BIMCO

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BIMCO Education Summer update

Ballast water management issues: the current state of play

How to choose the correct scrubber

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Ship to ship exchange in the Caland Canal, Rotterdam. (Photo: portpictures.nl*)*

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BIMCO Education Summer update

Full steam ahead on the BIMCO Education front, with SUPPLYTIME seminar held in Hamburg along with the popular BIMCO Summer Shipping Schools in Shanghai and Copenhagen.

Using SUPPLYTIME. Paul Dean and Robert Gay conducting one of the two case studies.

Using SUPPLYTIME, Hamburg 22-23 May

The 2005 edition of SUPPLYTIME continues to be one of the best-selling BIMCO standard documents. Used for a wide variety of offshore-related tasks, BIMCO Education often sees this reflected in the list of participants at the SUPPLYTIME seminars.

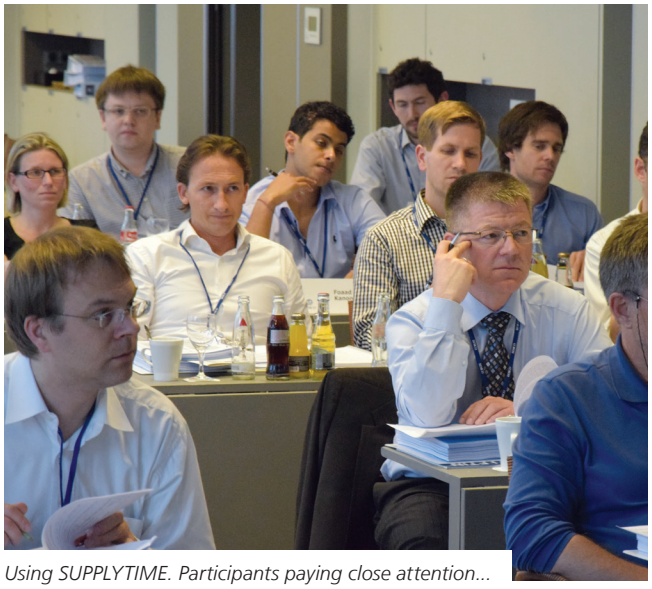
Here, we see a wide range of firms, not necessarily directly involved in the offshore support vessel sector (OSV), but from across the industry of heavylift, project and offshore wind farms. The SUPLYTIME Seminar in Hamburg was no exception, with 35 participants from Denmark, Germany, The Netherlands, Nigeria, Norway, Russia and Saudi Arabia.

Using SUPPLYTIME. Ian Perrott, ER Offshore, Hamburg, speaking on "Practical Issues".

Light-touch revision for greater clarity

BIMCO's Documentary Committee has earmarked SUPPLYTIME 2005 for revision. The revision is likely to be in the form of a "light-touch", focusing on incorporating the latest versions of BIMCO standard clauses such as Dispute Resolution and CONWARTIME. However, attention will also be paid to some of the clauses in SUPPLYTIME from which provisions in the WINDTIME charter party were derived.

The object of the revision will be to improve the clarity of SUPPLYTIME and bring it up to date with commercial practice and legal developments without upsetting the balance and appeal that the form currently enjoys. Work is due to begin on this important project over the Summer of 2014.



Using SUPPLYTIME. Participants paying close attention...

.... and making notes.

BIMCO Asian Shipping School (BASS)

This year's BASS was held in Shanghai from 23-27 June. It attracted 28 participants from Denmark, Hong Kong SAR, China, India, Japan, Russia, Singapore, Sri Lanka, Sweden and Thailand.

Summer Shipping School in Copenhagen

The week after BASS in Shanghai, we conducted the 2014 Summer Shipping School in Copenhagen, held from 30 June - 4 July. Thirty-four participants from Argentina, Belgium, Brazil, Canada, China, Denmark, Egypt, Finland, Germany, Israel, Monaco, Morocco, The Netherlands, Norway, Poland, Spain, Switzerland, United Kingdom and the United States took part.

The concept for both Shipping Schools is identical and even though they have developed over time since the first Shipping School commenced 12 years ago, it has remained remarkably consistent.

There is a full week of teaching and case studies, conducted by expert lecturers drawn from the global BIMCO network of professionals. These are people who fully understand the challenges in the international business environment because they are a part of it on a daily basis and are able to convey and communicate their experiences effectively, with passion and empathy.

These are combined with comprehensive case studies, social get-togethers and excursions to local maritime-related companies and institutions and the results are evident from the evaluation forms:

"Broad and well thought through. Keep it up!"

"Really enjoyed the course! It covered the shipping industry as well as it is possible to do within 5 days. Long days, but excellently combined with an interesting programme outside the hotel"

"The BIMCO Summer School was a great experience, (and) hard work, but we also had a lot of fun. The places we visited were very interesting and the organization was brilliant. There were expert speakers. I have received a global vision of the shipping industry. Thank you to all of you!!"

Asian Shipping School: Philip Yang provides participants with an overview of the global shipping industry.

Asian Shipping School: Participants visiting the Bund.

Summer Shipping School 2014 participants.

Steering an offshore supply vessel in rough seas using the bridge simulator at Force Technology.

Summer Shipping School: Visit to Maritime Museum of Denmark.

Summer Shipping School: Haris Zografakis in dialogue with the participants during the "Voyage Chartering" presentation.

Summer Shipping School: Richard Williams presenting on "Cargo Claims".

New Masterclass in the pipeline on Offshore and Heavylift Chartering

BIMCO is currently making the final preparations to introduce a new Masterclass on Offshore and Heavylift Chartering, due to be launched in November 2014 in Rotterdam, followed by sessions in Singapore and Houston in early 2015. The Masterclass can easily be combined with the popular 2-day seminar on "Using SUPPLYTIME", dealing only with this particular contract.

Apart from the practical considerations and the important voyage planning that arise in relation to heavy lift cargoes there are also some very specific and distinct contractual needs in this trade.

To assist those entering into charter parties for heavy lift cargoes in identifying suitable terms to govern their contracts of carriage, BIMCO has produced a range of documents, which today span the entire offshore industry, including SUPPLYTIME 89/2005, WINDTIME, HEAVYCON 2007/ HEAVYLIFTVOY, TOWCON 2008/TOWHIRE 2008, PROJECTCON and BARGEHIRE 2008.

However, there are significant differences in their application and use and often, a project will involve using several of the contracts in combination.

The Masterclass in Offshore Heavylift Chartering will provide the participants with a comprehensive overview of the commercial and contractual issues related to the use of these contracts. (PG)

Welcome to BIMCO!

BIMCO would like to extend a warm welcome to the following new members, admitted during the period from 1 June 2014 to 31 July 2014.

Owner Members

Perth WA, Australia	Technip Oceania Pty. Ltd. TPOCEANIA
Hong Kong SAR, China	EPC Global Shipping Co. Ltd.
Shanghai, China	EPC International Shipping Co. Ltd.
Shanghai, China	Greathorse International Ship Management Co. Ltd.
Hamburg, Germany	HBC Hamburg Bulk Carriers GmbH & Co. KG
Seoul, Korea, Republic of	Ji Sung Shipping Co., Ltd.
Kootwijkerbroek, The Netherlands	Chevalier Floatels BV
Laksevåg, Bergen, Norway	Norway Pelagic Logistics
Solli, Norway	Western Bulk Carriers AS
Doha, Qatar	Sora Marine Services Company Limited
Singapore	Pioneer Marine Pte. Ltd.
Singapore	Western Bulk Pte. Ltd.
Dubai, United Arab Emirates	Dynamic Marine Services
Boerne, TX, United States	The Levingston Corporation

Broker Members

Hellerup, Denmark	NAVITASHIP ApS
Voula, Greece	Caltrek Freight & Trading Ltd.
Uttarakhand, India	Blue Water Trade Winds Pvt. Ltd.
Panama City, Panama	Caribbean Group Asesores Maritimos y Portuarios, S.A. CGAMP
Istanbul, Turkey	Io's Shipbrokers Ltd.

Agency Members

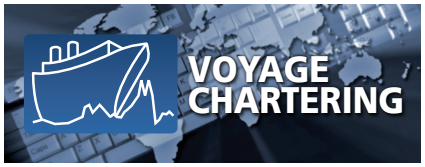
Salvador, Brazil	Casa Maritima Agenciamentos Ltda.
Misurata, Libya	Farwa Shipping Agency
Istanbul, Turkey	Battal Shipping Company
Izmir, Turkey	Medden Shipping & Trading Inc.

Associate Members

Eaton WA, Australia	Christopher Garvey Lawyer & Notary Public
Gazipur, Bangladesh	Cambridge Maritime College – CMC
Beijing, China	Beijing ValueFix Technology Development Co. Ltd.
Ballerup, Denmark	ShipIT Aps
Lyngby, Denmark	Cobham SATCOM (Thrane & Thrane A/S)
Hamburg, Germany	Vattenfall Europe Windkraft GmbH
Piraeus, Greece	United Guards Services Ltd.
Seoul, Korea, Republic of	Aegis International Inc.
Kuala Lumpur, Malaysia	Acme Venture Tech Resources Sdn. Bhd.
Kristiansand, Norway	Pentagon Freight Services AS
Lysaker, Norway	EMS Seven Seas (Norway) AS
Geneva, Switzerland	SGS Societe Generale de Surveillance
Dubai, United Arab Emirates	Control Risks Services Limited
Sharjah, United Arab Emirates	Minar Enterprises FZC
London, United Kingdom	Skrill Ltd.
Plymouth, United Kingdom	Securewest International Limited

New BIMCO eLearning Module on Voyage Chartering

Another brand-new eLearning module – "Voyage Chartering" – will be added to the suite in October 2014. This will complete the first part of the BIMCO eLearning Diploma Programme, which covers some of the most important components of the shipping business.



After three years of continuous development and promotion, BIMCO's eLearning programme is no longer a newly-emerged, unknown platform. Hundreds of shipping professionals from over 47 countries and 167 companies joining the programme, some of them for two or more modules, is never a coincidence.

Comprehensive study material, thorough tutor support, peers from all over the world, case studies and group work – plus online teaching sessions – make eLearning as exciting as any other kinds of learning experience, if not more. Also, the entirely web-based courses offer great flexibility at a lower overall cost, which enables participants to handle their day-to-day jobs and study simultaneously.

More and more companies are acknowledging these benefits. This year, the number of registrations has peaked, with some classes filling up very quickly. Following on this success, a brand-new module on Voyage Chartering is in the pipeline, which will be launched in October 2014.

Voyage chartering is a complex business

The ship owners promise to make the ship and crew available to charterers to carry an agreed cargo on an agreed voyage in exchange for the payment of freight. The ship owners remain responsible for the execution of the agreed voyage and, therefore, bear most of the operational risks that are associated with such performance. The voyage charterers promise to provide the cargo that is necessary to enable the ship owners to earn the freight and also promise in most cases that such cargo will not be dangerous and the ports to which the vessel is required to go will be safe. The charterers also need to ensure that the cargo is loaded and/or discharged within an agreed time.

These are the basic obligations of each party to a voyage charter. However, since voyage charters are not regulated by any compulsory international conventions, the principle of freedom of contract reigns supreme. Therefore, voyage charters will often include terms that are intended to minimise each party's obligations or even transfer some, if not all, of such responsibility to the other party.

Taking the high degree of complexity into consideration, this new module is designed to highlight the various problem areas and to consider ways in which parties attempt to allocate risk between themselves and thereby provide participants with a balanced understanding of the relevant legal principles and practices. The module covers the following topics extensively:

1. The nature of voyage charters
2. Voyage charters and other trading and carriage contracts
3. The negotiation and fixing of a voyage charter
4. The ship owners' duties to vessel, voyage and cargo
5. The charterers' duties to cargo, port and payment
6. Laytime, demurrage and despatch
7. Liens
8. Defences to liability
9. Limitation of liability
10. Paramount clauses
11. Law and jurisdiction (MJL)

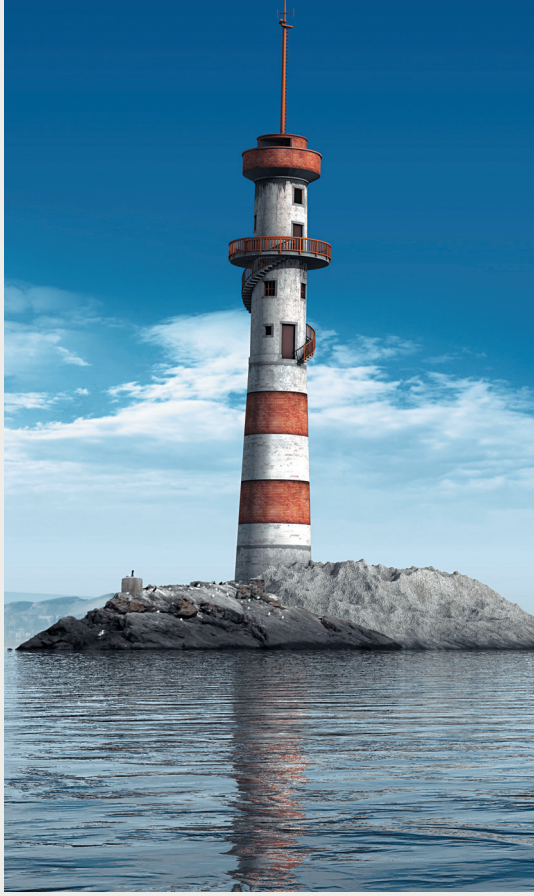
Lindsay East

Our tutor

Mr. Lindsay East has been involved in the practice of maritime law for over 40 years. He qualified at Richards Butler (now Reed Smith) in 1973 and became a Partner in 1977. Lindsay has been the head of Reed Smith's Shipping Group for six years and in 2014, he became a Consultant to the firm.

He has dealt with all kinds of dry cargo shipping law during the course of his career, ranging from charter party disputes, Bill of Lading disputes, Sale and Purchase disputes, shipbuilding contracts and, latterly, the drafting of litigation involving LNG charter parties and super yachts. He has also specialised in the drafting and interpretation of Club Rules.

Lindsay has been nominated as "one of the UK's top 20 shipping lawyers" by Legal 500 in 2009 and cited as an "outstanding shipping lawyer" by Legal 500 and Chambers for the last 15 years. He has also been named as a "super lawyer" for shipping law and one of the "best lawyers - shipping", both in 2013.



BIMCO Intervention works!

One of the services available to BIMCO members is intervention to recover outstanding undisputed amounts. The service is free of charge and is offered only to members acting on their own behalf and in their own interest.

Members owed money – be it an owner having problems obtaining payment of freight or demurrage or an agent or broker having difficulties in recovering his outlays, agency fee or commission – can ask BIMCO to intervene on their behalf with a view to retrieving the outstanding balance, provided that the unpaid balance is undisputed and that the members are acting on their own behalf and in their own interest.

Cases handled by BIMCO's Front Office on behalf of Owner members mainly concern hire and freight balances, deadfreight, demurrage, unreturned balances of advance funds and disregarded arbitration awards. Brokers and Port Agents can ask BIMCO for assistance in collecting brokerage commission and balances on disbursements accounts.

The procedure is briefly outlined as follows:

In a matter of non-payment of undisputed amounts, the member presents his case to BIMCO with copy of all relevant background material, requesting BIMCO to intervene on his behalf against the defaulting contractual party. Once the submitted documents have been examined, the Secretariat confronts the alleged defaulting party with the submitted information and requests his views or, alternatively, a prompt rectification of the situation. If our intervention does not have the desired effect, a Notice to Members is issued and circulated to all BIMCO members.

Very often the Secretariat receives requests from members to report an alleged defaulter in the BIMCO Notices to Members. Such requests cannot be met immediately.

Reporting defaulting parties in the Notices to Members can only be considered once the efforts of the Secretariat to obtain payment of an undisputed amount have failed. It should be stressed that, prior to issuing a Notice, BIMCO obtains the comments of both parties in order to establish facts and proceed accordingly. Proper documentation is, therefore, essential when members request assistance.

All correspondence concerning BIMCO intervention should be sent to the Front Office.

Further information

Read more about this service here:

https://www.bimco.org/en/About/Company_information/Intervention.aspx

Recent interventions

In early April, acting on behalf of one of our agency members, we approached an owner who had left a balance of USD 873 on disbursements outstanding for over six months and requested rectification of the situation. Having received no reply, we followed up on 29 April and ten days later, our member confirmed receipt of the amount due.

On 28 April we approached an agent who had not returned unused funds in the amount of USD 4,500 to his principal, an owner member of BIMCO, and asked him to arrange for the remittance without further delay. On 2 May our member confirmed receipt of the said amount.

On 1 May, acting on behalf of one of our agency members, we approached an owner who had left a balance of USD 3,600 on disbursements outstanding for over six months and requested rectification of the situation. The owner responded promptly and a few days later our member confirmed receipt of the said amount.

Over the last five years, BIMCO has assisted members in collecting an average of USD 5.9 million p.a.

Thinking the unthinkable

They do not get the publicity they deserve, but every year there are a crop of true stories about some quite amazing seamanship exhibited by the crews of merchant ships involved in rescuing others.

Ideally, to be well-equipped for a rescue at sea, perhaps of the crew of a yacht dismasted and sinking in a mid-ocean storm, a large container ship or a Suezmax tanker would not appear the most ideal rescue craft. But somehow they succeed, in the most adverse conditions, without any specific training for this unfamiliar role.

In addition to the yachts and occasional fishermen rescued by merchant ships, aided by excellent organisations like AMVER, which has brought applied science into search and rescue, merchant vessels are now finding themselves on the front line in another grimmer story of the sea.

Old certainties dissolving

In a world in which many of the old certainties are dissolving, thousands of refugees are on the move and merchant vessels on their normal routes are quite likely to inadvertently come upon these wretched people. There may be hundreds of them, crammed into an open and quite unsuitable boat, perhaps sinking in deteriorating weather, with dead and dying, even armed people-smugglers, to be given some sort of refuge.

A great deal of skill and courage, even diplomacy, might be required if such a boat-load is to be brought aboard and kept safe until they can be put ashore. And while we might think we have moved on a good deal since 2001 and the rescue by Wilh. Wilhelmsen's Ro/Ro *Tampa* of refugees north of Australia, which brought the Master into conflict with the authorities of the coastal state, the sheer pressure of numbers in 2014 has raised questions again.

With something like 50,000 desperate people crossing the Mediterranean in a variety of unsuitable craft and refugees regularly encountered in SE Asian waters, there are real concerns for those involved in these dramatic rescues.

Sheer weight of numbers

In some of these, the crew of a merchant ship has been outnumbered many times over by the people they have saved from a watery grave. And while IMO Resolution A920 (22) might be quite specific about the safety of rescuing crews and the responsibilities of coastal communities, when push comes to shove, the sheer weight of numbers of refugees means those who are supposed to be opening their doors to take these desperate souls may be less accommodating in complying with their international obligations.

Seafarers are professionally adaptable and can often get amazing things done, but there must be some concern at the way in which they are now exposed to a whole range of the world's problems that now can come their way. It is worth asking what training and advice they might be receiving for these untoward events.

And if they can be expected to rescue several hundred desperate individuals who are fleeing war zones or starvation, one might also consider the sort of situation that ordinary merchant ships might find themselves in the event that a large passenger ships has to be abandoned.

Useful US paper

The US Coast Guard, as might be expected, has engaged in planning for such an incident for some time and a useful paper *The Realities of Mass Rescue Operations,* published in the Nautical Institute journal *Seaways* by two USCG passenger vessel safety specialists, provides up-to-date thinking about the sort of incident the maritime community dreads. Merchant vessels which might be called upon to assist in mass rescues are described as "Good Samaritan" ships and there is no doubt there is likely to be some dependence upon such resources, particularly in the event that the emergency is far from land.

Perhaps the biggest such emergency in which the Coast Guard was involved directly was the evacuation of 520 persons from the burning cruise ship *Prinsendam* in 1980. The authors point out that "the next great event may be 15 times larger than this and occur in an even more isolated region."

The US Coast Guard has a professional responsibility to consider these matters, and the authors note that any large scale emergency involving a passenger ship will be unique, require co-operation between different organisations, with a major responsibility to account for the survivors

They must also deal with the demand for information, marshal what resources might be available and react intelligently with people relatively untrained to participate in such unfamiliar situations, but pressed into emergency service.

Learning from experience

We can learn from the fortunately few incidents where passenger ships have had to be abandoned. Clearly, weather has much to do with the outcome, as the tragedy of the *Estonia* illustrated, but even in relatively calm conditions, when passenger ships have been evacuated, the sheer numbers of people, possibly dispersed in different rescue craft, makes this a traumatic situation.

When the cruise ship *Mikhail Lermontov* sank after striking a rock off the coast of New Zealand in 1986, some 738 passengers and crew took to their lifeboats, many of whom were rescued and taken to safety by a very small coastal tanker that was in the vicinity and undertook heroic work.

The rescue of 979 passengers and crew of the burning 47 year old *Achille Lauro* was initially accomplished entirely by merchant ships, which came to the aid of the stricken ship in the Indian Ocean in November 1994. No fewer than 927 were taken aboard

a 91,000 DWT tanker that was the first on the scene, subsequently being divided up among other ships that came to the rescue.

The 1992 sinking of the cruise ship *Royal Pacific*, after a collision which saw the passenger vessel disappear in only 15 minutes and more than 700 people successfully evacuate in lifeboats, was also an event in which merchant vessels were heavily involved. Fortunately in calm weather in the Malacca Straits, the accident, which claimed nine lives, saw the survivors dispersed among a large number of merchant vessels who took them to a number of ports. The recording of which survivors were in which ships and the very real difficulties of retrieving them from lifeboats, even in the smooth waters, were issues causing comment after this notable rescue.

Planning for the worst

Planning for the worst is clearly something that rescue organisations undertake, but even in the non-passenger ship sectors, this is something that all marine professionals really ought to consider, should their ship become involved in a mass rescue, either of refugees or in the event of a passenger ship casualty.

Making sense of the manuals

There used to be jokes about the instructions that often accompanied self-build flat-pack furniture, which were so vague that they drove their purchasers demented.

One has also become used to trying to decipher manuals for foreign-built equipment, in which the translations left something to be desired.

But if you were spending tens of millions of dollars on a new ship, it might be assumed that the instructional and maintenance manuals that accompanied the gleaming vessel would reflect the shipbuilder's fine work. But sadly, all too often, the owner and the commissioning crew finds they have to make sense of a hastily collated collection of installation instructions received from dozens of component suppliers, often with no clue whatever about the equipment's subsequent maintenance.

A major complaint

According to the Confidential Hazardous Incident Reporting Programme (CHIRP), this had been one of its major complaints ten years ago, but little seems to have changed in the intervening years. An invitation to comment on the current quality of technical and operating manuals supplied on ships made this quite clear, with a considerable list of deficiencies in the manual department.

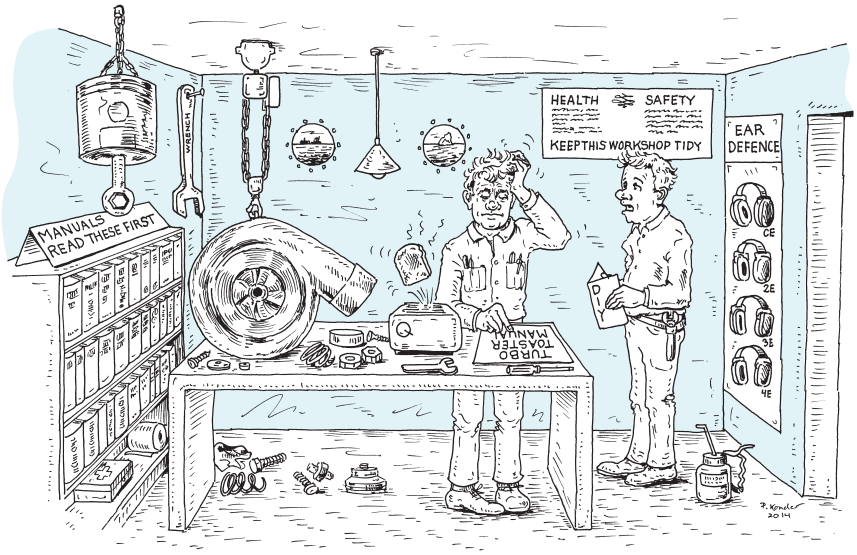
Poor translations, generic instructions with little relation to actual equipment supplied, maintenance schedules of no relevance to the machinery fitted and inadequate emergency procedures were all serious deficiencies that were identified.

