architecture for Maritime Policy” organised by the Dräger Foundation and the Earth Institute at Columbia University. He praised the virtues of the comprehensive regulatory framework developed by the International Maritime Organization (IMO) within the umbrella for oceans governance provided by the United Nations Convention on the Law of the Sea (UNCLOS).

ICS reported that the number of significant oil spills had decreased from about 23 per year in the 1970s to just three per year during the past 10 years, while the volume of maritime trade had more than tripled during the same period.

“In part this is because IMO environmental regulations are genuinely implemented and enforced on a global basis through a combination of flag state and port state control” said Mr Hinchliffe.

IMO has also developed binding rules to address damage to local ecosystems potentially caused by ship’s ballast water, as well as mandatory international rules to reduce sulphur and CO<sub>2</sub> emissions.

He explained that shipping is a global industry requiring a global regulatory framework, not a patchwork of national rules which would bring about chaos, inefficiency and have a negative impact on the smooth flow of world trade, as well as being detrimental to the protection of the oceans.

Speaking just before the New York event, Mr Hinchliffe remarked that because of the delicate balance of rights and responsibilities that exists between flag states, port

states and coastal states, the shipping industry is very reluctant to support a fundamental revision of UNCLOS – as has been proposed by sections of the European Commission and some environmentalist NGOs.

Apart from enshrining the principle of global maritime rules, which are vital to the industry, UNCLOS also establishes the right of all nations to freedom of navigation on the high seas and the right of innocent passage in territorial waters. It also deals with delicate issues such as the rights of all ships to use international straits which are of great strategic importance.

However, because UNCLOS addresses a number of other sensitive issues, not just affecting shipping, ICS believes it is very unlikely that governments would be willing to reopen what is a delicately balanced package.

“Shipping has a hundred years’ experience of international governance of its activities, and we would question any suggestion that UNCLOS is no longer fit for purpose, at least so far as the regulation of shipping is concerned,” he said.

Mr Hinchliffe suggested that if there were concerns about other areas of oceans governance, lessons could be learned by other sectors from the shipping industry’s global regulator, IMO, whose successful MARPOL Convention is enforced and implemented by 150 Flag States covering 99% of the world fleet.

He pointed out: “Unlike many other activities involving the oceans, shipping is probably unique in having a specialist UN agency to regulate our activities - the International Maritime Organization. We have experience of many intergovernmental organisations that impact on our industry. But through ICS’s participation at every IMO Committee meeting, we know that IMO is actually a model of efficiency, made up of experts from virtually every government in the world, who develop and adopt very complex regulations directly relevant to the protection of the marine environment.”

**Friday, July 13, 2012**



## Maersk: Vessel KPIs Save USD 90 Million on Energy



In three years Maersk Line has saved almost USD 90 million in energy costs by measuring the performance of individual vessels thus raising awareness on consumption.

Other business units follow suit.

In Maersk KPIs, Key Performance Indicators, have for years been a way of measuring how well one did in the past year. Since 2009 however, KPIs have also made their way on to the vessels in a mission to boost performance.

The vessel KPIs have evolved in a close dialogue between the vessels, Maersk Line Vessel Management and Maersk Maritime Technology, which is in charge of the Maersk Ship Performance System (MSPS).

In 2012 the overall scorecard consists of four parameters: Energy, safety, daily running costs and cooperation (best practice sharing). For the time being a dollar sign on concrete savings has been applied to the energy KPI only.

Following the first three years and a dedicated implementation by the crew and fleet groups, impressive savings can be traced: For example 160,000 tons of fuel has been saved as a result of higher propulsion efficiency. And in total, savings of USD 90 million have been made. These do not include savings from other energy initiatives such as trim optimisation or basic load reduction.

If you can't measure it, you can't control it Measuring has been a lead word all the way, AnupRajan, Performance Manager in Maersk Line Vessel Management explains:

"If you can't measure something, you can't control it. If you can't control it, you can't improve it. It is essential to realize that the scorecards are only a valuable tool if they help facilitate decision making amongst stakeholders," he says.

After seeing these positive results of the KPI process on Maersk Line's own fleet, more than 150 vessels were upgraded with MSPS in the second half of 2011:

"We're confident that although we are introducing rather new standards in the industry, we will be able to drive similar performance improvements in the chartered fleet," says Flemming Bo Larsen, who is in charge of the "Energy Efficiency Optimization Drive" in Maersk Line.

Since 1 January the largest owners of chartered vessels have received scorecards and benchmark on energy. Each of the KPIs will be rated on a monthly basis and merged into an overall KPI score for each charter owner. More owners will be added on an ongoing basis.

As described below other business units are right now following suit in measuring vessel performance.

### Vessel KPI in Maersk Supply Service

The motivation for Maersk Supply Service is more of an environmental nature. Although the fuel bill does usually not rest on Maersk Supply Service's shoulders, there is enough reason to save fuel: Firstly to meet the ambitious environmental targets and secondly to reduce maintenance cost on the engines. Currently approximately 70 vessels are reporting data through MSPS.

### Vessel KPI in Maersk Tankers

Maersk Tankers has KPIs up and running on its entire owned fleet and is planning a roll-out to the chartered vessels as well. Energy, safety and financials are also in the focus.

**Source: Maersk Line**  
<http://www.micportal.com>  
**17 July**





## Shipping 2020 – DNV's Predictions

**N**ewbuildings in 2020 will emit up to 30% less CO<sub>2</sub> than today's ships - EEDI will be a driver for two-thirds of this reduction.

1,000 newbuildings will be delivered with LNG engines towards 2020 -assumes an LNG price that is 30% lower than that of HFO. This represents 10-15% of the expected newbuildings (tankers, bulk carriers, containerships, offshore supply vessels).

About 30% of sailing time in ECAs can justify an LNG-fuelled engine.

Distillate fuel is the most likely choice to meet ECA emission requirements - scrubbers not a significant option before 2020.

2020, the demand for marine distillates will be 200-250 mill tonnes.

**Tanker Operator June/July**



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