Poor quality drawings, not specific to the machinery actually supplied and lacking detail were supplied, while important operating parameters such as maximum exhaust temperatures, or tightening instructions for bolts with no clue about the torque to be applied all made the engineer's life exceedingly difficult. Computer-based maintenance systems were reported as horribly inadequate.

Summoning service

It is suggested that the technical information is so poor because the supplier of the various machinery would like the despairing engineers to summon a service engineer, rather than do the job themselves. Is this a cynical view?

CHIRP lists a whole range of improvements to this clearly unsatisfactory situation, with more input from classification societies or other relevant authorities to ensure that the manuals, documents and other information should be accurate and complete. IACS itself provides a comprehensive recommendation on this matter. Would that it might be followed!



"We thought we were overhauling the turbocharger, but it turns out to be the galley toaster."

Ongoing IMO shipping issues

Since the last report under this heading, BIMCO has participated in three IMO meetings – the 93rd session of the Maritime Safety Committee (MSC) held from 14-23 May 2014, the first session of the newly-formed Sub-Committee on Navigation, Communications and Research and Rescue (NCSR) held from 30 June – 4 July, and the first session of the newly formed Sub-Committee on Implementation of IMO Instruments (III) held from 14-18 July 2014.

Maritime Safety Committee (MSC 93)

Proposed Polar Code

The development of the mandatory Polar Code for ships operating in Polar Waters made huge progress at this session and was approved in principle after finalisation of the outstanding issues.

The International Code for Ships Operating in Polar Waters (the Polar Code) is therefore likely to be adopted at MSC 94 in November 2014, in conjunction with the adoption of the associated draft new SOLAS Chapter XIV.

Application

The Polar Code will apply in the Arctic and Antarctic areas and will cover all aspects of shipping, ranging from education and training to construction, safe navigation in ice and operation in cold temperatures. The Polar Code itself will be a supplement to other IMO instruments.

It will apply to all passenger and cargo ships above 500 gross tons entering Polar Areas. It was the understanding of the MSC that the draft new SOLAS Chapter VIV would mandate that the Polar Code requirements will apply to new and existing ships certificated under the SOLAS Convention, whether or not such ships are engaged on international voyages. With this understanding, non-SOLAS ships that operate in Polar areas would not be required to meet the Code requirements, but may do so.

Expected Entry into force date

The Polar Code will enter into force 1 July 2016, if adopted at MSC 94.

Non-SOLAS ships

It was anticipated at this meeting that the second phase of the development of the Polar Code to cover regulation of non-SOLAS ships would commence soon.

Passenger ship safety

Based on the preliminary recommendations from the *Costa Concordia* casualty investigation report, a working group was tasked to prepare relevant draft text for any recommendations on operational, management or other issues where immediate action was needed. In addition, a number of temporary measures that passenger ships were urged to follow were agreed upon at this session, such as, for example, regarding the location of lifejackets and the life-saving appliances of the ship, improved route planning and restricted access to the ship's navigation bridge during voyages.

Measures to enhance the current regulation, e.g., making stricter criteria for ships' survivability following hull damage (damage stability), emphasis on the use of closed watertight doors during voyages, the need for double hulls in the engine room area (on new buildings), the possibilities of making the use of evacuation analyses mandatory, together with the location of vital marine equipment, the extent of the emergency power supply and the co-operation with local search and rescue authorities, were considered. Unfortunately, no decision was reached at this session. MSC 93 also considered the possibilities for making damage control plans more informative and user-friendly, whilst examining whether provisions on mandatory damage control drills were required. A proposal to include this for cargo ships did not get sufficient support.

Portable atmosphere testing instruments

MSC 93 approved a new draft SOLAS Regulation XI-1/7 on the "Mandatory Carriage of Portable Atmosphere Testing Instruments for Enclosed Spaces". This regulation requires that each enclosed space entry and rescue drill should include checking and use of instruments for measuring the atmosphere and should be seen as a part of a package, together with the resent adoption of the new SOLAS Regulation III/19 on "emergency training and drills" (adopted at MSC 92).

The two regulations, however, do not have the same entry-into-force date. SOLAS Regulation III/19 will enter into force already on 1 January 2015 and the new SOLAS Regulation XI-1/7 would first be due on 1 July 2016.

In order to align the two requirements and expedite the carriage of portable atmosphere testing instruments for enclosed spaces, MSC 93 decided to issue a circular on its early implementation for final approval at the next session (MSC 94).

Mandatory verification weight of containers

MSC 93 agreed on a number of proposed amendments to SOLAS Chapter VI regarding mandatory verification of the gross weight of containers. This was partly based on an earlier submission co-sponsored by BIMCO.

In brief, the draft amendment is as follows: The shipper must inform the ship and the terminal of the container's so-called verified weight before it is loaded on board the ship. The weight must be determined at an approved weighing station or in cases where the weight of each element in the container is known beforehand, by calculating a total weight of the lading and the container. If the weight is determined by calculation, the gross mass has to be verified by the

shipper. This can be done either by weighing the packed freight container using calibrated and certified equipment or weighing all packages and cargo items, including the mass of pallets, dunnage and other securing material to be packed in the freight container and adding the tare mass of the freight container to the sum of the single masses, using a certified method approved by the competent authority of the state in which packing of the freight container was completed.

The draft amendments to SOLAS Regulation VI are expected to be adopted at MSC 94.

Inspection of life-saving appliances

Previous guidelines in circulars MSC.1/Circ.1206 and MSC.1/Circ.1277 relating to life-rafts, stipulated the provisions on inspection and maintenance of same and provided guidelines on how to authorise persons carrying out the inspection. A consolidated version of the two circulars was expected to be made mandatory through an amendment of SOLAS Chapter III. But at MSC 93, several inconsistencies between the new draft circular and SOLAS Chapter III were identified and taking into consideration that this could lead to varying interpretations, MSC 93 decided to forward the text to the Sub-Committee on Ship Systems and Equipment (SSE) for clarification of these inconsistencies.

Prohibition of blending of bulk liquid cargoes

Together with a number of member states and industry organisations, BIMCO had submitted a paper on the development of guidance in respect of the application of new SOLAS Regulation VI/5-2 relating to the prohibition of the blending of bulk liquid cargoes. This submission was based on membership requests for clarification on the application of the new regulation which had already entered into force on 1 January 2014 and hence guidance was urgently required.

The submission was debated at length and in conclusion, the Sub-Committee on Pollution Prevention and Response (PPR) was tasked to provide interpretations on 7 specific questions related to the prohibition of blending of bulk liquid cargoes:

MSC 93 agreed on a number of proposed SOLAS amendments regarding mandatory verification of the gross weight of containers. (Photo: portpictures.nl*)*

- What is the definition of a "sea voyage"?
- What does "two or more different cargoes" mean?
- What does a "new product designation" mean?
- What is meant by "chemical reaction" in the context of a production process?
- What is the application to the carriage of gases?
- Define the correct interpretation of the words "process whereby the ship's cargo pumps and pipelines are used to internally circulate two or more different cargoes with the intent to achieve a new product designation"; and
- Define the application of this regulation to accepted practices such as the mixing of additives.

The above questions may seem trivial at first glance, but to ensure uniform and consistent application of this regulation, interpretation is of utmost importance. BIMCO will inform members when this work is finalised.

Piracy and armed robbery against ships

MSC 93 was dominated by two issues:

1. Guidelines for the Development of National Maritime Security Legislation. This submission by a number of member states providing guidance towards developing national legislation for contracting governments to give full and complete effect to SOLAS Chapter XI-2 and the International Ship and Port Facility Security (ISPS) Code, i.e. enabling coastal states to perform their obligations as required by the ISPS Code under their national laws.

BIMCO supported the submission, and noted that ISO 28000 had not been mentioned. This would be something to be taken up by the Correspondence Group, which the committee had agreed to establish.

2. Guidelines for Private Maritime Security Companies (PMSC) providing privately contracted armed security

personnel (PCASP) on board ships, ISO 28007.

In relation to the above, there were two submissions tabled at the committee. One was a joint submission by the Marshall Islands and BIMCO. It would seem that the potential risk of alternative standards raised by the establishment of the International Code of Conduct Association (ICOCA) was appreciated by the committee. One of the submissions, however, was asking for IMO to reaffirm its support for ISO PAS 28007 and encourage member states to bring the standard to the attention of flag states, their national standards bodies, PMSCs, ship owners and other stakeholders. It was further suggested that all member states are advised to require accredited ISO PAS 28007 certification for PMSC activities on board ships flying their flag.

BIMCO reported that the CGPCS plenary in New York had, in its final communique on the issue of the PMSCs and PCASP, stated "the Plenary noted the extant development of guidelines and advisories by the IMO and ISO. There is now a need to share these Best Practices, as articulated in the IMO guidelines and ISO: PAS 28007".

MSC 93 was asked to issue a MSC circular providing guidance and recommendations on the above and although the committee agreed in principle on the need for a single standard, it did not agree to issue a circular or even to amend MSC.1/Circ.1406/Rev.2. New proposals on this issue are to be provided to MSC 94 in November for consideration.

Development of a new guidance on how to amendment IMO instruments

The frequency of the adoption of new SOLAS amendments has been increasing in recent years. Therefore, MSC decided to develop new amendments to the SOLAS Convention, allowing for a new four-year cycle instead of an annual entry-into-force date. Amendments to SOLAS will thus be adopted in "packages" of every four years.

The four-year cycle should take effect from 1 January 2016 so that amendments adopted from this point in time could enter into force on 1 January 2020 at the earliest. As regards new amendments adopted in 2014 and 2015, MSC 93 would determine the entry into force dates in accordance with current practice.

In exceptional circumstances, it will be possible to adopt amendments outside the four-year cycle. The four-year cycle should, however, not apply to those instruments which have an agreed two-year cycle between amendments (e.g. such as the IMDG and IMSBC Codes).

Sub-Committee on Navigation, Communications and Research and Rescue (NCSR 1)

Ships' routeing measures and ship reporting system

NCSR 1 approved the following new and amended ships' routeing measures and amended ship reporting system, for submission to the MSC for final adoption:

- Amendments to existing Traffic Separation Schemes (TSSs) and associated measures;
- Amendment to the existing Traffic Separation Scheme "In the Strait of Gibraltar" and amendment of the precautionary area off Tanger-Med and of the south-western inshore traffic zone including anchorage areas;
- Amendments to the Traffic Separation Scheme off the Chengshan Jiao Promontory;
- Amendments to the routeing system "Off Friesland" and associated measures;
- Routeing measures other than Traffic Separation Schemes (TSSs);
- Amendments to the existing Recommended directions of traffic flow within the Precautionary area off Tanger-Med in the Strait of Gibraltar;
- New areas to be avoided Off Friesland;
- Deep-water routes forming parts of routeing system "Off Friesland";
- Amendments to the mandatory route for tankers from North Hinder to the German Bight;
- Amendment to the existing two-way route in the Great North-East Channel, Torres Strait;
- Establishment of two-way routes and a precautionary area at Jomard Entrance, Papua New Guinea;
- Revocation of the Area To Be Avoided in the region of the Great Barrier Reef;
- Mandatory ship reporting systems;
- Amendments to the existing mandatory ship reporting system Off Chengshan Jiao Promontory.

E-navigation Strategy Implementation Plan

An E-navigation Strategy Implementation Plan (SIP), which includes recommended tasks to progress the implementation of e-navigation, was agreed by NCSR 1 for submission to the MSC for approval. E-navigation is meant to integrate existing and new navigational equipment, in particular electronic equipment, in a system that could contribute to navigational safety while reducing the burden on the navigator.

There are five prioritised e-navigation solutions set out in the SIP:

S1: improved, harmonised and user-friendly bridge design;
S2: means for standardised and automated reporting;
S3: improved reliability, resilience and integrity of bridge equipment and navigation information;
S4: integration and presentation of available information in graphical displays received via communication equipment;
S5: improved Communication of VTS Service Portfolio.

The SIP sets out proposed regulatory framework and technical requirements for implementation completion by 2019.

Proposed Polar Code

Chapters on Safety of Navigation and Communication were finalised and the MSC meeting in November 2014 is expected to consider the draft Polar Code with a view to adoption, alongside the associated draft new SOLAS Chapter XI, which will make the Introduction and part I-A of the Polar Code mandatory under SOLAS. The draft Polar Code covers the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in the inhospitable waters surrounding the two Poles.

The revised guide to recovery techniques was agreed to and the NCSR 1 endorsed the draft revised Guide to recovery techniques (MSC.1/Circ.1182), with a view to approval

Russian icebreaker Krasin *leading an American supply ship into McMurdo Station, Antarctica.*

by the MSC. The update follows the entry into force, on 1 July 2014 of the new SOLAS Regulation III/17-1 on the recovery of persons from the water, which requires all ships to have plans and procedures to recover persons from the water.

The BeiDou System (BDS)
BDS was endorsed by NCSR 1 to be a component of the World-Wide Radionavigation System (WWRNS). The NCSR is to advise the MSC to recognise the BeiDou Navigation Satellite System (BDS). The Global Navigation Satellite System (GNSS) is a satellite system that provides worldwide position, velocity and time determination. Currently, two satellite navigation systems are recognised by IMO for use under the WWRNS: the Global Positioning System (GPS), operated by the United States and the GLONASS (Global Navigation Satellite System) managed by the Russian Federation.

Iridium as GMDSS service provider
The potential recognition of Iridium as GMDSS service provider was considered by NCSR1. Based on the information presented the recognition of the satellite communications company Iridium as a Global Maritime Distress and Safety System (GMDSS) mobile satellite service provider, NCSR 1 agreed to invite the MSC to designate an independent body to produce a technical and operational assessment of the provided information and submit a report to the NCSR 2 for evaluation.

Review and modernisation of the GMDSS
NCSR I continued with the work on the review and modernisation of the GMDSS and approved the high-level review which was prepared by a correspondence group and further developed by the IMO/International Telecommunications Union (ITU) Experts Group. The high-level review proposes some revisions to the functional requirements in the current SOLAS Chapter IV, Radiocommunications that sets out the undertakings by contracting governments to provide radiocommunications services as well as ship requirements for carriage of radiocommunications equipment. The modernisation plan, which aims to take into account new technologies available, is expected to be completed in 2016 and approved in 2017.

NCSR 1 also continued the work under the detailed GMDSS review including consideration of: revised definitions for sea areas A3 and A4; usage of satellite systems in coastal areas, use of voice communications, the expected evolution of satellite EPIRB systems, such as the Medium Earth Orbit Search And Rescue system (MEOSAR), and the review of existing systems considered for replacement, and existing and new systems for Inclusion in the modernized GMDSS. A Correspondence Group on the Review of the GMDSS was re-established to further develop proposals on issues identified in the detailed review of the GMDSS.

Maritime Search and Rescue (IAMSAR) Manual
NCSR 1 agreed to submit a set of draft revisions to Volumes I, II and III of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual to MSC for approval. The revised Volumes I, II and III are expected to be included in the 2016 edition. The amendments include the addition of information relating to self-locating datum marker buoys (SLDMB); the amending and addition of information relating to survival times in cold water; and amendments to the Maritime Search and Rescue Recognition Code (MAREC Code) to warn that when sending e-mail, fax, SMS or some other electronic messages, there is no guarantee that the recipient receives the message or that the message is being processed.

ECDIS circular
A draft circular on Electronic Chart Display and Information Systems (ECDIS), providing good practice guidance which incorporates and updates previously issued circulars relating to ECDIS, including advice on addressing operating anomalies, maintenance and training, was endorsed by NCSR 1 for forwarding to the Sub-Committee on Human Element, Training and Watchkeeping (HTW) for review

Automatic Identification Systems (AIS)
NCSR 1 finally also endorsed a draft Assembly Resolution on Revised guidelines for the on board operational use of shipborne AIS, for submission to the MSC.

Sub-Committee on Implementation of IMO Instruments (III 1)

Responsibilities of governments and measures to encourage flag states compliance
III 1 noted information on an initiative promoting the use of printed versions of electronic certificates as well as the validity of electronic certificates. Consideration was given to FAL.5/Circ.39 on "Interim Guidelines for use of printed versions of electronic certificates" and a lengthy debate ensued concerning the difficulties of implementing

and accepting electronically-based certificates as requested in the Interim Guidelines, where some national legislations still require paper certificates as proof of compliance. It was noted that some PSC regimes are recommending port state control officers (PSCOs) to accept printed versions of electronic certificates and III 1 encouraged all to fully implement the Guidelines contained in FAL.5/Circ.39, without applying additional national requirements.

Harmonisation of port state control activities

III 1 finalised the following:

- A draft MSC-MEPC.4 circular on Guidelines for port State control officers (PSCOs) related to the ISM Code for the HTW Sub-Committee's consideration and subsequent submission to the MSC and MEPC for final adoption;
- A draft MSC circular on Guidelines for PSCOs on certification of seafarers' rest hours based on the relevant provisions to the STCW Convention, or the HTW Sub-Committee's consideration and subsequent submission to the MSC for final adoption;
- A suggested process for advancing recommendations to relevant IMO bodies resulting from reports of concentrated inspection campaigns (CICs);
- A suggested advice on IMO's role to provide PSCOs with a decision support tool.

Development of guidelines on port state control under the 2004 BWM Convention

Together with a number of flag states and industry NGOs, BIMCO had submitted the following paper: III 1/8/1 - DEVELOPMENT OF GUIDELINES ON PORT STATE CONTROL UNDER THE 2004 BWM CONVENTION - Comments on the report of the Correspondence Group.

The co-sponsors of the paper are convinced that the four-tier approach (initial inspection, more detailed inspection, indicative analysis and detailed analysis) is a pragmatic approach and should be incorporated into the PSC procedures under the BWM Convention. The submitted paper was referred to a working group where it was part of a lengthy debate and parts of the paper were included in the final draft Guidelines on Port State Control under the BWM Convention. III 1 approved the draft Guidelines for subsequent adoption by the IMO Maritime Environment Protection Committee (MEPC) later this year.

The meeting also discussed harmonisation of port state control activities. (Photo: US Coast Guard)

Comprehensive analysis of the difficulties encountered in the implementation of IMO instruments

III 1 considered whether a proposal for a unified approach concerning ships issued with multiple Load Line Certificates should be developed aiming at providing guidance for port and flag states and ship owners. The proposal was supported in principle, but it was agreed that further consideration was needed though a request for a new unplanned output on the III agenda should be submitted to the MSC. A proposal for the status of exemptions to be indicated on the ILLC similar to certificates issued under other IMO Conventions. The proposal was agreed to and a request for a new unplanned output on the III agenda will be submitted to the MSC.

Review and update of the survey guidelines under the Harmonisation of Survey and Certification (HSSC) and the non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code)

Under the continuous updating of the HSSC survey guidelines, III 1 considered a proposal to align the survey windows under the HSSC for cargo ship safety construction intermediate and renewal surveys for ships not subject to The International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (ESP Code) with those for ships subject to ESP and consequently developed the text of draft amendments to SOLAS and the Survey Guidelines under the HSSC. III1 established a correspondence group to further deal with this matter.

Under this agenda item, III 1 supported and agreed to the following:

- A proposal for revisions to the Survey Guidelines on the secondary barrier testing requirements for gas carriers;
- Proposed amendments to the HSSC Guidelines with a view to providing clarity in the treatment of minor deficiencies;
- A draft MEPC 67 circular on the Guidelines for exemption of unmanned non-self-propelled barges from the survey and certification requirements under MARPOL;
- The progress of draft amendments to the 2013 Non-exhaustive list of obligations under instruments relevant to the IMO III Code that will enter into force up to and including 1 July 2016;
- A draft MSC-MEPC.5 circular on a Unified Interpretation for establishing the keel laying date of Fibre-Reinforced Plastic (FRP) craft.

Review of general cargo ship safety

After some debate on the issue III 1 noted the information and encouraged PSC regimes to ensure knowledge transfer between PSCOs in order to achieve an equal level of expertise for all ship types, including general cargo ships, which are recognised by III as a high risk ship type. (AFS)

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WISTA
UNITED ARAB EMIRATES

BY MICHAEL GREY

The importance of data

If we don't know what has gone wrong, how can we ever put it right? This might seem an obvious question, but the fact that it is still asked is a reflection of a problem that remains very much alive in the marine industry.

The old adage that "a problem shared is a problem solved" might be equally true, but when it comes to sharing data about accidents, incidents, near misses, or a difficulty that might develop into something that is safety critical, we are still hesitant about making these matters more transparent.

Shortly after taking up the office this July, the current Chairman of the International Association of Classification Societies (IACS), Mr. Philippe Donche-Gay, said that one of his current priorities during his year in office is to look at how design data might be shared to better understand how an accident has happened. And at a meeting on the future of ship safety last year, the Secretary General of the International Maritime Organization (IMO), Mr. Koji Sekimizu, suggested that improved data collection was an essential part of successful risk-based methodology, an essential element in the development of better regulations. Information matters and can be very influential in the enhancement of safety.

IMO Secretary General, Koji Sekimizu.

IACS Chairman, Philippe Donche-Gay.

Why is the marine industry so hesitant about the sharing of data, when its benefits in understanding the causation behind an accident, or the potential failure of structure or components, are apparently so obvious? The aviation industry has a long-established system for the sharing of safety related information, which operates efficiently and speedily, so that a problem with a single component in an aircraft or airframe will be transmitted between all the operators of those aircraft.

Liability and responsibility

In aviation, they seem untroubled by the maritime industry's concern about issues of liability and responsibility, of patents and intellectual property which seem to be constantly raised as objections to greater data transparency. Of course, in aviation they have the benefit of only a few major aircraft and engine manufacturers in the world, while the immediate consequences of not being transparent could be immediate, severe and life-threatening. It is an industry that carries the public in huge numbers and the political will to ensure that safety is paramount is always evident.

But the case for transparency and greater sharing of data is compelling, perhaps the more so in an industry that is, compared to aviation, far more fragmented in every way. A good illustration might be found in the problems that afflicted the dry bulk carrier industry in the 1980s and 90s, when a disturbing number of these ships were sinking, often with fatal consequences for their crews.

The bulk carrier sector was the most fragmented, with most owners in the sector, themselves scattered all over the world, each operating a small number of ships. The ships were operated under a multiplicity of flags, spread around all the major classification societies and many minor players. The accidents and incidents of structural failure were themselves spread widely around these owners, flags and societies and at that time the mechanism for collecting such data was either non-existent or ineffective. Indeed, because of this, it took time to realise that there were trends developing which clearly required deeper investigation.

Considerable room for improvement

It is probably true to suggest that if the same problems emerged today, there are

better mechanisms for the reporting and promulgation of accident investigation, through IMO, owners' organisations and classification societies. But, as the IMO Secretary General and IACS Chairman both suggest, there is still considerable room for improvement.

There remain, for instance, requirements under both SOLAS and the Law of the Sea Convention for flag states to inquire into marine casualties, with the obligation, moreover, to submit the findings of such investigations to IMO, which can use the information to issue reports or recommendations. It is fair to say that among flag states, casualty investigation itself has no common standard, ranging from a relatively small number of states which provide thorough and independent investigation to a larger number which tend to be less so, and those which appear neither to possess the resources or often the inclination to probe into casualties which involve ships flying their flags.

The requirement for this data to be transmitted to IMO is also extremely patchy in its observation, the reports themselves often reflecting the wide variety in quality and thoroughness of the investigation. There are often problems of translating these reports into useful languages, while the deduction of relevant conclusions and identification of any meaningful trends may be a long procedure.

The contrast with the aviation system of rapid data transmission around the industry, almost on a daily basis is stark. The need for marine casualty data to be made available was emphasised by the IACS chairman, who noted that the system available at present was a process that "was not currently effective".

Underpinning new regulations

The need for data is underlined when there are regulations to be made, if these are to be effective and based on the best possible information. It is also particularly critical in the event that an accident has occurred that is difficult to explain. Which is why design data is so very important, so that there can be some better understanding of the cause. Designers are always wishing to push the barriers as they seek to produce better and more profitable ships, with new structural elements, new constructional techniques – even new materials. Ships are getting bigger, designers wish to make them lighter and the introduction of such ships into service may reveal problems that could not have been foreseen in the design or even the classification process.

In the event that there has been a problem, it is reasonable to assume that what has appeared on one ship or one design might well be replicated aboard others. In such a situation, there needs to be some sort of mechanism to enable the design data to be exposed to a greater degree of inspection. Problems of intellectual rights and confidentiality immediately arise and it is this difficulty which both class and IMO are anxious to resolve.

Legal niceties

There are also often legal problems, particularly after a marine accident, which will prevent transparency and the free exchange of often important information, with lawyers for the various parties being concerned

Michael Grey

with issues of responsibility and ensuring liabilities. Insurers too may have an interest in restricting the free passage of data from an accident.

The fact that the industry is so international with the often considerable number of interests from many countries also tends to complicate the situation and make it easier to prevent the transmission of useful data between parties. One only has to look at some of the larger casualties in the maritime world to see the obstacles that are sometimes put in the way of transparency, but also the way in which lawyers are enabled to exploit the situation for the advantage of those whom they are representing.

The pity is that these legal niceties now so often prevent important safety information from being promulgated to those who might benefit from such data. It can only be hoped that pressure from the IMO, with the encouragement of classification societies, might be effective in devising a more effective process for the treatment of this important data, which can be so useful in the enhancement of safety.

Editor's Note: Michael Grey is BIMCO's Correspondent in London. He is a former Editor of Lloyd's List and a regular contributor to many maritime publications.

BY PETER LUNDAHL RASMUSSEN

Ballast water management issues: the current state of play

With the recent ratification by Tonga and Congo, the status of the International Maritime Organization's (IMO) International Convention for the Control and Management of Ships' Ballast Water and Sediments, also known as the Ballast Water Management (BWM) Convention, is that 40 IMO member states covering some 30.25% of the world's registered Gross Tonnage have so far ratified the convention.

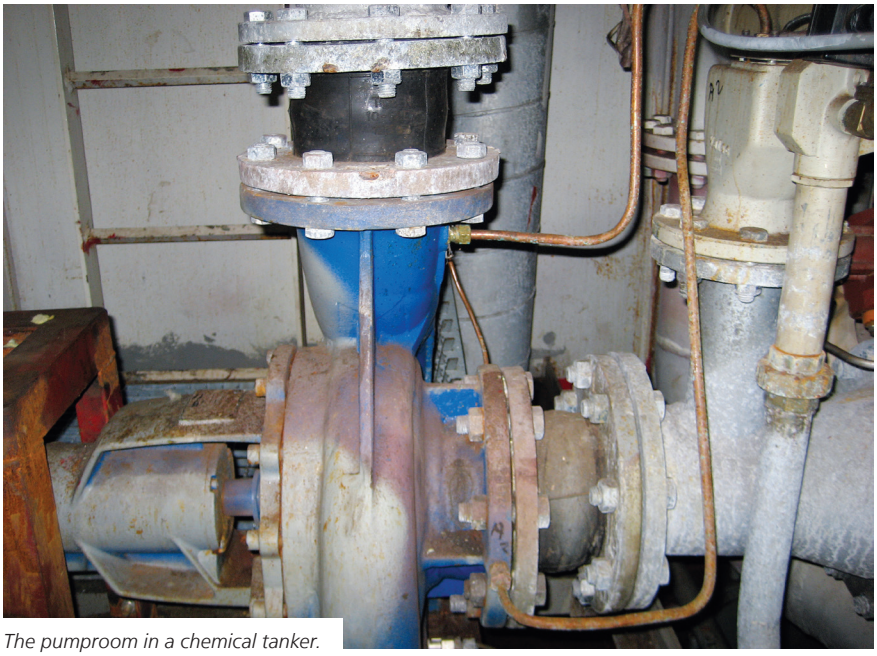
The IMO Secretary General recently announced that the governments of Japan and Turkey have passed the national legislation to approve ratification of the BWM Convention.

Japan and Turkey together account for about 2.28% of the world fleet in registered Gross Tonnage and the combined total tonnage percentage of the contracting States would then reach some 32.5%, against the 35% needed for entry in to force of the BWM Convention.

There are currently numerous ballast water management systems which have been granted type-approval by their respective administrations in accordance with the governing procedures under the IMO BWM Convention. There are, however, concerns regarding the ability of these systems operate in a compliant manner under all conditions and at all times, as well as uncertainties with respect to actual enforcement of the BWM Convention, especially with respect to sampling and analysis/testing of managed ballast water.

The US status

The US Coast Guard (USCG) BWM regulations entered into force back in June 2012. Among other things, the US regulations require that all ships calling at US ports and intending to discharge ballast water must either carry out exchange or use a USCG type-approved BWM system in addition to fouling and sediment management.



The pumproom in a chemical tanker.

The exchange of ballast water is only possible until the implementation deadline for the particular ship to comply with the BWM regulations in full. Currently, no ballast water treatment systems have achieved such type-approval from the USCG.

Other options for compliance include:

- The use of potable water from the US public water system; all ballast tanks and the piping system have to be cleaned, and any sediments removed beforehand;
- Discharge to a facility onshore or to another ship or barge for the purpose of ballast water management or treatment;
- No discharge of ballast water.

It is important to note that under the USCG regulations, ships do not need to install a Ballast Water Management System (BWMS) if the ship is able to comply by using one of the three ballast water management options listed above.

Furthermore, the USCG BWM regulations provide the following options for ensuring compliance:

- Use of a BWMS granted status as an Alternate Management System (AMS) allowed for use for up to 5 years after the ship is required to comply with the Ballast Water Discharge Standard (BWDS).
    - AMS determination is intended as an interim measure to allow foreign type-approved BWMS, installed

US regulations require that all ships calling at US ports and intending to discharge ballast water must either carry out exchange or use a USCG type-approved BWM system in addition to fouling and sediment management.

prior to the availability of Coast Guard type approved BWMS and before the vessel's compliance date, to be used on a vessel for up to 5-years after the vessel would otherwise be required to comply with the Ballast Water Discharge Standard. The USCG believes this interim measure will allow the BWMS vendor or manufacturer sufficient time to obtain USCG type-approval without penalising vessel owners for having been early installers.

- An AMS acceptance of a BWMS provides no guarantee for USCG type-approval and there is a danger that the chosen and installed BWMS, even though accepted as an AMS by the USCG, could be underdeveloped and additional costs could be incurred for either modifying the AMS BWMS to the required performance capabilities and standard required under an USCG type approval or installing an USCG type approved BWMS.
- Compliance-wise, the Alternate Management System will ensure up to 5 years operation for the BWMS on board, unless the BWMS chosen is either type-approved before the expiry for the AMS installation or clear indications of an unsuccessful type-approval by the USCG emerges close to the expiry date for the AMS installation.
- The US Environmental Protection Agency (EPA) accepts the use of an AMS as compliant with the EPA Vessel General Permit (VGP) requirements.

- Applying for an extension to the implementation schedule if able to document and prove that despite all efforts to meet the BWDS, compliance with requirements is not possible.
  - Any extension request must be made no later than twelve months before the scheduled implementation for the ship.
  - However, upon the USCG's type approval of a BWM system suitable for use on the ship, such a ship is required to install a BWM system at its earliest opportunity.
  - The extension granted and issued by the USCG cannot exceed 5 years from the ship's implementation date but in practice, the extensions granted are hard dates i.e. all the extensions issued so far have granted an extended compliance date of 1 January 2016.
  - If an extension period proves to be inadequate, the owner, operator, agent, Master or person in charge of a ship may submit a supplemental extension request for the ship. Any supplemental extension request should be submitted not less than 90 days prior to the end or termination date specified in the original extension granted.
  - The Vessel General Permit (VGP) under the EPA enforcement policy provides no guarantee that owners and operators that have been granted extensions by the USCG will not be subject to potential administrative, civil and criminal fines for non-compliance with the 2013 VGP requirements to install BWMS according to the EPA's schedule and regardless of the USCG not having type approved any BWMS,
  - The extension granted by the USCG does not affect or supersede any requirement or prohibition pertaining to the discharge of ballast water into the waters of the United States under the Federal Water Pollution Control Act, including those associated provisions of the Vessel General Permit (VGP), or US State Law.
  - In order for the EPA VGP enforcement response policy to apply to a ship, compliance with all other provisions of the 2013 VGP, including the submission of a valid NOI, is vital.
  - A copy of the extension letter shall be kept on board the vessel and made available to USCG vessel inspectors and Port State Control Officers, as well as other federal, state, and local officials with jurisdiction over ballast water discharges into US waters.

The possible implications of BWM to ship owners

A major concern is the lack of confidence in the efficiency and reliability of BWMS approved under the scope of the BWM Convention's Guidelines for approval of Ballast Water Management Systems (G8).

Owners are urged to exercise due diligence when approaching manufacturers and vendors of BWMS in order to safeguarding their investments. It is of the utmost importance to request all information and data related to the approval process, including the full shore and shipboard test results.

The BIMCO Secretariat has compiled a list of general issues related to installation or retrofitting of a BWMS as set out below:

Ship

- Alternative solutions:
  - "Technical" water or freshwater taken on board in discharge ports as ballast;

- De-ballasting to a BWMS facility (barge or shore based);
- NOBOB (No Ballast On Board) or use of permanent ballast water in a closed and sealed system;

- Ballast system characteristics (i.e. the number of independent systems on board chemical and oil tankers, topside tanks on Bulk Carriers, potential pressure drops, etc.);
- Ballast volumes carried during normal operation compared with ballast pumping rates and BWMS flow rates;
- Compliant sampling points:
- On board power capacity for operating a BWMS;
- Pre-planning and Class approval process;
- Space limitations versus space required for a BWMS;
- Type, size & trade of the ship;
- Use of ejector for stripping of ballast water tanks.

BWMS

- Availability & delivery time;
- Compatibility with ship design and construction (pipelines and possible pressure drop);
- Efficacy and reliability in all conditions;
- Explosion proof/intrinsically safe installations if needed;
- Flexibility in terms of installation location;
- On board Maintenance requirements;
- Possibility for expanding the scope of compliance to future more stringent ballast water discharge standards by upgrading and/or add-on possibilities;
- Repair & service availability for the BWMS (after-sales support, spare parts, etc.);
- Suitability for all commonly experienced water conditions and qualities;
- BWMS capacity and efficiency to be warranted by the manufacturer;
- Up and run time needed for the BWMS;
- Worldwide type approval, including USCG, to be guaranteed by the manufacturer.

Installation

- In dry-docking or repair yard;
- Inclusion of specifications in build specifications for new buildings;
- On board in service retrofitting by ships' staff and/or riding gang requires carefully planning and logistics preparations.

Cost

- Life cycle costs (CAPEX);
- Operating cost (OPEX);
- Additional cost for maintenance of other equipment i.e. ballast pumps wear & tear due to increased running hours.

Commercial

- Consideration of trading areas;
- Contractible impact as operations could take longer time to complete.

Crew

- Health and safety;

Inside a ballast water tank.

Peter Lundahl Rasmussen

- Training and familiarisation;
- Workload – a BWMS should be easy to operate for the crew.

Operational

- Amendment of the Safety Management System;
- Development and implementation of a BWM plan;
- Implementation and proper use of a BWM record book;
- Operation, control and monitoring aspects, i.e. proof of operation for compliance purposes, i.e. tamper-proof electronic logs with records of operations;
- Safe and compliant operation of BWMS in all possible shipboard conditions, i.e. heavy sea, cold or warm climate/waters;
- Safe operation (loading, discharging and bunkering) in terms of stability and strength of the ship;
- Updated ballasting/de-ballasting procedures as use of gravity might not be possible depending on the chosen BWMS.

For further guidance on Ballast Water Management issues, please refer to the following publication: The BIMCO/Fathom "Step-by-Step Guide to Ballast Water Management" All BIMCO members are entitled to a 30% discount and can obtain this publication at GBP 171.50. Please visit the BIMCO Webshop via the following link: *https://www.bimco.org/Products/Shop.aspx*

Editor's Note: Peter Lundahl Rasmussen is Senior Marine Technical Officer at BIMCO.

On the Horizon...

DATE	VENUE	EVENT	CONTACT
1-6 Sep. 2014	Copenhagen	**ITTC Conference**	Jeppe Juhl: jsj@bimco.org
2 Sep. 2014	Hong Kong	**BIMCO Seminar/Presentation to HK members – President speaking**	Michael Lund: mlu@bimco.org
4 Sep. 2014	Brussels	**ECSA Sulphur Task Force Meeting**	Lars Robert Pedersen: lrp@bimco.org
8-9 Sep. 2014	Norway	**ISO Workshop**	Jeppe Juhl: jsj@bimco.org
8-9 Sep. 2014	Bahrain	**SHADE (Shared Awareness and Deconfliction)**	Giles Noakes: gno@bimco.org
8-10 Sep. 2014	Hamburg	**SMM/Gmec**	Lars Robert Pedersen: lrp@bimco.org
8-12 Sep. 2014	London	**IMO Sub-Committee on Carriage of Cargoes and Containers (CCC)**	Ai-Cheng Foo-Nielsen: acfn@bimco.org
15-17 Sep. 2014	Brussels	**Mona Lisa Project Committee Meeting**	Aron Sørensen: afs@bimco.org
15-17 Sep. 2014	Oslo	**DNV Nordic Safety Committee**	Lars Robert Pedersen: lrp@bimco.org
15-19 Sep. 2014	London	**IMO Editorial and Technical Group (IMSBC Code)**	Ai–Cheng Foo Nielsen: acfn@bimco.org
16 Sep. 2014	London	**Manpower 2015 Study Steering Committee**	Aron Sørensen: afs@bimco.org
16-17 Sep. 2014	Oslo	**DNV-GL: Nordic Ship Safety Committee**	Lars Robert Pedersen: lrp@bimco.org
18-19 Sep. 2014	Singapore	**Using SUPPLYTIME Seminar**	Peter Grube: pg@bimco.org
18-22 Sep. 2014	Norway	**ISO Workshop**	Jeppe Juhl: jsj@bimco.org
19 Sep. 2014	Singapore	**STMS Strategic Working Committee (Singapore and Malacca Straits Meeting)**	Aron Sørensen: afs@bimco.org
21-22 Sep. 2014	Malaysia	**7th Malaysia Cooperation Forum**	Aron Sørensen: afs@bimco.org
21-23 Sep. 2014	Amsterdam	**Dry Bulk Europe**	Peter Sand: ps@bimco.org
22-26 Sep. 2014	London	**Facilitation Committee (FAL 39)**	Jeppe Juhl: jsj@bimco.org
23-25 Sep. 2014	Bremen	**IQPC International Conference and Workshop on Ballast Water Management (BWM)**	Peter L. Rasmussen: plr@bimco.org
24 Sep. 2014	Langkawi	**Project Coordination Meeting (Singapore and Malacca Straits Meeting)**	Thomas Timlen: tt@bimco.org
24 Sep.-10 Dec. 2014	eLearning	**eLearning Course: Bills of Lading**	Mette Juul Madsen: mem@bimco.org
25 Sep. 2014	Dalian	**Dalian Maritime University on 2015 Manpower Study**	Aron Sørensen: afs@bimco.org
1-2 Oct. 2014	London	**Ship Efficiency: The Event**	Lars Robert Pedersen: lrp@bimco.org
1-3 Oct. 2014	Geneva	**BIMCO Masterclass Workshop: Voyage Chartering**	Miaojia Liu: mjl@bimco.org
2-4 Oct. 2014	Copenhagen	**International Association of Young Lawyers (AIJA) Offshore Seminar**	Grant Hunter: gh@bimco.org
6-10 Oct. 2014	Copenhagen	**Danish Maritime Days**	Karin Petersen: kp@bimco.org
6-11 Oct. 2014	Gothenburg	**FONASBA Annual Meeting**	Søren Larsen: sl@bimco.org
7 Oct. 2014	Copenhagen	**BIMCO Maritime Security Committee/BIMCO Marine Committee Meetings**	Elizabeth Ahlefeldt: eal@bimco.org
8 Oct. 2014-28 Jan. 2015	eLearning	**eLearning Course: Dry Cargo Laytime and Demurrage**	Mette Juul Madsen: mem@bimco.org
13-17 Oct. 2014	London	**IMO Marine Environment Protection Committee**	Aron Sørensen: afs@bimco.org
14-17 Oct. 2014	Singapore	**SIBCON 2014 (SBC)**	Grant Hunter: gh@bimco.org
Mid-Oct. 2014-Feb. 2015	eLearning	**eLearning Course: Voyage Chartering (new!)**	Mette Juul Madsen: mem@bimco.org
15-17 Oct. 2014	Singapore	**BIMCO Masterclass Workshop: Bills of Lading**	Peter Grube: pg@bimco.org
16-18 Oct. 2014	Dalian	**BIT Oceans Conference**	Wei Zhuang: zw@bimco.org
20-24 Oct. 2014	London	**International Oil Pollution Compensation (IOPC) Funds**	Christian Hoppe: cho@bimco.org
27-31 Oct. 2014	Panama	**ISO TC 8 Committee Meeting**	Aron Sørensen: afs@bimco.org
27-31 Oct. 2014	Dubai	**CGPCS Piracy Week**	Giles Noakes: gno@bimco.org
28-29 Oct. 2014	London	**Combatting Piracy Conference**	Michael Lund: mlu@bimco.org
29-30 Oct. 2014	Hamburg	**ACI 11th BWM**	Peter L. Rasmussen: plr@bimco.org
30 Oct. 2014	Singapore	**Asia Pacific Marine & Offshore Conference**	Thomas Timlen: tt@bimco.org
30-31 Oct. 2014	Shanghai	**Tripartite**	Lars Robert Pedersen: lrp@bimco.org
3 Nov. 2014	London	**Double Jeopardy, Trial by Media, Trial by Law**	Grant Hunter: gh@bimco.org
6-7 Nov. 2014	Aberdeen	**BIMCO Seminar: Using SUPPLYTIME**	Peter Grube: pg@bimco.org
7 Nov. 2014	Copenhagen	**BIMCO Documentary Committee Meeting**	Doris Larsen: dla@bimco.org
9-10 Nov. 2014	Rotterdam	**Executive Committee/Board of Directors Meeting/Presentation to Dutch Members**	Karin Petersen: kp@bimco.org
10-15 Nov. 2014	Tokyo	**ISO 19030 Working Group**	Jeppe Juhl: jsj@bimco.org
12 Nov.2014-25 Feb.2015	eLearning	**eLearning Course: Tanker Chartering, Laytime and Demurrage**	Mette Juul Madsen: mem@bimco.org
17 Nov. 2014	Singapore	**BIMCO HEAVYLIFT Contracts Workshop**	Thomas Timlen: tt@bimco.org
17-21 Nov. 2014	London	**IMO Maritime Safety Committee**	Aron Sørensen: afs@bimco.org Giles Noakes: gno@bimco.org
19-21 Nov. 2014	Genoa	**BIMCO Seminar: Trading and Carrying Goods**	Peter Grube: pg@bimco.org
20 Nov. 2014	Athens	**14th NAVIGATOR 2014: The Greek Decision Makers Forum**	Michael Lund: mlu@bimco.org
24-26 Nov. 2014	Hong Kong	**BIMCO Masterclass Workshop: Time Chartering**	Peter Grube: pg@bimco.org
25-26 Nov. 2014	Stavanger	**Gas Fuelled Ships 2014**	Lars Robert Pedersen: lrp@bimco.org
26-28 Nov. 2014	Rotterdam	**BIMCO Masterclass Workshop: Offshore & HeavyLift**	Peter Grube: pg@bimco.org
1-2 Dec. 2014	Barcelona	**Platts 3rd Annual Mediterranean Bunker Fuel Conference**	Peter Sand: ps@bimco.org
3-5 Dec. 2014	Antwerp	**BIMCO Masterclass Workshop: Bills of Lading**	Peter Grube: pg@bimco.org
8-12 Dec. 2014	Antwerp	**Lloyds List 10th Annual BWMTech Conf. & Workshop**	Peter L. Rasmussen: plr@bimco.org

BY JENNIFER AHLBÄCK

How to choose the correct scrubber

Most ship owners today should have heard about scrubbers by now. To some, it will be a highly familiar subject, having gone through the process of evaluating a scrubber option or having even installed a scrubber system for their fleet, whilst for others it is still a big question mark.

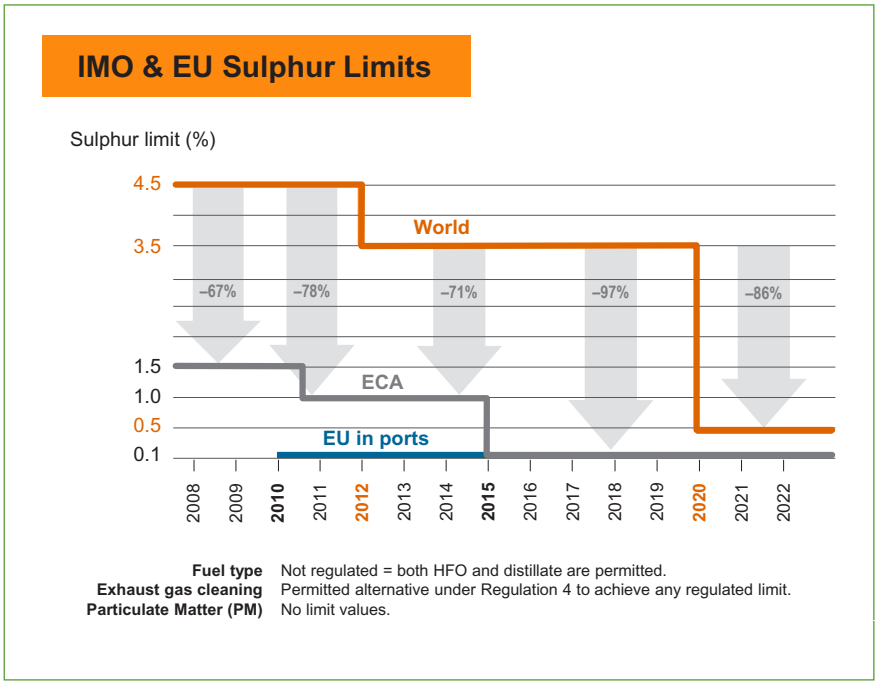
Getting to know the rules about the upcoming sulphur limits and the alternatives for complying can be a hassle in itself, rendering the process of understanding the whole concept of exhaust gas cleaning a bit overwhelming. Which scrubber should one choose? Which one is best? What is the difference between open loop and hybrid, and will they be legal in the future?

Different opinions and many rumours

There is much discussion, both from regulatory bodies and various experts, all with different opinions, along with a lot of rumours to bend our ears, leaving us not knowing whom to listen to. Suppliers are not making it any easier by constantly upgrading their equipment and often changing the names of the available products.

On top of everything, there is the added pressure that the decision must be made soon. The regulations regarding Emission Control Areas (ECAs) will be tightened already in January 2015, which means that those operating in these waters should already have a plan. After this there is the world limit looming ahead, which will be enforced in either 2020 or 2025. Let's now have a look at some of the issues about installing an exhaust gas cleaning system, so as hopefully to give some idea as to how to choose the right scrubber.

Figure 1: Current and upcoming sulphur limits from the IMO
The stricter world limit might be postponed until 2025.



A tricky subject

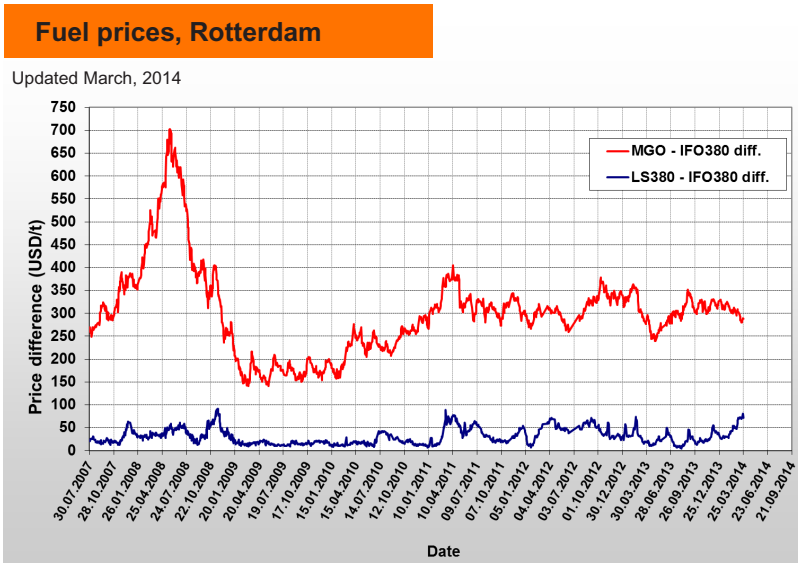
Let's start from the beginning, as experience tells us that exhaust gas cleaning can be a tricky subject if one doesn't have all the facts on the table. It's also important to give some of the spotlight to the environmental impact of scrubbing, as it often gets sidelined by all the talk of rules, cost and payback time.

Sulphur oxides (SOx) are formed in a combustion process, when the sulphur in the fuel oxidizes, thus forming sulphur oxides. Sulphur oxides dissolve in water. This means that when emitted into the atmosphere, they will dissolve in the water in the air and form acid rain. Acid rain is very harmful to people and the environment, as it will destroy land, crops, fresh water lakes and buildings. However, the fact that SOx dissolves in water also makes possible the technology for scrubbing.

In a scrubber, the exhaust gas is sprayed with alkaline water. The sulphur oxides will dissolve in the water and be removed from the exhaust gas along with some other harmful emissions, such as particulate matter. If the wash water from the scrubber is cleaned before being discharged into the sea, a lot of particulates and heavy metals that have been cleaned from the exhaust gas will also be removed.

Under normal circumstances without a scrubber installed, these emissions will be emitted into the atmosphere. A lifecycle analysis to evaluate the use of scrubbers compared to running on low sulphur fuel was recently carried out by Shell[1]. The study concluded that running on HFO with a scrubber installed will actually be more beneficial for the environment than running on MGO, as the refining processes

Figure 2: Fuel prices, Rotterdam
The price for low sulphur fuel is expected to rise.



Source: Bunkerworld

are comprehensive. This is of course only the result of one study, but it nevertheless it indicates a possible direction to proceed in.

Two main options

Once one has an idea of what a scrubber is and what it is used for, the evaluation of whether a scrubber is the best option for the particular vessel can begin. There are two main options for complying with the new sulphur legislation; low sulphur fuel and exhaust gas cleaning. If the ship is already running on a low sulphur fuel and is compliant with the rules, there is obviously no need to install a secondary cleaning method. One might also want to have a look at the annual fuel usage, and compare it to the installation cost and operational expenditure (OPEX) of a scrubber system. This might be highly relevant for an existing vessel, where the remaining lifetime is limited and the installation cost is higher than for a new build.

The big advantage of a scrubber is that it will enable the ship operator to run on cheaper high sulphur fuel and still be compliant with the sulphur limits. This means that the scrubber will pay for itself in the form of fuel cost savings. The return on investment (ROI) will depend on the price difference between HFO and MGO.

There are of course other low sulphur fuels available on the market or that are being developed, which might be interesting for certain vessels. Liquefied Natural Gas (LNG) is at the forefront of these, with the technology and procedures already available, even though the supply infrastructure is still not fully developed. Running on LNG will solve several emission problems, as it will fulfil both the strictest SOx legislation and also comply with the Tier III NOx (nitrogen oxides) rules from the IMO. Running on LNG will also reduce particulate matter. This would be a good alternative for ships, such as ferries for example, that operate on set routes. For most vessels though, the installation of a scrubber is a solid business case.

As scrubbing technology is such an attractive solution, there are quite a few suppliers on the market today. This is naturally beneficial in that it leads to healthy competition and constant development of the technology. The not so great thing about having many suppliers is that the terminology has been used quite freely, with the result that one supplier's hybrid scrubber can be very different from the next. This confusion, together with the different product names the different suppliers have come up with, can leave one's head buzzing.

Wet scrubbers

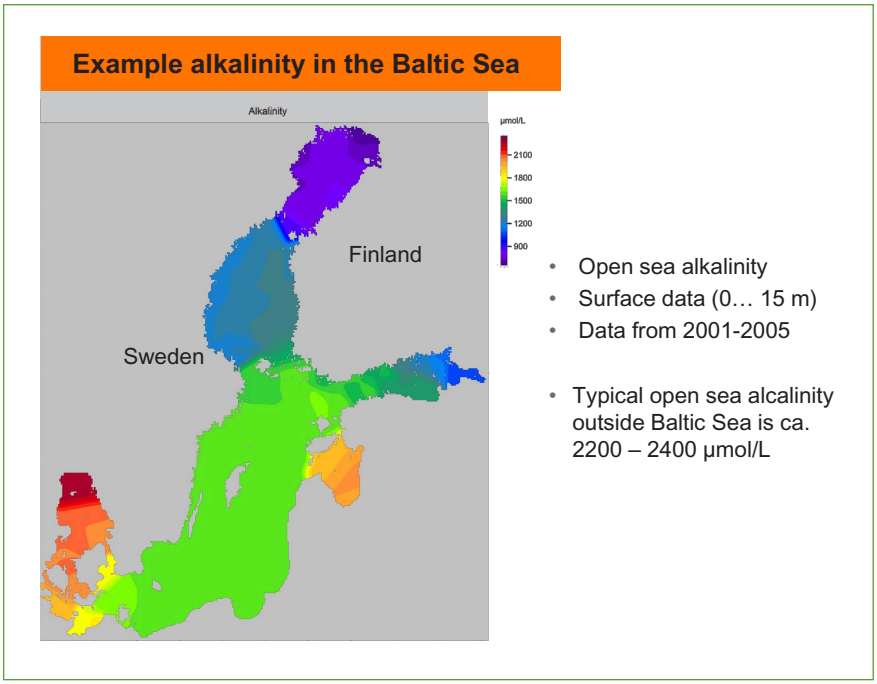
This article will focus on wet scrubbers, as they have been thoroughly tested and validated. These represent the preferred cleaning method of today, which makes it the most relevant technology. A full wet scrubber portfolio includes open loop, closed loop, and hybrid scrubber versions. The terms "open loop" and "closed loop" usually mean pretty much the same, independent of the supplier, while the word "hybrid" is being used to describe a few different products out there.

An open loop scrubber system means that seawater is utilised as scrubbing water. It is called an open loop because the water is taken from the sea, led through the scrubber, and then released back into the sea, thus forming an open loop. A closed loop system, however, will be filled with water which is then recirculated. The water is not, therefore, supplied from the sea and it is a closed loop. In a closed loop system only a small amount of the scrubbing water is let out from the system and released into the sea.

There is often a misunderstanding that a closed loop will not have any discharge into the sea. This is never the case, as the scrubbing water cannot recirculate forever, but has to be gradually exchanged with clean water to maintain the cleaning efficiency of the scrubber. The discharge water can, however, be stored for a period of time in a tank to enable a zero-discharge mode.

There has also been much discussion as to whether open loop systems will be allowed, due to the amount of discharged water. In my opinion, the discussion should not

Figure 3: Example of alkalinity variations in the Baltic Sea
A safety margin of 1,000 µmol/L has been set for open loop scrubbing.



be about the open loop as a principle, but rather about what quality the discharged water should have. At Wärtsilä we have always been very strict on cleaning the discharge water, even from our open loop system, and are committed to following both current and future legislation. This is not always a popular choice to make, but we feel it is the right thing to do.

The hybrid option

Now that the open and closed loop systems are all figured out, let us look at the hybrid option. A hybrid is, as the name suggests, some kind of mix between both systems. At Wärtsilä the name is used to identify a system that can run in both open loop and closed loop, enabling flexibility for customers operating in both low and high alkalinity areas. The term "hybrid" is also being used for other products, such as an open loop system where caustic soda (NaOH) is being added to the water to give the alkalinity already in the seawater an extra boost. The only thing one can really do to keep track is to ask the supplier to clarify what they mean by hybrid and what the benefit is of having such a system.

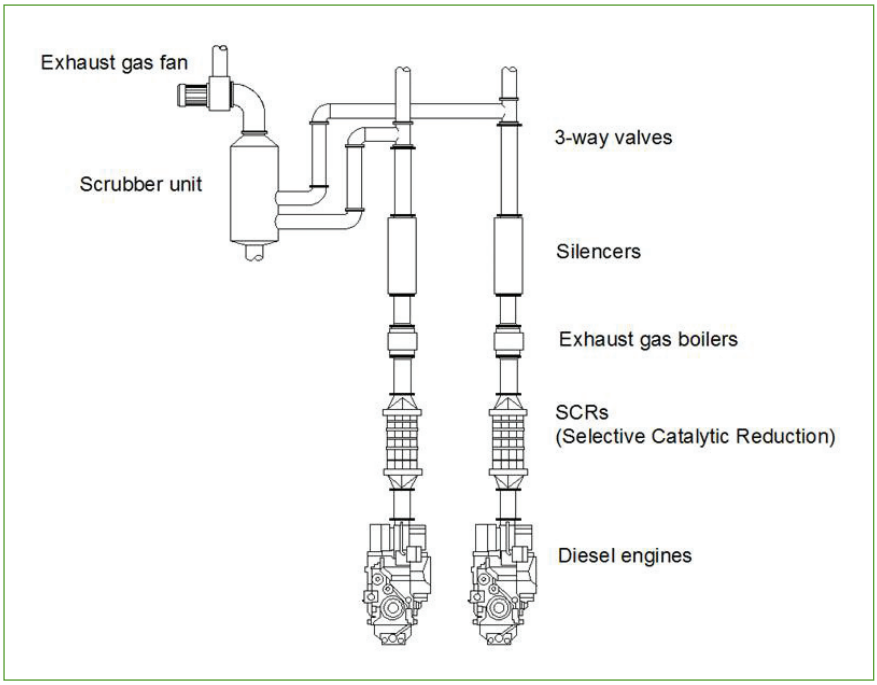
Alkalinity and the operating route

So which one of these should one go for exactly? In general, one system isn't better than the other. As long as one goes for a serious supplier with certified products, it is really a matter of looking at which system is best for the particular vessel. In the end it all comes down to alkalinity and the operating route.

Alkalinity is the term used for the ability of water to buffer acid and can, to some extent, be found naturally in all waters. In scrubbing, alkalinity is used to buffer the SOx dissolved in the scrubbing water. The alkalinity will help in neutralising the SOx and keeping the pH higher. On the open sea the alkalinity levels are generally high, and therefore the seawater can be utilised for scrubbing. This is what the open loop scrubber system does.

There are, however, some areas in the world where the alkalinity is too low for open loop scrubbing to be practical. These areas include, for example, the American Great

Figure 4: Separate versus combined scrubber units



Lakes, the port of St. Petersburg (RU), and the Mississippi river. If a ship is operating full time in these areas, a closed loop system would be the best option as it uses caustic soda to buffer the scrubbing water's alkalinity. Thus, the system is independent of the alkalinity in the surrounding seawater. A hybrid can then be used for those vessels that mostly operate in high alkalinity waters, but enter low alkalinity areas for shorter periods of time. A hybrid will then enable the system to switch between open and closed loop, according to operational needs.

The different systems have benefits and drawbacks when considering capital expenditure (CAPEX), OPEX and sometimes practicality. There might be other reasons for choosing a specific scrubber, other than just the alkalinity of the seawater on the vessel's route. If, for example, a ship operates in high alkalinity areas, but also in very shallow and sandy waters, one might want to consider installing a closed loop or hybrid system. This is because in an open loop, the sand will enter the system and cause wear to the equipment, especially to the water treatment units. This will add a lot of cost to maintenance.

Another thing to consider is the amount of water running through the system, as one of the biggest costs when operating a scrubber is the power used for the pumps. The amount of water needed will be higher in an open loop than in a closed loop, and therefore the power consumption will also be higher. In a closed loop system, however, caustic soda is used and this will add some cost. The amount of equipment in the system will also naturally affect the investment cost. Open loop comes out looking best here, as it is the least complex system.

Engine installations on board

Once one has decided which scrubber system will fit the designated vessel best, it is time to have a look at the engine installations on board. There are generally two ways to go; one can have separate scrubbers for all engines and boilers or one can have a combined unit for several engines or boilers. Because of the numerous technical and safety concerns, Wärtsilä has made the decision not to combine both engines and boilers into the same scrubber unit. This decision is also supported by boiler makers.

There are benefits and drawbacks with both combined and separate scrubber units. Separate units for each engine or boiler will allow considerable operational flexibility and will, therefore, most probably have a lower OPEX. The investment cost will, however, be higher than for a combined solution, as more equipment naturally means more cost. The combined solution will enable two or more engines or boilers to utilise the same scrubber unit, thereby saving space and investment cost. As mentioned though, these scrubbers will be less flexible, and will run for much of the time on "overload" if some of the attached engines are not running. It is always wise to discuss the best solution with a technical expert.

Putting knowledge into practice

To put this knowledge into practice and to further illustrate what has been discussed in this article, let us look at one of Wärtsilä's reference installations. Wärtsilä sold eight scrubber systems to Algoma, the first delivery being in 2012. In this case the closed loop system was chosen as the vessels will operate entirely inside the Great Lakes, where the alkalinity levels are low. A combined scrubber unit of 11 MW was installed for both the main and auxiliary engines to reduce both the investment cost and the space requirement. The potential loss of flexibility in the system was deemed manageable.

So to summarise, first look at the rules that are applicable where the vessel will operate. One should bear in mind that it's always the strictest legislation that needs to be followed. Furthermore, it is not only the IMO rules that need to be heeded, but also the local legislation in areas where the ship will operate. Secondly, have a careful look at the different options. Will the installation of a scrubber fit the vessel or should one go for an alternative? Many ship owners choose to get support from consultants at this point.

Once it has been concluded that a scrubber will be a good option for the vessel in mind, have another look at its operating route. Will the vessel enter low alkalinity areas and for how long? One might also want to keep in mind that until the world limit is enforced, the cost benefits of a scrubber will only be relevant in the emission control areas (or in the case of similar local legislation).

Jennifer Ahlbäck

Finally, one needs to have a look at the machinery to be hooked up to the scrubber system. By looking at the operating profile and layout of the engine room(s), one needs to assess which kind of scrubber installation will fit best. This will, however, be quite challenging and most operators would now seek guidance from one or several suppliers.

The suppliers will mostly be happy to offer relevant support along with their products, such as layout drawings, on board visits, payback time calculations and power consumption estimations. Overall, it is recommended to involve technical experts from the supplier already in the early planning stage of installing a scrubber, as the process is often quite lengthy. This is not an "off-the-shelf" product and cannot be treated as such. Every vessel is unique, which means that so too is each scrubber system.

Note

[1] Hongrui Ma ao. Transportation research, an international journal, Part D: Transport and environment, January 2012, Elsevier, volume 17D, issue 1.

Editor's Note: Jennifer Ahlbäck is an environmental engineer and has been working with scrubbers and other environmental products for three years within Wärtsilä. Originally from Finland, she now lives and works in Norway.

BY REAR ADMIRAL EVANGELOS TSANTZALOS

Greek shipping: mobilising sea trade with efficiency

Shipping is *the* global and strategic industry *par excellence*, serving the needs of international and EU trade in raw materials, finished products and energy. International regulations should govern a global industry, ensuring uniform standards to safeguard its viability and competitiveness. This success story should be cherished and preserved by international policy-makers.

There is no doubt that shipping is a major contributor to world economic growth. Few realise that over 60% of the total crude oil and refined products transported worldwide are carried safely by sea, amounting to more than 2,260 million tonnes.

No one, therefore, should ignore the dependence of the international community on ships for continuity in energy supplies on which all nations depend for securing, on a daily basis, the standards of living to which they are accustomed or aspire to.

The profile of Greek shipping

Despite more optimistic forecasts, 2013 was a relatively disappointing year in terms of world economic growth, though the second half was better than the first. Only the US exceeded expectations. European economies remained laggards and the Chinese economy performed less well than expected.

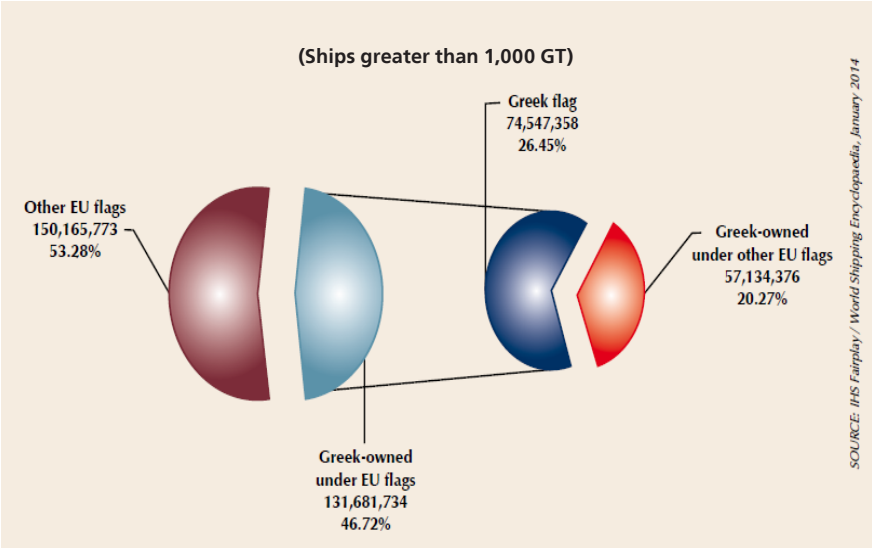
The immediate impact of this tendency was especially felt in the dry cargo market. Reduced industrial output required reduced quantities of raw materials and resulted in fewer cargoes being transported by sea. Moreover, serious differentiations in the exchange rates of some of the BRICs further impacted negatively on world demand. Expectations for 2014 are significantly higher than the 2013 performance due to the continuing US Federal Reserve policies and the rate cut by the European Central Bank.

By the end of 2013, the economic data of the Greek flag fleet was, to a large extent, satisfactory. Despite recession, over-tonnaging, an unstable freight market and reduced access to ship financing from banks, the Greek-owned fleet increased in tonnage (DWT) and in number of vessels.

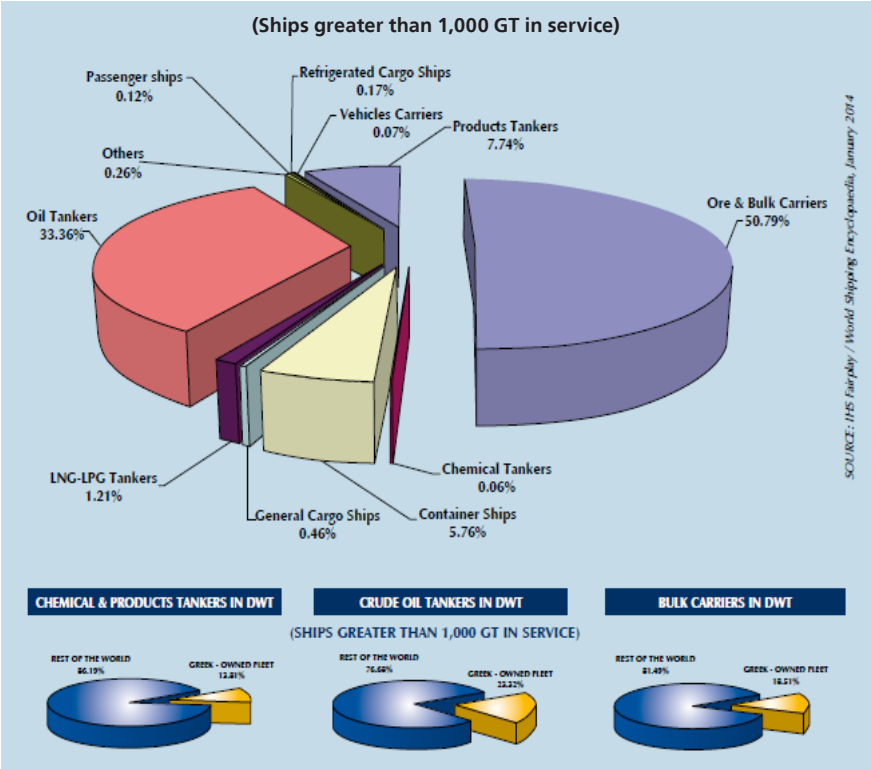
The Greek register accounted for 802 vessels (over 1,000 GT) amounting to 41,829,594 GT. Greek-owned tonnage held first position internationally. The fleet accounted for 3,669 vessels (ships greater than 1,000 GT) of 261.63 million DWT, representing 16.16% of total world DWT. The Greek flag fleet ranks seventh internationally (in terms of DWT) and second in the European Union (EU) (in terms of GT). The Greek-owned fleet under EU flags accounts for 46.72% of the EU DWT tonnage. Moreover, Greek owners control 18.51% of the world tanker fleet (crude oil tankers), 23.32% of the world bulk carrier fleet and 13.81 % of the world chemical and products tankers fleet in terms of DWT (excluding ships currently on order)[1].

By the end of December 2013, newbuilding orders by Greek interests amounted to 371 vessels (over 1,000 GT), representing 32.60 million DWT. Of these vessels, 149 were tankers, corresponding to 18.32% of world tonnage (DWT), including 58 LNG/LPG tankers amounting to 25.94% of world tonnage (DWT) and 51 products tankers corresponding to 14.24% of world tonnage (DWT), 169 bulkers corresponding to 15% of world tonnage (DWT) on order in each type, 48 containerships corresponding to 7.08% of world tonnage (DWT) and 5 other vessels. The orderbook of Greek shipping in 2013 continues to indicate a diversification to specialised ships like LNG/LPG vessels, containerships as well as products tankers[2].

The EU fleet in DWT



Ship type analysis of the Greek-owned fleet in DWT



In a geopolitically changing world Greek shipping, in general, is a reliable world trade player, covering an important part of the transportation needs of the world in energy and raw materials and by playing a significant role as an excellent representative of our country in all major ports and trading centres worldwide. Another indication of the Greeks' leading role in global shipping is the fact that more than 52% of shipping companies listed in NYSE and NASDAQ are owned by Greek nationals[3]. In the distribution of the Greek-managed fleet, under the flag criterion, a considerable proportion belongs to "open registries" such as Liberia, the Marshall Islands, the Bahamas and Panama (see Table 1).

As one of the world's quality flags, Greece generates a substantial political, economic and strategic contribution within the field of international maritime trade. Greek shipping is an export industry, playing a critical role in the development of the Greek economy not only through the systematic bridging of the deficit of the balance of trade but also through the creation of added value for all productive sectors, as well as the generation of employment on ocean going vessels, in shipping offices and the maritime cluster of activities ashore.

In the EU, over 90% of its external trade and 40% of its internal trade are carried by sea. Hence the Greek fleet and maritime capability are of importance for the EU, the US, and their allies from an economic, political and strategic point of view.

Lastly, continuous renewal of the Greek fleet has resulted in an average age of 11.5 years by the end of 2013, where the average age of the world fleet is 12.4 years. At the same time, newbuilding orders from Greek interests amounted 371 new vessels, representing 32.60 million DWT in the same year. New ships constructed under the Greek flag are fully compliant with all new safety and environmental regulations.

Table 1: Distribution of Greek-managed fleet according to flag (based on the number of ships on 31 December 2013)

Country	Number of ships	Percentage
Liberia	654	17.32%
Marshall Islands	633	16.77%
Greece	624	16.53%
Malta	597	15.81%
Panama	396	10.49%
Bahamas	264	6.99%
Cyprus	247	6.54%
Isle Of Man	62	1.64%
St. Vincent and The Grenadines	32	0.85%
Others	266	7.05%
Total	3775	100.00%

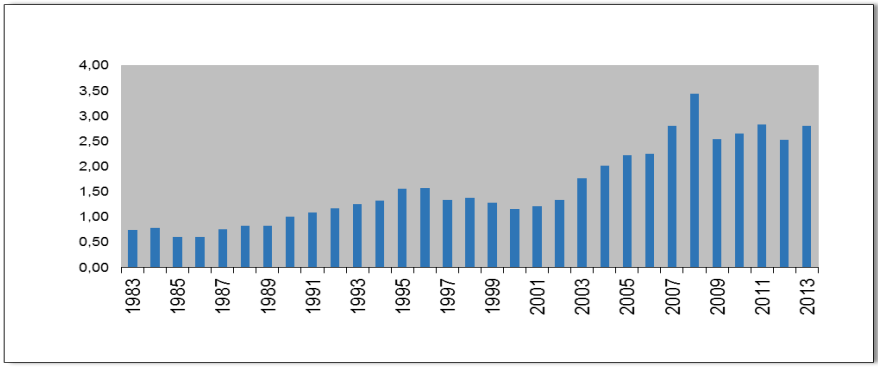
Contribution to the Greek economy

Shipping is one of the most important sectors in the Greek economy. According to data published in Eurostat's ESA tables, water transport had the highest foreign trade surplus of all the branches of the Greek economy. Despite the difficulties in both the internal and global economic environment, Greek shipping has managed to retain its international position and during the era of the ailing Greek economy, shipping was the only economic sector in Greece that did not reach high unemployment levels. It was able to offer career opportunities for youngsters through a systematic campaign to attract them to the seafaring profession.

These developments are being implemented within the long-established institutional legislative framework for shipping, where shipping is recognised as a non-negotiable, historic, national, economic and strategic asset which must remain internationally competitive.

In 2013, despite the persistent global economic crisis, Greece's foreign exchange earnings from shipping amounted to EUR 12,089.90 million compared to EUR 13,287 million in 2012; i.e. a reduction of 9.01%, while shipping provided 192,000 jobs – directly or indirectly – on ships and ashore in the maritime cluster.

Foreign Currency Imported from 1983 to 2013 (in millions of USD)



In terms of the maritime cluster, the numbers are equally impressive. About 1,336 shipping companies are established in Greece; 715 of them are active in the field of ship management and slightly fewer – 621 – are active in the field of chartering/brokerage and other shipping activities[4].

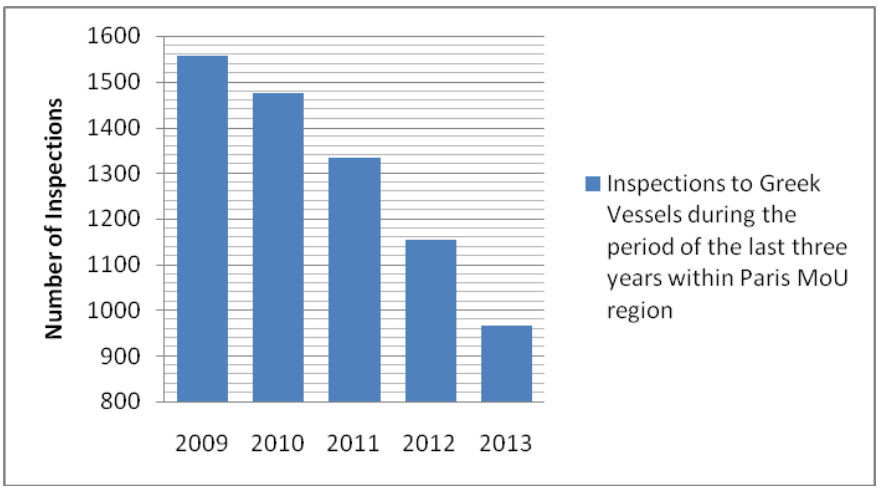
In 2013, the above-mentioned companies imported and converted to Euros USD 2,808,779,962. The equivalent amount in 2012 was USD 2,531,390,307. This is an increase of 11.0%.

The direct contribution of the core Greek shipping cluster represents 3.5% of Greek GDP. As such, Greek ocean-going shipping companies contribute the most. In addition, the shipping cluster contributes indirectly[5] to the economy, while the total contribution of the shipping cluster is 6% of Greek GDP. The contribution in Euros from the Greek shipping cluster in the past few years has remained stable, indicating that as a percent of GDP it has exceeded 7% of the economy, given the overall Greek GDP contraction over the last year[6].

Another indicator of the contribution of Greek shipping to the Greek economy is the Services Balance inflow. Greek shipping ranks first in the Services Balance receipts, while the capital needs of Greek shipping are covered mostly by private investments, without any subsidies or state financing, in contrast to other forms of services such as tourism, which ranks second on Services Balance receipts. Also, the Greek Shipping Industry has been investing shipping capital in other sectors of the Greek economy such as energy, transportation, construction, financial services, tourism, and technology and as such, supports employment in Greece and reveal the additional contribution of Greek shipping to the economy[7].

The shipping sector is of both real and symbolic importance for the Greek economy. Directly and indirectly – via synergies with other industries – the shipping sector contributes over 6% per year to economic activity and is the spearhead and most recognisable symbol of dynamic outward-looking Greek entrepreneurship, capable of competing successfully on a global level.

Paris MoU Inspections to Greek vessels during the last 3 years



The Administration

The Greek Maritime Administration is structured exclusively under the Ministry of Shipping, Maritime Affairs & the Aegean, by which it is intended to concentrate all functions of shipping in one provider, thus establishing a versatile and sustainable administrative scheme. The Hellenic Coast Guard acts as the prime implementer of this scheme. In other words, a one-stop-shop Public Administration has been established for Greek shipping, providing services to seafarers and ship owners.

The performance of the Greek Flag

For the current year, Greece is once again on the "White List" of the Paris and Tokyo MoU regions. The Greek flag is consistently included in the white list of these two Memoranda and furthermore, Greece is also listed in the US Coast Guard catalogue of quality fleets "Qualship 21". Greek-flagged vessels reaching the US and undergoing PSC inspections achieve a very low detention rate every year.

The high performance of these ships, in conjunction with the completion of a voluntary audit of the Greek Maritime Administration by IMO, has granted Greece and its ships the privilege of participating in the USCG Qualship 21 programme for one more consecutive year, along with other 22 flag states. Qualship 21 recognises flags with high performance that promote quality shipping and rewards their ships with reduced PSC inspections in the US.

Greece on the international stage

Greece exercises a major influence on sea transport worldwide, which is further strengthened by the fact that 90% of all foreign trade and 30% of intra-European trade is carried out by sea. Hence, Greece has a decisive role and as a member of the International Maritime Organization (IMO) since 1958, has actively participated since to international legislation, while at the same time and as a member state of the EU since 1981, enforced specific maritime regulations and directives of the European Union.

Additionally, attributing particular importance to deepening our maritime relations at bilateral level, Greece has concluded bilateral maritime agreements with 47 countries, including all major world trade partners.

Furthermore, acknowledging the fact that maritime transport is the international activity *par excellence* that requires a free and stable global regulatory framework, Greece considers the favourable conclusion of negotiations on further liberalisation of international maritime transport within the context of WTO and TISA as a matter of the utmost priority.

International challenges

The challenges that international shipping is facing are excess tonnage, combined with a short-term reduction in the demand side for transported cargo volumes, a lack of funding from bank institutions, a sharp decline in vessel values, uncertainty in oil prices and acute competition.

It is more than evident that living in a truly globalised environment, we have to recognise the trends and the new challenges in order to be able to identify the barriers to trade and capital mobility and to make the best use of technology so as to maximise efficiency and achieve further cost reductions, not only in the field of transport but also in the field of communication and commercial operations in general.

With this in mind, we should emphasise that the global shipping industry requires global regulation, and this is what the IMO has done so competently for almost a century now. We should give credit to the work of the IMO for developing by consensus the rules that will enable a sustainable shipping to flourish in the next decades.

At the European level, the adverse economic circumstances, coupled with the past recession in international shipping, render co-operation between all EU Member states imperative in order to maintain competitiveness and hence, the sustainability of European shipping.

With these thoughts and bearing in mind the value of shipping for the whole of the EU, Greece focused the "Sea Pillar" of our EU Presidency on shipping; and we took a major step forward towards the delineation and implementation of our strategic vision.

During the Informal Maritime Ministerial Meeting of 7 May, the "Athens Declaration" on the "Mid-Term Review of the EU's Maritime Transport Policy until 2018 and Outlook to 2020" was adopted that gave prominence to important issues which constitute the EU's shipping policy priorities in the years to come.

These policies focus on:

- The important role of shipping to Europe's economy and welfare;
- Securing the long-term competitiveness of the EU's maritime industry;
- Increasing employment in the maritime sector;
- Free access to markets;
- That short sea shipping needs to play a stronger role in the EU;
- The need to financially support the environmental performance of older short sea ships in order to comply with requirements such as low sulphur consumption standards, scrubbers or LNG fuelling and aiming that this would be done in EU shipyards.

In conclusion, and given that international shipping will continue to serve the needs of international trade and growth, the focus should be on supporting and facilitating the industry through positive measures and a favourable global environment, while maintaining the fundamental principles of free and fair competition and preserving its sustainable development for the benefit of consumers, traders, the global economy, society and future generations.

The general motto of the Greek EU Presidency "Sail together" takes on a fresh meaning when it comes to shipping, meaning that the only sustainable way forward for shipping is finding a second wind to face current and future challenges through co-operation, common understanding, inspiration and aspiration for the "engine of the world's welfare".

Notes

1 UGS Annual Report 2013-14
2 ibid
3 Foundation For Economic & Industrial Research, (2013), ''Executive Summary", ed. FEI.
4 Ministry of Shipping, Maritime Affairs and the Aegean, (2013)
5 Approx. EUR 2.3 billion
6 Bolton Consulting Group, (2013), "Impact Assessment of Greek Shipping on the Economy and Society", ed. BCG
7 ibid (2013)

Rear Admiral (H.C.G.) Evangelos Tsantzalos

Editor's Note: Rear Admiral (H.C.G.) Evangelos Tsantzalos is Director General for Maritime Affairs at the Ministry of Shipping, Maritime Affairs and the Aegean. Rear Adm. Tsantzalos holds a Master's Degree in Maritime Law from Southampton University, a Hellenic Naval Academy Diploma from Piraeus and a Bachelor in Law Degree from Thrace University.

He has held posts such as Director General for Hellenic Coast Guard Personnel, Harbor Master of Patras, Regional Commander of Coast Guard Port Authorities in Peloponnese, Maritime Attaché at the Consulate General of Greece in New York, Head of Unit for International Organizations and European Union issues at the Ministry of Shipping, Maritime Affairs & the Aegean and Policy officer at the Shipping Policy and Development Directorate, dealing with European Union and International Organizations issues, also at the Ministry of Shipping, Maritime Affairs & the Aegean.

Rear Adm. Tsantzalos has also represented Greece in various international fora, such as the EU, UN, IMO (Assembly, Council, Legal Committee, diplomatic conferences), the OECD, and within the context of bilateral maritime negotiations. He is Vice President at the International Conference on the Revision of the Athens Convention Relating to the Carriage of Passengers and their Luggage by Sea 1974 (IMO, 2002)

BY ANNE RIES

Quenching the thirst for knowledge

As he struggled ashore on a remote atoll in the Marshall Islands in January, Jose Salvador Alvarenga had achieved something unique; something he hadn't set out to accomplish, but something he was glad to have managed.

Against all the accepted beliefs and knowledge of scientists, the 37-year-old El Salvadorian fisherman had survived for over a year, crossing an ocean in an open boat without access to drinking water.

The recommend personal daily intake of water is a litre and a half, but survival experts believe that you can get by on 200 ml – a cupful – if you slow down your metabolic rate and remain cool. Jose claims he survived on raw birds and fish flesh, turtle blood and his own urine as his boat drifted from Mexico after the engine died. A distance of 10,000 kilometres, a duration of 13 months; a remarkable human achievement.

Vital for sustaining life

As I write this I'm adding up the number of times I've already been drawn to a tap today – nine, and I've yet to have a mid-morning coffee. Alongside oxygen, water is the most important ingredient for sustaining life. Seventy one per cent. of the planet is covered by it, 97.5% of it is salt water. In order to manage that 2.5% of "fresh water" and the minute fraction that is carried on board a vessel, the MLC 2006 Convention took steps to implement a new code and the Danish Maritime Authority highlighted this in a ruling – "It shall be ensured that drinking water on board (used for human beings) is of satisfactory quality and suitable for the purpose. It shall be possible to document this by means of regular analyses held up against international standards."

At Seahealth, the Danish Maritime Occupational Health and service partner for ship owners and seagoing personnel, we have been working on creating the platform to ensure that water on board is clean and drinkable and if that is not possible, to ensure that it is from a bottled source or water that has been previously boiled. Seahealth works for the betterment of health and safety on all Danish-flagged vessels, but any projects and initiatives are for the greater good of the industry; not least regarding water.

Let's start with an EU definition:

"Drinking water is all water either in its original state or after treatment, intended for drinking, cooking food preparation or other domestic purposes, regardless of its origin and whether it is supplied from a distribution network, from a tanker, or in bottles or containers."

That definition explains why I've already been to the tap nine times. It's not just thirst. It started from the moment I turned on the shower, brushed my teeth and washed a dish. Later it will add up as I rinse a salad for lunch.

Considerable problems involved

The need for clean drinking water at sea poses concrete and local problems that are considerable in comparison with delivering the product to the tap in your kitchen or bathroom. At home, the source is constant. At sea, water is taken on board from different geographical origins and to differing local standards and quality. It can also be converted from seawater to tap water and this in turn brings in a whole new set of checks and controls. On board it is bunkered and then pumped to where it is required, again triggering the need for regular checks of both equipment and quality.

The guidance we drew up at Seahealth – *Drinking Water On Board Ships* – covers sampling and testing, interpreting the results, sources of possible contamination and prevention of these. It creates a focus for day-to-day awareness and alongside threshold limits, it contains proven information on cleaning procedures.

Talking to seafarers

In creating the guidance we talked to seafarers. Most probably think that regarding water, you turn on the tap and there it is. We tried to encourage them to take a whole new

From the guidelines: table for drinking water analysis under various conditions.

Parameter **What should be meassured?**	**1.** **Production from seawater**	**2.a** **Bunkering** Water quality is known and acceptable. You are able to get documentation for water quality	**2.b** **Bunkering** Water quality is unknown	**3** **New vessels or if work has been done on the drinking water system**
Indicator parameters e.g. salt, pH, iron	Annual control		Control	
Inorganic trace elements e.g. lead, copper, zinc			Control	Control of metals, especially for new buildings
Organic micro-contaminants e.g. pesticides, organic compounds			Control	Control of organic compounds from coating
Microbiological parameters Determination of bacteria count, coliform bacteria, E. coli	Annual control	Annual control	Control - and annual control	Control on delivery and after repairs
Additives for further treatment Chlorine/silver salts or other additives	Annual control	Annual control	Annual control	

look – from the water in the glass right back through the entire system on board.

Much has been written about the topic. Two of the most relevant items are the World Health Organization's *Guidelines for Drinking-water Quality* (4th edition, 2011) and the 257 page EU sanitation training network manual for hygiene standards and communicable diseases on passenger ships. They are good but a little bulky. We have distilled them, as you might say.

We started by looking at the drinking water system as shown in the ship's manual. We followed the pipes from tank to tap, going with the flow as it were, circling on the drawing any areas of potential contamination such as filters or breather vents. We then examined these as the first in a regular process of routine maintenance steps. Once at the tap, we recommend that the water be examined for taste, colour and smell, intending this to be a constant, natural and regular reflex.

Some issues are not necessarily as clear as water; a factor which has led to the bottled variety becoming a more popular commodity than beer or milk in the United States. Bottled water markets itself on the virtues of purity and has on occasions choked on this. It has turned the most natural thing on earth into a "product", a huge industry.

Fiji Water is bottled at source in the Pacific and then shipped to the US, where it is a popular brand. The marketing guys at Fiji Water once ran an advertising campaign in the United States with the slogan "We call it Fiji because we didn't bottle it in Cleveland." The city of Cleveland took offence and then in court proved that their town tap water was superior on every level to the bottled variety. Sometimes, nature bites back. Nevertheless, bottle water can be necessary on ships – along with boiling the water – if the water on board is not clean.

As cruise liner operators know to their cost, the effects of any lack of hygiene in the bathrooms, kitchens or bars can sweep through a ship in hours, disabling crew and passengers for days, ruining reputations for years. Water is our friend, but it can also be our enemy. Legionella, E. coli and other microorganisms are not wanted on board, but somehow they obtain tickets. Of course, on a cruise liner with around 600 people on board, the opportunities for disease and the spreading of the same are considerably multiplied compared to a merchant vessel. So it is easier to make safe provision for water on board such vessels if strong clear rules and procedures are implemented.

Building in regular checks

The key to this is building regular checks into the Safety Management System that generate four questions which in turn leads to clarifying the water situation by stages. Firstly, ask what is the quality of the water produced or loaded on board? Then what are the risks of the water being contaminated and how should the water be treated? How should you routinely monitor that the water is clean? And finally, what should you do if it is not clean? Like an information tree, the guidelines then take you to the branch that should answer your question.

If everything is fine then the only action is to enjoy and use the water, but taking constant care to be aware if there is any change in taste, smell or colour. If it is not OK then it's a bit like a detective story. We have to look for clues and compile evidence. Thankfully, the sleuthing is fairly routine. Again you follow a route determined by the source of the water; if it was produced on board from seawater, bunkered from shore or a third option that either of those two were possibly polluted by the ship's recent history, such as a newbuild or a new system installed or refitted. Test and work back from the most remote outlets.

On board we should be ultra-cautious when bunkering and where possible, make sure that chemical testing by experts has been done before you potentially contaminate what you already have. If you are in any doubt about the quality, you should place it in a separate tank, quarantining it until you are sure it is safe.

There's a lot of water out there – without it we wouldn't need ships. Many vessels draw their water requirements from the sea itself. As a catchment area, twenty nautical miles offshore is the minimum starting point and more in shallow estuary-fed areas. Only in recent times have fish been able to return to London's River Thames. Would you swim, let alone drink, water that the professionals have abandoned?

The makers of the desalination equipment often make recommendations on where to pick up the seawater. Bringing the seawater on board puts the entire process in your hands. For instance, at sea you will only have your own hoses and pumps, over which you have some control and record-keeping. You also have a different set of parameters to work to, ones which don't involve third parties in a harbour. The greatest generator of problems with water is mankind… with a little help from the animal world.

Anne Ries

Scientists might never fully understand the secret of Jose's remarkable survival. He started his shark-fishing trip with a young companion who didn't make it, and apparently he slipped him over the side. After that, it was just him, the sea, his fishing rods, the odd dash of rain and time – plenty of time. Without water we really start to flag after 100 hours. Hunger strikers survive months without food as long as they get plenty of water. After all, we are water; our brains are 80% water. It is just that it is "cleverer" for us to drink some types of water rather than others. At sea, we need to be clever about it. Jose certainly was.

Clean drinking water is a basic human right and we have waited a long time for the MLC rule. Its implementation and the Seahealth guideline will hopefully create a new and fresher focus on making sure that there is ample clean and drinkable water on board.

You can find the guidance at *http://www.seahealth.dk/en/publication/drinking-water-board-ships*

Editor's Note: Anne Ries, M. Sc., Eur OSHM, has been Senior Occupational Health Consultant at Seahealth since 2007.

BY KYLE HURST

Big data analysis is the new weapon against on-line threats

When it comes to information technology, some parts of the shipping industry are well up to speed with 21st Century ideas – but unfortunately the IT infrastructure on their ships is often firmly rooted in the 1980s.

Kyle Hurst of Station711 explains how companies can now monitor these crucial networks, and potentially save themselves money at the same time.

Ever since ship owners began installing the first information technology on their vessels back in the late 20th Century there has been a fundamental problem.

Ships spend a lot of their time far removed from the continual back-up and maintenance needed to keep a computer network running smoothly. Also, most mariners are not IT experts and struggle when the system goes down or a component fails. While many ship's networks are quite advanced, particularly on large vessels, some are poorly designed and under-maintained, isolated as they are from central checks and control. For many companies this will continually cost them time and money and there does not seem to be an adequate strategy for managing the risk – till now.

Scenario 1: The impact of "human error" on data protection

A container vessel runs its on board network from a desktop PC loaded with an old version of Windows XP. One day a crew member decides to install a game on the PC, which he has on a USB stick. This infects the PC with a virus which "kills" the operating system and results in the loss of all data and most on the vessel's IT capability.

Vulnerable networks

This long-standing problem has become more acute, and potentially more damaging, since the advent of the internet. As companies rapidly adopt sophisticated new on-line systems, connected to the internet via satellite services, networks have become increasingly vulnerable. Now it's no longer just a question of maintenance – some ship's networks are wide open to attacks from computer viruses or hijack attempts from botnet programmes and other malware. The potential for network disruption is huge, and could expose companies to failures and service delays. When operational systems go down, a vessel's efficiency is compromised until IT can arrive to fix the problem.

Vision versus reality

Like the rest of the corporate world, the shipping sector is buzzing with "big data" concepts such as the Industrial Internet, Smart Shipping/Monitoring and Intelligent Systems. The idea is to use smart, connected systems to increase efficiency, cut costs and enable new services, while delivering faster than your competitors and giving customers better value.

Data demand is being driven by a range of sectors within shipping, all competing for a slice of the available bandwidth. Aside from the obvious operational requirements for communications, navigation and ship's maintenance, there is demand from areas such as HR and Accounts for crew data, and from crew members themselves for personal comms such as e-mails, social networking and entertainment. Crew usage is encouraged by companies with BYOD (bring your own device) policies, which allow them to use their own iPads and mobiles. Machine-to-machine data traffic is also likely to increase exponentially over the next few years as services such as remote engine monitoring and diagnostics become more common.

Scenario 2: Lack of accountability

Two IT personnel board a vessel in port to perform a routine update of the operating system on a single PC. On inspection they find the original OS has been wiped and a pirated version of Windows installed with no virus protection. As a result, the computer is effectively disabled by viruses. The crew claim "it was like that before we came on board". The IT personnel have to stay on board till the next port to fix the PC, so a two-hour job becomes a 72-hour job.

However, these demands, and the ambitions of shore-based managers and ships' owners, are increasingly at odds with the reality of shipboard IT. Many companies have no effective IT policy for their vessels, so basic areas such as system redundancy and the suitability of equipment for use at sea are not considered. As a result, periodic failures are inevitable and are likely to become even more frequent, especially when you factor in the scope for human error – either through accident or negligence.

On many ships there is no effective "owner" for the network and connected devices, which results in a lack of accountability. Even when a ship does have an IT manager, they often don't have enough visi-

bility of who's doing what on the network – especially on-line. The rise in internet use means that numerous devices connect to the ship's wireless network, and the IT manager is often unable to regulate them. One of the biggest risks is from crew who come aboard with their own USB sticks, which may be infected with computer viruses. All of this adds up to an unmanaged and unreliable IT environment that is often the backbone for operations.

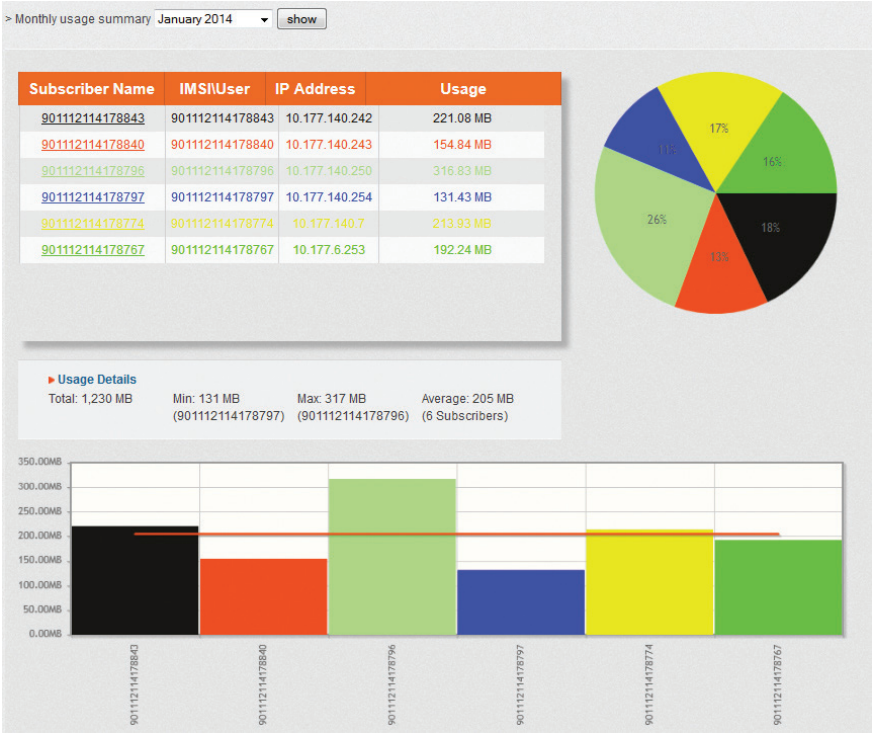
The storm on the horizon

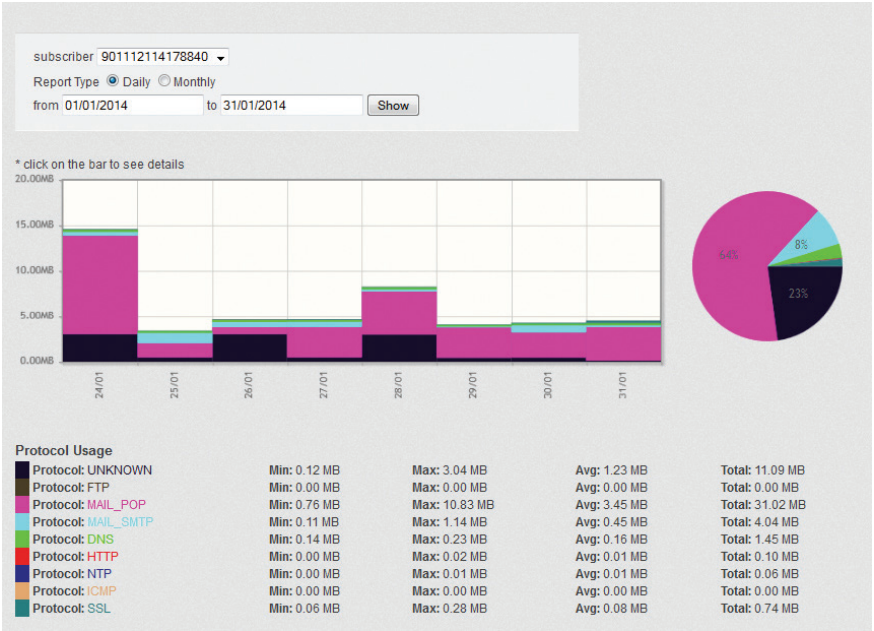
All the evidence points to a potential crisis for many in the shipping industry as the gap grows between demand for sophisticated on-line systems that connect ship to shore and the reality of shipboard IT that is not fit for purpose. System failures will become more frequent and costs will escalate as a result.

One source of unseen extra expense often overlooked by shipping companies is the potential for massive bills resulting from unwanted data traffic over satellite systems. Some satellite companies charge per MB used, so costs can quickly escalate to eye-watering levels if unwanted data is not identified and stopped quickly. Even if you are not paying per MB, and are using an unlimited usage system, you still should know where all your bandwidth is being used. There is a risk of thinking you need to pay more to increase your bandwidth, when actually most of your usage is unwanted data! And let's face it, maintaining IT systems at sea is not exactly low-cost as it is!

The good news is that cost-effective, reliable solutions already exist to provide comprehensive protection for shipping companies against the adverse impact of on-line threats and substandard IT. Some companies have recognised these problems but Station711, through their dedication to innovation, have created tools to help put shipboard IT where it ought to be – one step ahead of the multitude of threats. If the cost of failure is higher than onshore, and the ability to remedy it while at sea is lower, then shouldn't shipping companies do everything they can to design their systems to be more resilient than those onshore? Station711 believes so.

Some basic and essential first steps are to lock shipboard systems into the corporate





Two examples of read-outs from Data Analyzer showing spikes in unwanted traffic.

IT and procurement policies, ensure that hardware is designed for maritime use, and that suitable back-up components are available to the crew while at sea. An integrated communications platform such as smart@sea by Station711 will provide the over-arching control needed to ensure the network integrates effectively and safely with satellite communications. It is also a cost-effective first step to upgrading substandard IT. Station711 systems will quickly highlight problem areas and help you prioritise them as you make improvements, while providing essential protection in the meantime.

However, the next vital step in making onboard systems safe and controlling costs is to analyse the types and volumes of data flowing to and from the ship's satcomms terminal.

Total visibility of data

Data Analyzer from Station711 is a unique solution that monitors all data moving to and from a ship's satellite terminal. It works by inspecting the data flow through the onshore point of presence (PoP), so it is completely independent of the ship's network and can be operated by shored-based

Shore-based IT data centre. Many companies have no effective IT policy for their vessels.

personnel. Login is via a web interface. Data Analyzer can be used in co-operation with smart@sea or as a stand-alone system.

One of the strengths of this solution is the flexibility and granularity of the analysis. You can set a range of parameters to interrogate the data – including source/destination IP, source/destination port and traffic total – and customise it to generate alerts when undesired or damaging activity is detected. The dashboard view, and the charts and diagrams it generates, is excellent for monitoring data communications at a glance. Daily, weekly or monthly traffic reporting options are available and the user can set a date range to produce a traffic diagnostic for a specific period. Full traffic data reports are available for the last six months, and general data usage is retrievable for 12 months, so large-scale traffic analysis is well supported.

Scenario 3: Early diagnosis of an expensive glitch

A shipping company running Data Analyzer noticed a sudden increase in the volume of encrypted data being received by one of its vessels, from tens of MBs to 1GB plus. On inspection they found a "hole" in the vessel's firewall, which was allowing an antivirus programme to download an update via satellite. Thanks to Data Analyzer they were able to fix it the same day, potentially saving thousands of dollars in unwanted data traffic if it had continued unchecked and also closing a hole in the firewall that could have been exploited.

The solution's "killer app" is its ability to identify unwanted network traffic in almost real time; this is a unique "safety-net" that is only offered by Station711. As you can see from the illustration, the graphs clearly show any sudden increase in different types of data, either transmitted or received. The black sections of the graph indicate an unknown data type (encrypted), which could be potentially dangerous or unwanted transmissions, while the sharp spike represents a massive increase in usage – and in per-MB satellite charges for the user. By using Data Analyzer to spot this early the company can fix the problem, which might be caused by a virus or botnet-type malware, and quickly bring costs back in line.

As well as being a powerful tool in monitoring and controlling data traffic, Data Analyzer has many applications in the wider management of shipboard IT. It gives much greater visibility of where data is being used and by whom, which encourages greater accountability by crew members. In the same way it benefits security, because the knowledge that all data usage is analysed will discourage crew from using the satellite link for unauthorised downloads, which could introduce viruses on to the network. And it helps IT managers plan the satcomms requirement, either for a single vessel or a fleet, by providing a comprehensive breakdown of usage.

Network monitoring

One of the biggest headaches for shore-based managers is remote diagnosis of shipboard IT problems. If a ship's officer calls and says "our server has gone down" where do you begin in trying to solve the problem? The new version of smart@sea will allow IT managers to monitor the status of a ship's network, computers and operating systems in virtual real time. So if something fails the IT manager will be the first to know and can then decide how to fix it. This is a huge advance on trying to decipher the problem based on information from crew members who may have no IT background, and in any case have many other important things they should be doing.

By using Network Monitoring and Data Analyzer in tandem, IT managers will be empowered by a 360-degree view of their ships' computers, network and satellite traffic in real time. As well as much wider visibility of the vessel's IT environment, it will give them a comprehensive ability to diagnose issues or failures and keep the network safe and functioning well. Above all, it will enable them to be proactive in preventing failures or problems before they occur or escalate out of control.

In a world of rapidly increasing ship-to-shore connectivity and network complexity, it's good to know that the "bad old days" of chaotic shipboard IT may soon be consigned to history by smart systems like Data Analyzer.

Kyle Hurst

Editor's Note: Kyle Hurst is Director, Channel Development, of Station711. Established in 2000, Station711 provides Mobile Satellite communication service packages, including customised solutions. Station711 is part of the RRsat group.

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BY MICHAEL GREY

The role of the Harbour Master

The traditional role of the Harbour Master has been greatly expanded and today, Harbour Masters can wear many different hats. There remains the prime responsibility for marine and navigational safety in the waters of the port, which themselves can be an all-embracing role in a major port, or one in which there may be complex navigational problems.

It is the Harbour Master who, in many ports, will be tasked with the responsibility for security under the International Ship and Port Facility Security Code, ensuring that terminal operators undertake their obligations and serving as the point of liaison for national security authorities and law enforcement.

There will be, almost inevitably in most parts of the world, extensive environmental responsibilities attached to the job, which are regularly being extended and which will see the Harbour Master closely involved with the prevention of all forms of pollution, response and contingency planning.

It may involve close involvement with the environmental authorities, putting a practical perspective on port development plans or dredging schemes. And in many ports, the Harbour Master will have commercial responsibilities, part of the senior management which will ensure the future prosperity of the port by the team's ability to attract and retain customers.

No two ports the same

No two ports are the same, their geography, topography, hydrography, size and commercial alignment all contributing to the extent of the Harbour Master's role. Ports will tend to be defined by their trades, some intensely focused on a narrow range of trades, like the great bulk iron ore or coal terminals, and petroleum and its products. Some are specialist ferry ports, others with their trades widely spread across a range of different trades and ship types and sizes. Some will share their waters with other marine sectors like offshore, fishing, or a large and often seasonal leisure contingent, whose needs all have to be accommodated by the provision and maintenance of the appropriate marine facilities. Pilotage, towage, linesmen, vessel traffic control, port information systems and the policing of port waters will probably all find themselves within the Harbour Master's bulging portfolio.

Harbour Masters have traditionally been professional mariners, who have opted for this interesting and challenging branch of the industry after a sea career and a Master's Certificate. There has been little formal training for the transition between the bridge of a ship and the Harbour Master's office, although there are now some specialist qualifications that are available.

Captain Kevin Richardson, recently elected President of the International Harbour Masters' Association (IHMA), believes that continuous professional development is essential if Harbour Masters are to properly undertake their expanding roles in the 21st century. Captain Richardson, who recently retired as Harbour Master of the UK's busiest ferry port of Dover, points out that today's Harbour Masters are often coming from different professional backgrounds and there is a need for good training throughout the ports industry generally. It is, he says, "essential to refill the pot of expertise" with training and the IHMA recognises the need to sponsor good training initiatives.

A relatively young organisation

IHMA is a relatively young organisation, formed in 1996, but has grown fast and now has 230 members spread right across the world. They are strongly represented in Europe, which is where the organisation originated, but there is significant membership in Australia, South Africa, Russia and Canada. There are still "gaps", notably in South America and the US, where the "Captain of the Port" remains a US Coast Guard appointment. Nevertheless, Captain Richardson believes that a compelling case can be made for membership, as a valuable networking organisation and "a natural source of information and advice" to professionals who may, by nature of their job, may find themselves somewhat isolated.

IHMA, its president suggests, can provide "an international template of best practice" and as an observer at the International Maritime Organisation (IMO) the organisation can provide a professional and practical input into many debates, which these days see politicians often taking decisions on technical and marine competencies. IMO status, he emphasises, is "very important" and the IHMA can react quickly to issues raised at the organisation.

Appropriate expertise

The IHMA, for instance, can bring much appropriate expertise to the topical problem of places of refuge and the need for risks to be properly and professionally assessed. Captain Richardson suggests that the UK system in which the Secretary of State's Representative (SOSREP) would be the focus of decision making has been demonstrably effective in dealing with damaged ships, but admits that it has not commended itself to all other countries where political pressures remain influential.

Security is a further issue that increasingly involves the Harbour Master's department in much additional work, something which

The IHMA regards its IMO status and participation as "very important". Captain Kevin Richardson, President of IHMA (right) is seen here with the Chairman of the IMO Working Group on e-Navigation, John Erik Hagen, of the Norwegian Coastal Administration.

is, says the IHMA President, unlikely to get better. Here, too, there is a role for the IHMA in sharing experience and best practice, as the Harbour Master in every port considers what can be done to make "a situation of high risk for the terrorist". It is he emphasises, a "huge issue" with the problem of securing the "marine back door" in the shape of the water side of every port not an easy thing to address.

Complicated in ports where commercial shipping, which could conceivably be targeted, shares the waters with leisure interests – very significant in some ports – the security situation does not lend itself to easy implementation. There is an obvious need for intelligence-based decision-making. As for "dumping" security responsibilities upon the Harbour Master, it would be better if this often demanding role could justify its own specialist, but this is not always possible and it is just another area with which the Harbour Master needs to build up an expertise,

The environmental problems are also increasingly landing on the Harbour Master's desk. Developing and testing contingency plans for pollution may be a logical role as it will be a marine-based business. Take the problem of atmospheric emissions in port. Who, asks Captain Richardson, will be charged with policing the emission levels, with port state control in many parts of the world exceedingly stretched?

Supporting crew welfare issues

The IHMA, perhaps because of the seafaring background of its members, is strongly supportive of measures which contribute to the welfare of ship's crews and the port welfare structures. There is a general belief that barriers to shore leave for ship's crews need to be reduced if seafarers are to have a more reasonable life. In the UK, the IHMA has recently agreed to sit on a port welfare facilities development project co-ordinated by the Merchant Navy Welfare Board.

The Harbour Master, says Captain Richardson, should be "in the middle" of most matters that involve the interface between ship and shore. Obviously it is within the Harbour Master's bailiwick to be part of any consultation on matters of ship handling and manoeuvrability, the operation of tugs and weather conditions, problems of windage, tidal and hydrographic conditions. He is able to contribute to any discussions on bollard strength, infrastructure design, berth or channel design. IHMA has a Memorandum of Understanding with the Permanent International Association of Navigational Congresses, its members serving on PIANC working groups. It works closely with IALA and the International Maritime Pilots' Association and provides a contribution to a working group on lifting appliances.

IHMA believes it is important that there should be clarity and a common approach to the presentation of the static information that ports provide to operators considering the use of a port. It is working closely with the UK Hydrographic Office to develop an on-line port information exchange, with BIMCO involved in providing the definition of common terms that will reduce the risk of confusion when considering what is meant by such terms as "depth" or "length" or "height" etc.

The IHMA structure

The IHMA is organised with a seven member Executive Committee which takes policy decisions and a six member Council which acts as a consultative body. There is a good spread of members of these bodies around the various regions, the regions themselves organising their own committees, which in turn report back to IHMA. The president rotates reasonably often. A small secretariat is headed by Anne Carnegie.

Members get together at regular congresses, the last being in Bruges, while the next congress will be held in Vancouver, the first time it has been held in North America. These are important for information exchange, technical networking and sharpening the organisation's antenna as to what is concerning members around the world.

During his presidency Captain Richardson hopes that the IHMA can make substantial progress on Continuous Professional Development for Harbour Masters, the production of best practice guides and generally promote the organisation as a logical and practical method of keeping Harbour Masters better informed. "We heard it first from you" is a recommendation he would like to hear more.

Harbour Masters are, he says, people used to managing hazards of all kinds, whether it is deciding policies on Pilot Exemption Certificates, to the proper parameters for keeping a port open in deteriorating weather, deciding on the limits of navigation. Captain Richardson thinks it important to have strong connections between pilots and Harbour Masters and that if a pilot has reservations about the safety of a ship or operation, "the Harbour Master needs to back the pilot up", having the courage of his convictions.

If a Harbour Master feels he needs to close a port or restrict its operations because of weather conditions or other safety concerns, he should not be subject to commercial pressures, nor give in to it. But he does need to explain the situation clearly. Meanwhile, the IHMA will always give support to members in difficult areas.

An organisation like IHMA, Captain Richardson points out, is a very valuable source of international information to people whose day to day job will be focused upon a single port, broadening their perspectives and widening their horizons in their own challenging and ever expanding roles. ❚❚

Editor's Note: Michael Grey is BIMCO's Correspondent in London. He is a former Editor of Lloyd's List and a regular contributor to many maritime publications.

New books

The pilot's life

Competent pilots might be considered an integral part of the risk mitigation strategies that will keep a vessel safe at what is usually the most hazardous part of her voyage. They represent local knowledge of the navigational conditions, coupled with familiarity in the important specialist skill of ship-handling.

The ideal pilot will walk onto the bridge of a strange ship and be able to assimilate the situation and put the Master at ease. Such an individual will have useful character traits of calmness, outward competence and a considerable degree of spatial awareness.

Pilotage is as old as shipping itself, the pilot who boards a ship an outsider, but paradoxically part of the bridge team who will handle the ship at this crucial time. Except in the Panama Canal, where pilots assume full liability, they are there to advise the Master and the Master-pilot relationship is one that, while the subject of debate, is undeniably important.

Every port is different

Just as every port is different in terms of geography, the depth, the tides, the weather and the type of shipping it attracts, so pilotage has to be attuned to the specific needs of the location. So how does one begin to write a book on pilotage? The International Maritime Pilots' Association, has done just this and *IMPA on Pilotage* is a large and comprehensive volume with its authors drawn from pilot services all over the world. Thus there are contributions from people with real and current expertise in handling every different type of ship in a wide range of conditions, from canals to the ports of the frozen north.

Whether one has ambitions to become a pilot, or "merely" pay for them when the bills come in, whether you are an employer of pilots or an experienced pilot looking to stay at the top of one's profession, this is a comprehensive guide.

After a brief history of pilotage (a story in itself as there were pilots operating 4,000 years ago in Mesopotamia), the book begins with sections on the legal and statutory issues that surround it. IMPA, of course brings a useful and practical perspective to debates in the International Maritime Organization (IMO), where practising pilots who may have been handling ships that week can contribute. Regulation of pilots also features in national instruments. There are important messages on liability and criminalisation, on immunity and exemptions.

Practical matters

Practical matters are featured in a section on conducting pilotage, with the latest thinking on planning and the pilot's passage plan, the best methods of undertaking the Master/pilot exchange of information, communication and the topical matter of language, should the pilot speak in something other than the ship's working language. The importance of common sense and courtesy is underlined, as the Master needs to know what the pilot is saying to the tugs or to port control and the pilot in turn needs to be made aware of events that are happening during the pilotage.

The sheer variety of the different types of pilotage are emphasised with descriptions of underkeel clearance, winter pilotage, contributions from Panama and Kiel pilots and the differences between river, deep sea and straits pilotage. All are different, but all demand concentration, application, and the expertise of a well-focused bridge team.

Ship handling

There is a large section on ship handling – the "theory" dealing with propulsion, steering and power, the practical side pointing to the incidents which can interrupt a passage with blackouts, and problems with shaft generators and controllable pitch propellers.

The fast-changing world of navigational equipment and technology is underlined, the special skills needed with azimuthing control devices emphasised.

Problems in handling high sided vessels exposed to windage and the phenomena of squat and interaction are described. There are hints on the use of tugs, the handling of sailing vessels, unusual craft, warships and fast craft.

It has been said that some pilots are instinctive ship handlers, but most individuals will benefit from training and a section for the would-be pilot describes various entry routes to the profession. The importance of continuous professional development is underlined while the value of mentoring is emphasised. Today's pilots of course can benefit from the use of training simulators that are ever more realistic and useful and the use of simulator training and that of scaled manned models form a useful section. Bridge resource management has been a very live issue in the marine world in general and BRM for pilots is discussed. Issues of fatigue and its management are considered.

There are ports where pilots are dropped aboard by helicopter, a very few where a "cherry picker" puts the pilot safely aboard, but in the vast number of ports the pilot still will board an arriving ship in an exposed roadstead, from a small boat. There is thus an important section on transfers, considering ladder safety, the evolution of pilot boats and the use of helicopters.

A number of appendices contain IMPA's position competition, ECDIS, the IMO's e-navigation strategy and the use and design of portable pilot units. This is a useful and interesting volume about an important function that bears so much on maritime safety.

IMPA on Pilotage is published by Witherby Seamanship International, price GBP 75.00. ISBN 978-1-85609-635-5. Further information: *www.witherbyseamanship.com*

The science of dismantling

Ship recycling, which was once so matter of fact a conclusion to the life of every ship, has become controversial, with health, safety and the environment all important issues.

The International Maritime Organization's (IMO) Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships is yet to be ratified and come into force and until this happens, it might be expected that this will remain a contentious subject.

Last year the World Maritime University in Malmo ran a large and very informative international conference on ship recycling and its proceedings have now been published by WMU. It focused primarily on the five leading countries Bangladesh, China, India, Pakistan and Turkey, which process some 97% of world tonnage, in a business which last year saw 1,213 vessels scrapped, with 645 sold to beaching facilities in India, Bangladesh and Pakistan. It is these yards which are under scrutiny, attempting to improve their practices and reduce the environmental, safety and health difficulties which have been the focus of international attention.

Every aspect of ship recycling

The conference drew together 275 participants during the 30th anniversary year of the WMU, with no fewer than 47 expert speakers in nine sessions which covered virtually every aspect of ship recycling. Policy issues were discussed, there were speakers from dismantling industries in recycling countries, the meeting brought the European stance on recycling to the "rest of the world", while specialists were available to speak on everything from the recycling of oil rigs and platforms, waste management and the development of technology, to the development of good practice in the yards themselves. This book contains a selection of the papers and keynote presentations given during the conference (BIMCO being one of its sponsors) – 18 in all.

The aim of ShipRec 2013, as noted by the WMU President Dr. Bjorn Kjerfve, was "to bring together stakeholders with various national, regional and international interests". There were insights from the heart of the ship-recycling industry which for some nations forms an essential part of the local and national economy. There were speakers from all sides of the debates current about recycling. At the end of the day, it is hoped that this conference will have added to the sum total of knowledge and helped to improve the industry.

Perspectives on the industry

The proceedings contain perspectives on the industry from both the IMO and ILO, the two UN agencies concerned, papers on education for the ship recyclers, an EU project on the Turkish recycling sector, risk assessment, oil rig dismantling, the impacts hoped for in the Hong Kong Convention and its challenges. There were interventions on technology, the need for better accident reporting and the economic impact of the industry in one of the major players – Bangladesh.

This was an important and topical conference, the issues of which remain live, as ship recycling affects every ship on the seas and thus every ship operator.

International Conference on Ship Recycling – Proceedings from ShipRec 2013 7-9 April 2013. A WMU Publication ISBN 978-91-977254-8-4.

Macro Economics

Take nothing for granted; we need reforms to improve economic performance

Global economy

The International Monetary Fund (IMF) has downgraded its global growth projection from 3.7% in April to 3.4% in July. The adjustment is primarily due to the large negative result in the US in the first quarter of the year. The IMF stressed that this is now behind us – and it therefore sticks to its 2015 projection with an unchanged growth level of 4.0%. Moreover, the outlook for the various emerging markets including, amongst others, Russia, ASEAN-5, Brazil, Mexico and South Africa, is now less optimistic compared to the assessment made three months ago.

Regardless of slower economic activity, the projected level of world trade volumes (goods and services) was unchanged from IMF's April projection.

Overall, the recovery is still not very strong and still needs support. Different stages of the recovery require governments and institutions to apply different measures. Reforms are needed across the board and they are coming, but often too late and too slowly in many countries. Despite the aggressive monetary policy deployed by many nations, the IMF sees no major risk bubbles right now. It appears as if the markets understand quite well what the central banks are doing. This reduces the downside risks of these operations.

US

The very disappointing performance of the US economy in Q1 (-2.1% in Q1-2014) led the IMF to reduce annual growth expectations for the US in 2014. A sluggish level of private demand (goods and services), in combination with declining exports, contributed much more negatively to GDP growth than initially estimated. As BIMCO expected, all of that changed in Q2, according to the advance estimate, as GDP grew by 4.0%, leaping forward through a reversal of the negatives in Q1.

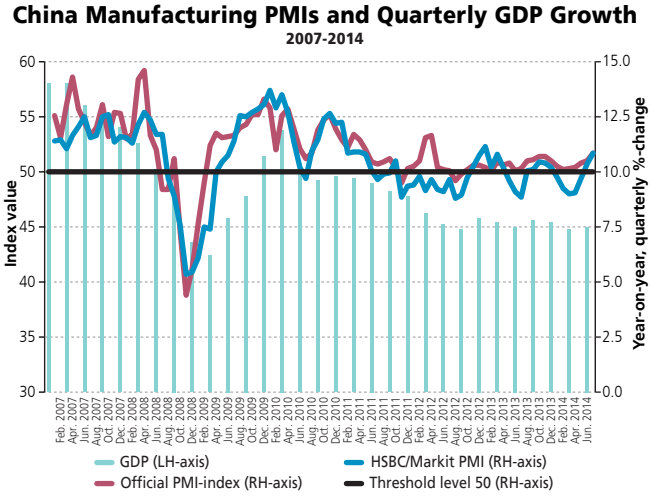
The macro economic development is mirrored perfectly in BIMCO's own US West Coast container export and import data. January/February exports of containerized goods were in considerable negative territory, whereas March clawed it all back to end Q1 y/y at +0.5%.

Despite that, the recovery in the US remains the strongest in the western part of the world and the Central Bank (FED) continues to taper off its quantitative easing programme concurrently with economic improvements; now the FED "only" purchases bonds worth USD 25 billon per month, down from an exorbitantly high USD 85 billion in each month of 2013.

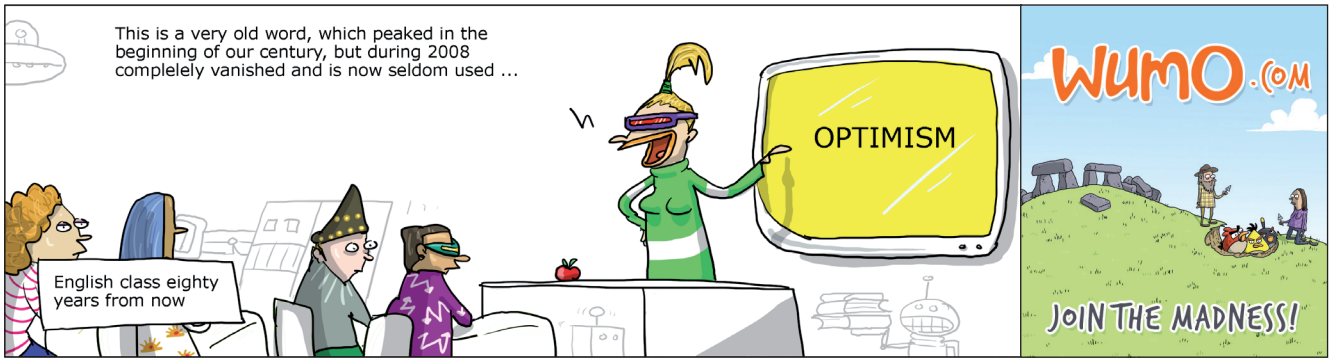
Growth has been strong enough in the past few years to create much-needed jobs, though the FED believe there is still room for improvement. In time, this job-generation will make the recovery self-sustainable.

Asia

In China, the economy grew by 7.5% in the second quarter, reversing the slightly negative trend from the past two quarters, coming in higher than the 7.4% growth in Q1. This happened in close correlation with the authorities' aim to control credit growth. A looser credit policy in the second



Source: BIMCO, HSBC/Markit, Fung Group



Source: Wulffmorgenthaler

quarter as compared to the first immediately resulted in higher growth rates.

June also marked the return of both Purchasing Managers Indexes (PMI) into positive territory for the first time since December 2013. The weakness seen in the early stages of the year appears to be gone for now. Other indicators confirm that the economy is still moving forward fast; most noticeably the Chinese steel industry produced 3% more steel in the first half of 2014 (412 million tonnes) as compared to H1-2013 (400 million tonnes). China produces half of the world's steel and has doubled its output in just 8 years. Full year production in 2006 was 421 million tonnes.

In Japan, growing inflation stemming from VAT increases and yen weakness has confirmed that the Central Bank is on the right track and it seems firm in its pursuit of additional monetary policy stimuli. This leaves the full focus on "Abenomics'" so-called third leg, which consists of a growth strategy with a wide range of reforms, mainly effecting corporate tax, the labour market, pension system, and also potentially legalising gambling, to generate more revenue. The execution, effect and scope of the strategy will directly influence the Japanese economy.

EU

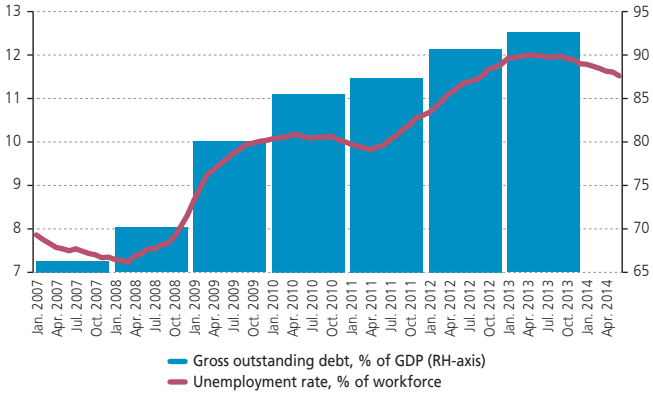
The weak and uneven pace of recovery in the Euro area is affecting the efficiency of the European Central Bank's (ECB) operations. Nevertheless, the main issue in Europe is still the inadequate amount of demand. The level of activity is still not high enough to reduce unemployment sharply and secondarily, to bring down debt levels.

This low activity level puts pressure on the ECB too and the bank must remain focused on bringing inflation up to its target level at around 2% – which is rather far from the level of 0.5% in June. Euro area flash inflation for the month of July released on the last day of the month showed an alarmingly low level of +0.4% y/y. No inflationary pressure is visible, as capacity can easily cater for the subdued level of demand from private households as well as businesses.

Unemployment in the Euro area in June was 11.5% (April 2013:12.0%). Here, the rising trend was broken last year whereas the debt level has increased from 66.3% by the end of 2007 to hit 92.6% by the end of 2013 in an unbroken rising trend.

The ongoing tension between Ukraine and Russia may have a negative spill over effect on the economies in Europe. Both countries are significant

Key Euro Area Indicators
2007-2014



Source: BIMCO, ECB

trading partners with several European nations, especially as regards energy. Coal prices have already gone up, and we could see rising inflation stemming from higher energy prices when demand goes in tandem with lower temperatures in Europe.

Outlook

Now we have confirmation that economic development in China is not about to stall, it should comfort the market and provide impetus for a stronger freight market in the second half of 2014 unless the supply side fails to deliver, or China unexpectedly suffers a set-back.

As regards to Europe, the IMF expects France and Italy to perform worse than previously projected in April. This is not just due to bad fortune in the first half, as was the case in the US, but also to a significant lack of reform of the systems needed to turn the current situation around and prepare for a brighter future. Spain, on the other hand, could perform more strongly in both 2014 and 2015, leaving negative growth rates behind in 2013.

In the US, the adverse weather conditions this year have cut GDP growth expectations from 2.8% down to 1.7% but going forward, the US is now looking at 3.0% in 2015, up by 0.1 percentage points from April projections.

To conclude, 2014 is still on track to beat the 2013's performance in GDP-terms. By a narrower margin than originally foreseen. With a bit of luck, we can avoid a photo finish to make the call at the end.

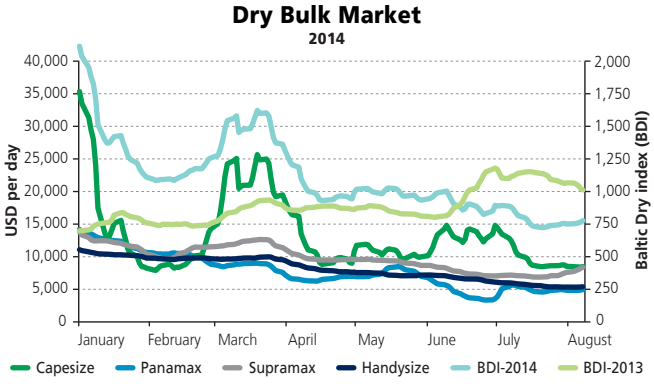
Global seaborne trade is dependent on global growth, thus it is vital if general shipping demand is to go forward that a smooth transition from a sustained recovery to normalized demand become successful. The article was finalised on 8 August 2014. Read about the impact on shipping on the following pages...

Dry Bulk Shipping

All eyes on Brazilian iron ore exports, as we await the long-anticipated lift in freight rates.

Demand

The freight market, which performed so well in Q1, has certainly not delivered in the past 4 months. BDI has dropped from 1,621 on 20 March to hit 747 on 29 July. Panamax ships have not been above USD 10,000 per day since 20 February, but below USD 5,000 per day for most of June and July. BIMCO expected challenging market conditions, also for Panamaxes, but rates below USD 4,000 per day were an unpleasant and unexpectedly low level.



Source: BIMCO, Baltic Exchange, CRSL

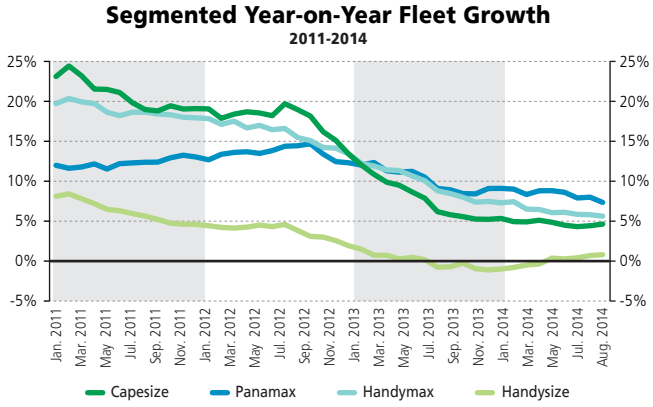
As we have entered into the second half of the year, the anticipated freight rate recovery for Capesize ships in particular should start soon. In our last report, we made the case that more long-haul shipments of Brazilian iron ore are required to deliver significantly higher freight rates. Supported by seasonality, in conjunction with the announcement made by Brazilian mining giant Vale, expecting its iron ore shipment in second half of the year to be 22% higher than the first half, the case is still on target. Freight rates on the West Australia to Qingdao, China, route peaked in March at USD 22,661 per day (today: USD 6,681 per day), whereas freight rates Brazil to Qingdao, China, hit USD 40,797 per day in March (today: USD 18,065 per day).

The pause in recovery has meant a tepid demand for newbuildings. This has caused prices to fall for the first time in two years, according to Intermodal. Today, an 180,000 DWT Capesize ship costs USD 56 million – 20% more than in 2012 – and with indications of cheaper prices around the corner. At the market peak in 2008, a Capesize newbuilding would have set you back USD 100 million. Kamsarmax/Panamax newbuildings can be acquired at around USD 30 million, up by 10% on 2012-level.

Lack of cargo has caused more widespread idling of dry bulk ships in recent months. Poor freight rates have discouraged opportunistic repositioning and less available cargoes has meant a fierce fight for them, putting downward pressure on earnings.

Supply

The slowing fleet growth over the past 20-something months has spurred optimism in the industry. Whereas developments have been gentle to the Capesize and Handysize fleets in particular, Panamax ships are continuously feeling the heat. The Panamax fleet has grown by 84 ships, the most out of the four sub-segments



Source: BIMCO, CRSL

since the start of the year. Including 2013, it becomes clear that the heat is partly on for Handymax ships too.

The improvements seen on the supply side of the Capesize segment are mirrored in the freight market, with rates becoming more volatile once again. The opposite, where the supply side is still outstripping the demand side, has resulted in steadily falling freight rates, with low volatility for Panamax and Handymax ships.

The supply growth for the years 2014 and 2015 follows our expectations closely. What is new in the supply side outlook is the lift in estimated 2016 deliveries. The overall order book has grown by more than 10 million DWT in the past two months, with the majority of those contracts destined to be built for as late delivery as possible. New orders in total for 2014 have climbed to reach 41 million DWT, out of which 50% is for Capesize ships and VLOCs. Amongst the noticeable orders are 4 ships with a capacity of

QUICK FACTS

8 August

Total fleet size (change since 1 January)
DWT million: 746.15 (+3.1%)

Rate indices (change since 10 June)
BDI: 777 (-23%)
BCI: 1,166 (-39%) • BPI: 624 (-11%)
BSI: 804 (+2%) • BHSI: 363 (-24%)

Latest update on Baltic Indices available at www.bimco.org

Changes to Dry Bulk Fleet Sub-Segments

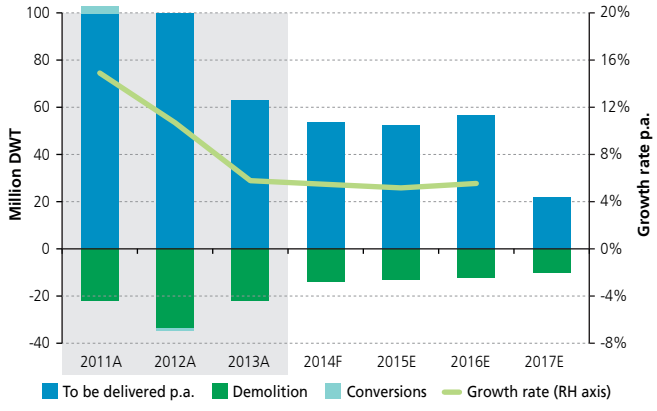
	Changes			
Year-to-date	*Capesize*	*Panamax*	*Handymax*	*Handysize*
In number of ships	50	84	77	22
In DWT capacity, %	3.3%	3.8%	3.0%	1.3%
Since start of 2013				
In number of ships	107	260	259	-34
In DWT capacity, %	8.4%	13.1%	10.7%	0.5%
Fleet status today				
In number of ships	1,615	2,436	3,066	3,108
In DWTm capacity	303.0	192.4	162.5	88.3

Source: BIMCO, CRSL

260,000 DWT placed in a Chinese yard by the Australian mining company Fortescue Metals Group; yet another mining company who is dipping its virgin toes into the ship owner' ocean.

On another scale, Brazilian mining giant, Vale have only three VLOCs with a capacity of 400,000 DWT left for delivery. According to the schedule, the ships will be delivered before the end of this year. Vale will then control a fleet of 35 VLOCs, owned or chartered-in. This fleet represents the most ambitious ship owning adventure from a commodity producer ever. Whether these purpose-built giants will fulfil their intended function – providing iron ore directly from Brazil to the ports of the world's largest buyer, China – remains to be seen.

Dry Bulk Supply Growth



Source: BIMCO, CRSL

A is actual. F is forecast. E is estimate which will change if new orders are placed. The supply growth for 2014-2017 contains existing orders only and is estimated under the assumptions that the scheduled deliveries fall short by 10% due to various reasons and 30% of the remaining vessels on order are delayed/postponed.

Year-to-date, 8.1 million DWT has been demolished in total, with Panamaxes rather surprisingly being toppled by the other segments. 2.8 million DWT of the total demolished ship capacity were Capesizes, 1.8 million being Panamax capacity, with 3.5 million DWT being split between the Handy segments.

Outlook

In theory, the current oversupply of both iron ore and coal in the global commodities market provides the shipping market with lots of cargo opportunities. However, we need the customers to create the demand. For iron ore, it has not been a problem to find customers and a lot of shipping demand comes on the back of the increased supply of quality ore and subsequent strong demand for it. For coal, in particular steam coal, it has been somewhat different. There has been lots of supply coming into the market but the demand situation has developed somewhat differently from what we expected earlier. The Chinese market is well supplied already, Japanese power consumption has been low and only South Korean demand has been lifted significantly above the level of last year.

On a positive note, BIMCO can see that the grain and soya exports that we placed in a supporting role to the overall demand development has turned out stronger than originally expected. As we have now entered into the second half of the year, volumes should know only one way, and that is up. In the Capesize segment, this should provide impetus for higher freight rates, as the supply situation is "under control". To what extent the Panamax and Supramax freight rates will follow suit is more uncertain. BIMCO expects they will improve, but hardly shoot up like a rocket.

To sum up, our forecast for August/September: BIMCO believes that the level of Capesize TC average rates will go higher to around USD 10,000-27,000 per day. Panamax TC average rates will move around at USD 5,000-10,000 per day. For the Supramax segment, BIMCO forecasts freight rates in the USD 8,000-14,000 per day range, whereas Handysize freight rates are expected around USD 5,000-8,000 per day.

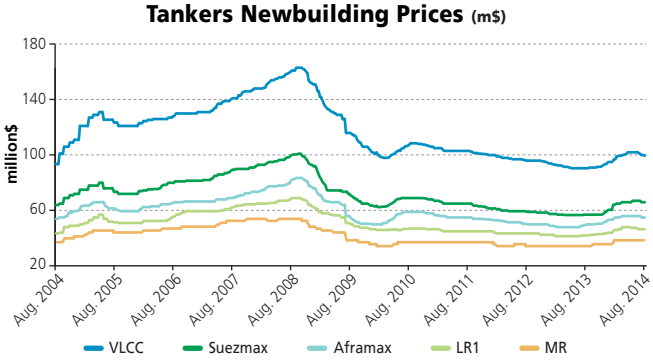
More shipping market analysis on www.bimco.org

Tanker Shipping

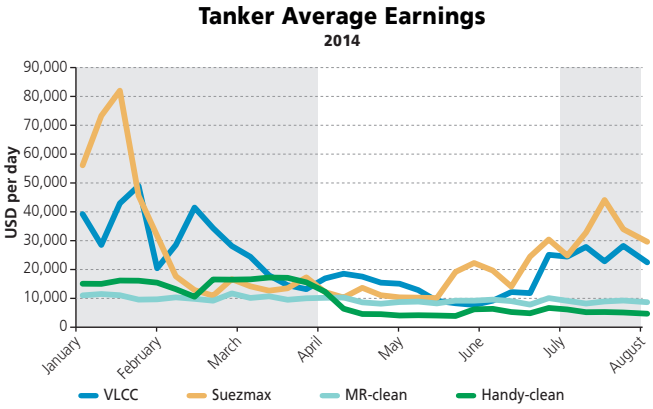
Crude oil tankers out-perform their oil product peers in a market full of surprises

Demand

Some time ago, BIMCO expected the first signs of a solid recovery in the oil tanker industry to appear in the product tanker market. However, like other soon-to-arrive recoveries, the waiting time tends to increase as we approach the expected tipping point. This time around, global refinery throughput started the year strongly but entered a still running soft patch in May, high volumes but shorter hauls out of the US Gulf, and the steady inflow of new ships were part of the cocktail that prevented freight rates from taking off big time. Over time and changing conditions, BIMCO's freight rate assessments have been close to the target. For the past two months, we have expected to see clean rates for Handysize and MRs move sideways, with an upside potential. What we got was sideways movement with a downside tendency.



Source: BIMCO, Intermodal



Source: BIMCO, CRSL

Instead, crude oil tankers showed incredibly positive momentum going into Q3. Earnings surpassed our expectations for a ceiling at USD 20,000, to reach USD 44,058 per day briefly in mid-July for Suezmax tankers.

A stronger freight market is often followed by a stronger second-hand market. This time around, things have been no different, especially for VLCCs. Data cleaned for large en bloc deals reveals that 36 VLCCs have changed hands during the first seven months of 2014. In 2012 and 2013, the figures were 26 and 32 respectively.

Although there are few similarities between the transactions, one element sticks out. Half of the sold vessels are heading for the third special survey (SS) soon, one that could prove expensive. Ten of the 18 vessels have their next SS scheduled for 2015, whereas the remaining eight are already bound for a special survey later this year. This divestment of ships prior to an SS could point in the direction of lost faith by the seller in future earning power as ship pass the age of 15. 15 years and above is where oil majors dare to go.

US crude oil exports hitting a 15-year high in May have made a few headlines recently, as the debate continues on whether to "update" the US policy that de facto prohibits export of unrefined crude oil to other nations than Canada. A few cargoes of condensate heading for the Asian market that received permission further fuelled the discussion. The fact is that +90% of crude oil exports go to Canada, and a lot of it via pipelines. Fixture lists only show a handful of tankers that have been engaged in this trade. Should the US start to export crude oil on a large scale to places other than Canada, it surely holds the potential to affect trade as we know it today if the price and quality of the oil matches demand.

Supply

While owners have recently hesitated to place orders for dry bulk and container ships, the renewed interest in placing tanker orders has been worth noticing, mostly in the crude oil tanker segments for 2016 delivery. During the past two months, the total tanker order book has risen by 4% to hit 69.2 million DWT, equal to 13.6% of the active fleet. In spite of this flurry, it remains the lowest order book-to-fleet ratio amongst the three main segments, where dry bulk holds the highest ratio at 23.0%, and container ships lie in the middle at 17.8%.

New orders have been mainly for crude oil tankers, but in the supply growth outlook, estimated product tanker deliveries for 2016 have gone higher too. The next few years remain largely unchanged. A pair of VLCCs were ordered for 2017 delivery, the first orders for VLCCs since early April. Fleet

QUICK FACTS

8 August

Fleet sizes (change since 1 January)
Crude (DWT million): 374.06 (+0.2%)
Product (DWT million): 130.26 (+1.8%)

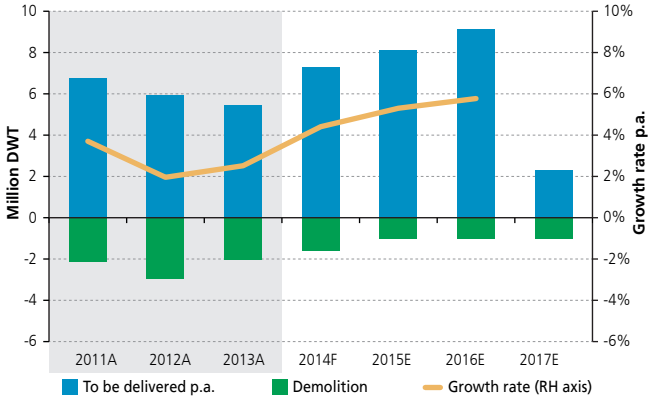
Rate indices (change since 10 June)
BDTI: 811 (+28%) • BCTI: 552 (+5%)

Latest update on Baltic Indices available at www.bimco.org

growth for crude oil tankers in general and for VLCCs specifically, has finally done something good for the market balance. BIMCO expects supply growth for 2014 just above the multi-year low level of 2013.

46 out of 64 new product tankers were MRs, which throughout the year are expected to increase by another 40. The other segment in focus this year, VLCCs, have seen the delivery of just 14 new ships in the first eight months of 2014, with 11 expected for the remainder of the year. Last year, 28 newbuilt VLCCs were delivered. The slower delivery pace has eased some of the supply-side pain which has added to the fundamental market conditions.

Product Tanker Supply Growth



Source: BIMCO, CRSL

A is actual. F is forecast. E is estimate which will change if new orders are placed. The supply growth for 2014-2017 contains existing orders only and is estimated under the assumptions that the scheduled deliveries fall short by 10% due to various reasons and 25% of the remaining vessels on order are delayed/postponed.

The weaker freight market that has placed downward pressure on newbuilding prices in recent months may also have encouraged investors and owners to take another shot at the tanker market in the hope that they will hit the new, temporarily low, market price before asset prices pick up more consistently again.

The demolition of tankers continues as expected. A couple of owners took advantage of the high prices to sell two 1993-built VLCCs for breaking in Pakistan at USD 500 per LDT.

Outlook

Going forward, the supply side is expected to worsen somewhat at the same time where demand is expected to improve. This would in turn leave the fundamental supply-demand balance unchanged with little room for massive and sustainable freight rate improvements. 2016 is a little too far into the future to conclude anything, but the higher influx of new ships does require a solid demand development to level things out.

The many crude oil supply disruptions have left a muddy picture of the overall situation. The unrest in Iraq is likely to limit production growth going forward, in spite of Iraq appearing to maintain ability to limit the impact on the global market form its internal disputes. Also, Libya, which used to supply 1.5 million barrels per day, faces severe disruptions. Syria and Russia are the other large producers and exporters experiencing serious headwinds due to civil war, territorial disputes and sanctions. At the same time, the oil price remains steady, suggesting that the expected oil consumption for the future are not aiming for the stars. This, in turn, means that the tanker market needs to feed on changed trading patterns rather than sheer volume growth in future.

Will the interest in newbuildings pick up any time soon? According to BIMCO calculations, all tanker sub-segments, from VLCC to clean Handysize, would return a negative cash flow under the assumptions of a 60% debt-financed ship at 4% interest and a ten-year repayment profile deployed on a 1-year time charter hire. Even under a 15-year profile, the only ship that was able to return a positive cash flow was the Handysize product tanker.

For August/September, BIMCO expects earnings for the all the crude oil tanker segment to stay above USD 20,000 per day. VLCC may go as high as USD 35,000 per day, while Suezmax and Aframax crude oil carriers could be reaching USD 30,000 per day in a volatile market.

In the product tanker segment, BIMCO expects earnings on the benchmark routes from AG to Japan for LR1s hold on to gains and stay around USD 10,000-16,000 per day, with LR2s earning stay volatile around USD 10,000-20,000 per day. Handysize rates are set to improve from the recent bad performance around USD 5,000-10,000 per day, with MR average rates expected to continue to firm in the interval of USD 8,000-12,000 per day.

More shipping market analysis on www.bimco.org

Container Shipping

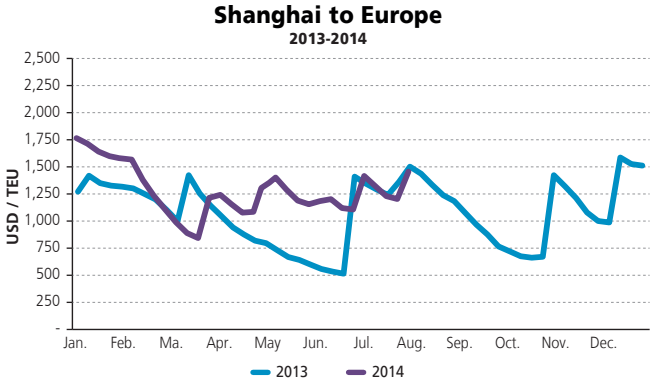
The peak season is off to a good start and the balancing act in the freight market is as important as ever

Demand

The demand side continues to improve on a global scale. The winter weakness in the US and still-sluggish demand in Europe has been offset by continued strong demand on North-South trades in the Atlantic basin and improving conditions on the ever-strong intra-Asian trading lanes. Demand-side growth is outstripping supply-side growth now, which is something that improves the fundamental balance in the market. This difference is 1-2%, not a landslide change from one day to the next, but a most welcome move in the right direction.

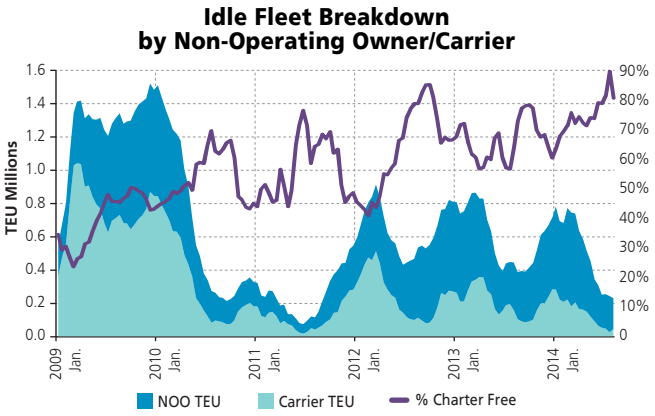
It should be borne in mind that the container shipping industry is still carrying around huge overcapacity. Some of it originates all the way back to 2009, where the difference between supply and demand was enormous. This put the fundamental balance off by a 9% contraction of demand, primarily on the long main lane hauls, while at the same time, the supply side grew by 6%.

As operators on the Far East to Europe trading lanes treads very carefully in order to avoid putting too many ships into service on that market, freight rates have responded positively to the effects of slow-steaming, blank sailings, and roll-overs. The spot freight rate average of 2014 (January-August) is USD 1,281 per TEU, 19.5% higher than the USD 1,072 per TEU recorded for the same period last year. On trans-Pacific to US West-Coast, rates have fallen 14% over the same period.



Source: BIMCO, Shanghai Shipping Exchange

The time charter market for Panamax sized ships and those smaller in capacity and with a beam less than 32.25 metres is not doing well at the moment. The prospects of any significant change are not good, as cascading takes its toll and more efficient and cost-effective ships make their way down through the trading lanes. Current daily charter rates are between USD 4,600 and USD 9,400 per day for ships with a capacity ranging from 700 TEU to 5,300 TEU. For the larger ship sizes, wide-beamed 5,000 TEUs and those with higher capacity, charter rates are stronger, but still not impressive.



Source: BIMCO, Alphaliner

Supply

The optimism in the freight market is reflected by the redeployment of idle ships into active service, in particular those with a charter party attached. When looking at the supply side growth in 2014 so far, the reintroduction of tonnage must also be considered as part of the equation. This has added another 540,000 TEU to the newbuilt deliveries before subtracting ships sold for demolition. According to Alphaliner, 119 ships with a combined capacity of 230,900 TEU were idle as at 28 July.

For the full year 2014, BIMCO expects ships with a combined capacity of 500,000 TEU to be sold for demolition. This is why BIMCO believes that idling is a very effective, but also temporary, tool to adjust the deployed fleet growth up as well as down. Year-to-date scrapping amounts to 305,000 TEU.

Year-to-date, 997,000 TEU of new containership capacity has entered the fleet. BIMCO forecasts a six-year-high on new ship deliveries, amounting to a bit more than 1.4 million TEU. As the record scrapping level takes its toll, BIMCO expects the fleet growth to be 5.3% in 2014. The scrapped ships were, on average, built in 1992, but range from 1973-1999 (average capacity 2,610 TEU). To put the future demolition potential into perspective, only 553,000 TEU (3.1% of the total fleet) of the active fleet is more than 20 years old (built up to and including 1993). For 2015, the expected

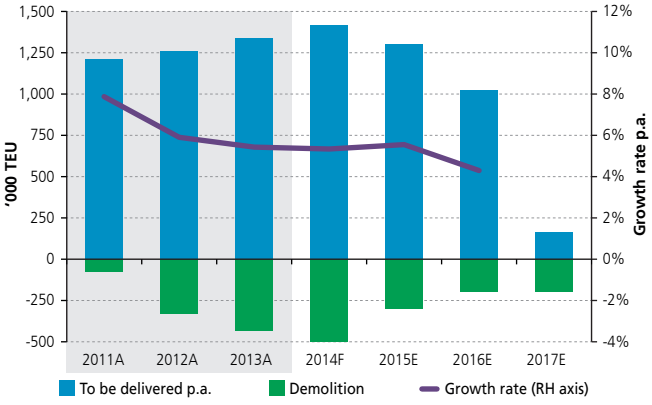
QUICK FACTS

8 August

Total fleet size (change since 1 January)
TEU million: 17,807.84 (+4.0%)

Rate Index (change since 6 June)
CCFI: 1,112.05 (0%) • SCFI: 1,171.63 (+8%)

Container Supply Growth



Source: BIMCO, CRSL

A is actual. F is forecast. E is estimate which will change if new orders are placed. The supply growth for 2014-2017 contains existing orders only and is estimated under the assumptions that the scheduled deliveries fall short by 10% due to various reasons and 10% of the remaining vessels on order are delayed/postponed.

scrapping level is lower, which in turn could result in a higher fleet growth.

So far, in 2014, 41 ultra large containerships (ULCS), each with a capacity beyond 10,000 TEU, have left Far Eastern shipyards, topping last year's delivery number of 34. With another 14 expected to be delivered, we could see a new record of 55 ULCS, equal to 730,000 TEU, bound for the Far East to Europe trading lane. The challenge to strike the balance in matching supply to demand stays unchanged. Fifty-three ULCS are scheduled for delivery in 2015. The average size of the ULCS are a staggering 15,030 TEU. In November and December this year, the first two of China Shipping Group's five ships with a capacity of 19,000 TEU are set to become the world's largest container ships.

The only thing not getting bigger and bigger right now will be the order book, falling from 3.6 million TEU two months ago to 3.3 million TEU in early August. The lower contracting activity is positively affecting this number. "Only" 552,000 TEU of new capacity has been contracted so far this year. For 2013 as a whole, no less that 1.9 million TEU was ordered. The two new building trends identified in our last report remain on track. The low level of new contracts continues, with no new orders for +10,000 TEU ships placed since April. Moreover, the absence of contracts for new ships between 2,500 TEU and 9,400 TEU still holds.

Outlook

Going forward, the profile of the new ships that are delivered into the active fleet will lead to continued cascading of the less optimal ships for a given trade.

The peak season is upon us again and it is off to a good start on all the key high capacity/volume trading routes out of the Far East. On 1 August, freight rates went higher, as supply matched the demand situation well. BIMCO expects the spot freight rates to resist last year's constant slide from early August to end-October on Far East to Europe. The Far East routes to the US West Coast and US East Coast seem exposed to a gradual deterioration of freight rates as the peak season passes by and winter service programmes for the liner operators picks up. All of this is subject to solid demand growth in Q3.

While the Transpacific Stabilization Agreement does provide a more stable supply of ships and a more stable freight rate environment on the trades it covers, the anti-trust regulation on trades into the EU tends to develop the opposite. However, operators have proved this year that volatility is not a prerequisite. Practice sometimes makes perfect, and the balancing act has engendered a situation today where idling is at a three-year low point, 41 new ULCS are deployed and freight rates are buoyed beyond the break-even point.

In spite of the above positives, serious overcapacity remains, and the non-operating owners with smaller ships feel that in the charter market on an everyday basis. ▮▮

Surviving in shallow waters

We have arrived at the half-way point for 2014 and, as in previous years, it remains unclear exactly how this year will pan out for the industry.

At face value, there are a number of positive trends – regional demand is healthy to and from the Indian Sub-Continent and within the huge intra-Asian market; flows from Asia into Europe and North America have been stronger than expected; carriers have managed capacity well again in the East-West trades and spot rates, while remaining volatile, are not falling to the lows seen in 2013.

However, some factors could puncture some of this confidence. The headhaul trans-Pacific may not see a peak season as so much cargo has been shipped early because of potential US West Coast labour problems, which may yet cause disruption and additional costs. The cascade is bringing more and more ships of at least 8,000 TEU on to West Coast loops and this has certainly contributed to over-capacity on the North-South routes.

The P3 saga

And then there is the P3 (CMA CGM, Maersk Line and MSC). A great deal has been written already about the P3 since the Chinese regulatory authorities blocked its formation in mid-June, but few would disagree that it was at the very least an excellent opportunity to help stabilise capacity in the next few years.

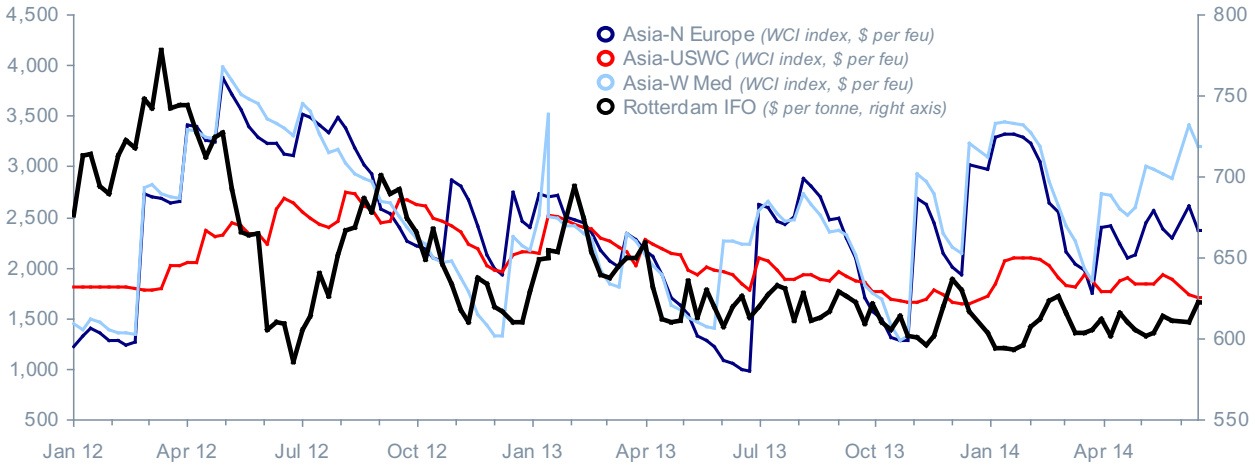
Maersk senior management initially dismissed this as an irritant, rather than a major let-down, but for sure all three carriers would have built in significant cost savings in the next few years, which now will be much more difficult to achieve.

Barely three weeks later, Maersk and MSC announced their intention to commence a 10-year vessel sharing agreement (VSA) in the four main East-West trade lanes, dubbed 2M. This includes 185 vessels with an estimated 2.1 million TEU capacity, deployed on 21 weekly services. This is significantly different that the proposed three agreement since the combined market share of the two, rather than three lines, is much smaller and the co-operation is a pure VSA and there will be no jointly owned operational company.

Pending regulatory approval, the 2M is expected to start in early 2015 and as of July 2104 deployment the two lines would have an approximate 33% of the Asia-North Europe trade and a huge 38% share of the trade to the Mediterranean.

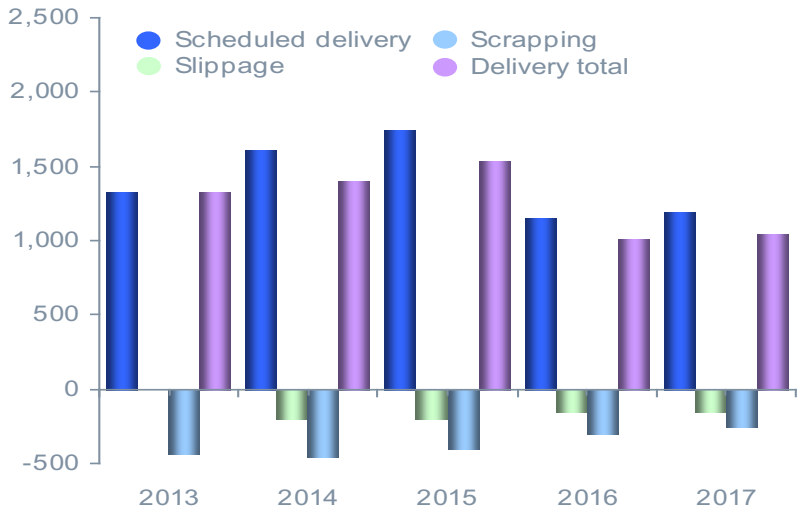
This now puts CMA CGM a little out in the cold and the French carrier has not yet released any plans in terms of new operational agreements. Clearly, its existing agreements with both Maersk and MSC would come to an end – at the moment it runs four joint loops with Maersk in the Asia-Mediterranean trade. One poten-

Figure 1: East-West trade spot rates, 2012-14 (USD per FEU)



Source: World Container Index

Figure 2: Adjusted containership orderbook ('000 TEU)



Source: Drewry Maritime Research

tial tie-up could be with CSCL and UASC, which already have agreements in the core trades, and the large fleet of ULCVs owned and operated by CMA CGM would be an attractive fit.

New agreements

The G6 members have been allowed to continue with their new operational agreements, which have also brought the lines over the magic 30% share on the trans-Pacific trade. Now that Evergreen has joined with the CKYH carriers, they will also take a much larger slice of the overall pie. More importantly, this allows Evergreen the best way to deploy its additional ten 14K vessels (2016/17 delivery) within an alliance rather than launch yet another independent loop. (see Figure 2)

It could be that the Chinese authorities, and indeed many shipper bodies that also lobbied furiously against P3, have got their wish and the supposed cartel will not now be formed. But, for an industry that desperately needs to control capacity growth – and operational agreements were the obvious way forward – a major industry tool has in our opinion, now been lost. A mature debate to balance the benefits of higher economies of scale, alliance consolidation and the need to control an oligopoly of mega-alliances has not really happened. It seems that political issues and swipes from shipper bodies about supposed pricing cartels have got in the way.

Freight rates have of course been extremely volatile since 2008, but the cancellation of P3 will surely do little to improve stability, at least in the short to mid-term. The pressure to fill slots will be felt even more keenly and if market share remains a priority, it is inevitable that rates will continue to yo-yo. Shippers moan about the monthly GRI mechanism, but until the industry finds a tool that more adequately controls supply growth, lines will continue with this monotonous but ultimately futile strategy. Index-linked contracts or hedging are an avenue followed in the other shipping markets, but there seems to be noted resistance within the container sector and among the lines in particular. Why is this? (see Table 1)

Carriers have also re-negotiated annual contracts on the trans-Pacific at levels of USD 150-200 per FEU lower than last year. This is potentially a collective reduction of USD 1.25 billion in annual revenue. On the one hand they have ensured good base cargo for their larger ships, but the pressure to cut costs elsewhere and raise rates in the spot market to make up for the shortfall is further intensified.

Table 1: Key Supply and demand changes

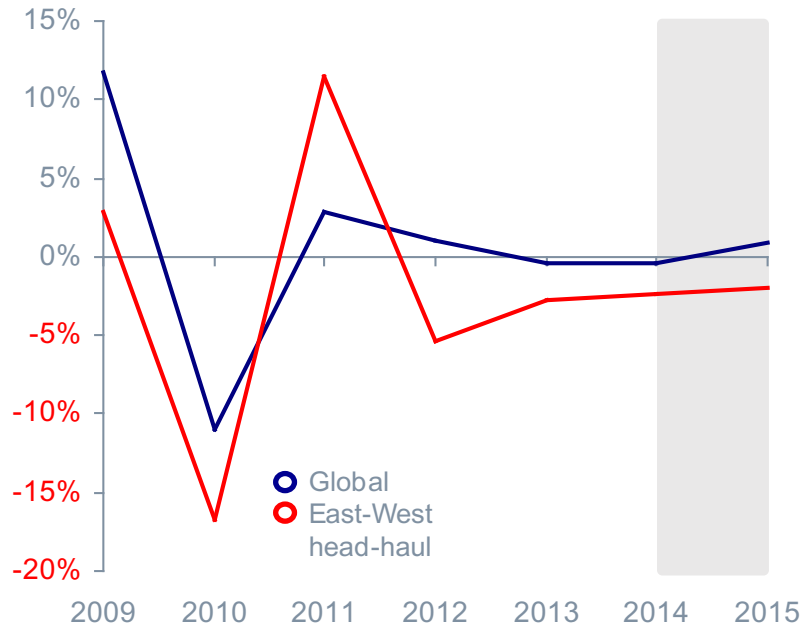
	March 2014	June 2014	Market Direction
Global container traffic growth 2014	4.2%	4.7%	Upgraded
Global effective supply growth 2014	4.6%	4.5%	Downgraded
Global supply/demand Index 2014	99.0	97.0	Downgraded
Asia-N. Europe w/b demand growth 2014	2.5%	3.1%	Upgraded
Asia-US e/b demand growth 2014	4.1%	4.4%	Upgraded
Average E/W freight rates incl. fuel – 2014	-1.1%	-1.9%	Downgraded
Average E/W freight rates excl. fuel – 2014	-0.1%	-1.6%	Downgraded

Source: Drewry Maritime Research

Managing capacity

Yet again, carriers have managed capacity well in the East-West trades so far this year. We estimate that despite the injection of capacity during the second quarter, particularly on the trans-Pacific, headhaul capacity has only increased by 2.1% year-on-year as of 1 July. Despite this, however, there is still some structural over-supply since carriers will struggle to fill many ships of

Figure 3: Forecast supply-demand gap – global and East-West markets (annual surplus of supply growth over demand growth)



Source: Drewry Maritime Research

14,000 TEU and above on the Asia-North Europe route consistently throughout the year. The cascade has also hurt the trans-Pacific trade and average spot rates are 14% below the levels of last year. (see Figure 3)

Other capacity levers are having negligible impact. Although scrapping is hitting record levels, this has no major impact on the East-West routes. As of late June, the idle fleet capacity was at around 1.6% of the global fleet or 280,000 TEU – its lowest level for some time.

It is a major positive that the order-book has become noticeably quiet in the last two months, but the G6 lines are we understand already talking to certain Asian shipyards about placing orders for a series of 18,000 TEU ships. Given the lack of available berth space, earliest delivery would be 2017. While this may be seen as a positive move for the G6 members to join the ranks of the big three, UASC and CSCL, it is certainly not a fillip for overall industry recovery.

Indeed, it seems that the industry has endured a long cycle of over-capacity and poor financial results. There has been a huge transitional phase that has taken place over the past five or six years, which has seen the formation of more alliances and VSAs, deploying significantly larger and younger tonnage across all global trades, but perhaps it has hit a wall.

It could be that the huge task of adequately matching supply and demand at the global level and on a consistent basis – which ultimately helps to drive freight rates – is simply beyond the industry, and we do not mean this as a condescending remark. This is an industry where accurate volumes on many trade lanes are unknown – simply because there is no unified and agreed system of accounting. This is an industry where relatively few shippers can provide accurate volume forecasts. This is an industry where the constant desire to launch bigger ships in order to reduce unit costs can only ever logically be at odds with the aim of matching supply and demand.

A different world

It may be a well-worn cliché, but the world is very different to what it was in 2001 and trade-route growth rates of 6-12% can no longer be guaranteed, even on so-called emerging trades.

The major reaction from the leading lines has been to focus on cutting costs – and they have been successful. It is almost as if the main reason for their existence – to carry containers from A to B, at a reasonable profit, is now a side show for some persistently unprofitable carriers. Maersk and CMA CGM seem to be forging ahead of their competitors in terms of cost cutting as they are the only major players in the black. Most, if not all of the top 20 lines are following their example, but our analysis highlights that they have a quite a long way to go yet.

Elsewhere in the industry there are a few other positives. The charter market has slowly picked up and owners of new, wide-beam vessels are certainly obtaining pay-back for their initial investments made several years ago. Asset prices are also finally on the up after years in the doldrums. Prices for both second-hand units and new vessels are a little healthier, although there is nothing yet to suggest that they will rocket. ▮▮

Editor's Note: The above article is based on information supplied by Drewry Shipping Consultants from its latest Container Forecaster report. For further information contact Nigel Gardiner at Drewry Shipping Consultants, 15-17 Christopher Street, London EC2A 2BS; Telephone: +44 20 7538 0191; E-mail: gardiner@drewry.co.uk

Ongoing Chinese shipping issues

Enterprise income tax

Alert on China's new enterprise income tax notice for non-resident taxpayers

The "Notice on provisional Measures on the Collection of Tax on Non-Resident Taxpayers Engaged in International Transportation Business" (2014 No. 37 Notice) recently issued by the China State Authority of Taxation will take effect on 1 August 2014.

It is expected that it will impact international shipping in China. BIMCO members should keep a close eye on this issue, in particular, foreign ship owners, managers and operators who are considered non-resident taxpayers under the current Chinese tax regulation.

No. 37 Notice is designed to quantify working procedures regarding income tax management for non-resident taxpayers engaged in international shipping in China. It defines who is obliged to report income tax; how to register and apply; what items would be considered as taxable income and so on. The following points are worth noting:

Who are "non-resident taxpayers"?

Pursuant to Clause 2 of No. 37 Notice, it will apply to all foreign enterprises carrying out international transportation business via vessels, aircraft or space slots (either owned or hired), which includes the transportation of passengers, cargo or post in and out of Chinese ports, together with other cargo-handling and warehousing activities. It further clarifies that all voyage chartering or time chartering shall be considered as international transportation regulated by this notice, whilst the demise chartering is excluded.

How to register your enterprise income tax

Foreign enterprises in the international transportation business in China are obliged to register with the local tax authority within 30 days either from the date the business license is issued by the regulator, or from when the transportation agreement is signed.

Foreign enterprises are permitted to appoint local agents to handle their tax registration. They can choose one port to register with by submitting their business license, operational documents, contracts and their local contact. If foreign enterprises provide transportation services at different ports in China, they may need to submit photocopies of their tax registration to different tax authorities at different ports.

What is "taxable income"?

According to the notice, enterprise income tax shall be deducted from the actual income received from the transportation services, less the relevant expense incurred. Income derived from passenger and cargo transportation means all freight earnings, such as ticket revenues, overweight baggage charges, insurance premiums, entertainment and so on for passenger carriage, as well as basic freight together with various surcharges for cargo carriage.

Tax Withholding Obligation

Clause 9 of No. 37 Notice reiterates that the Chinese partners assume an obligation to withhold tax in the event that the foreign enterprise fails to register with the tax authority. It includes: (1) any organisation or individual who is supposed to pay to a foreign enterprise or their branches, affiliates or representative office in China, or who is entitled to collect amounts on behalf of foreign enterprises; (2) any organisation or individual who effects payment through their related parties abroad or the third parties they designated; (3) any other organisation or individual as defined by Enterprise Income Tax Law.

How to apply the tax treaties

Foreign enterprises are eligible to apply for an official confirmation from the Chinese tax authority through which they may benefit from reduced or waived enterprise income tax due to a double taxation treaty between their nation and China. BIMCO has provided a list of all the Tax Treaties that China has signed so far on its website (at *www.bimco.org*).

Applicants may need to submit an "Application Form for Non-Resident Tax Agreement Treatment" coupled with (1) a copy of the enterprise registry certificate issued by their nation; (2) ID or legal entity supporting documents issued by their home tax authority or shipping department; (3) a copy of any transportation agreements entered into with a Chinese partner; (4) statements of sailing routes, passenger or post carriage, including a Chinese port call plan; (5) others items as may be required by the tax authorities. One application will be valid for three years.

Any foreign enterprises failing to follow the application procedure but benefitting from the tax treaty will be assessed as per tax authority's order within a given period. This may result in them being required to pay back any tax due that they have received. Any foreign enterprises who inadvertently missed out on any tax treaty benefit are entitled to apply for a tax refund within three years of their over-payment.

In short, China intends to tighten its tax regulations for non-resident enterprises who benefit from their international shipping business in China. Members should check with their local agents or business connections in order to ensure they are fully compliant with their tax obligations in China. The China State Authority of Taxation is expected to issue further

guidelines for implementation, but have not done so as yet.

From P3 Alliance to 2M Vessel Sharing Agreement

China's Ministry of Commerce (MOFCOM) released a decision on 17 June 2014 stating that it would not approve the P3 Alliance, a plan prepared by three leading liners Maersk Line, MSC and CMA CGM, largely due to competition concerns.

The three firms had planned to pool about 250 ships on three major trade routes, including Asia-Europe, as part of their ambitious goal to cut costs and increase efficiency. As per its original blueprint, the P3 Alliance was understood as a flexible merger as it would have been an independently operated network. Prior to seeking the approval of China's regulator, it received the nod from the US Federal Commission in March and European anti-trust regulators in June.

MOFCOM explained that one of the reasons it had blocked the alliance was that it would have significantly increased the firms' joint market share to 47% on the Asia-Europe service route, even though each had already held a substantial share. The P3 Alliance might hamper or even undermine competition in certain trades. Moreover, the companies in question had failed to convince the regulator as to how they would alleviate the alliance's impact on competition.

In fact, the China Shippers' Association (CSA) had lobbied the government at length against approving the alliance, arguing that it would give the firms too much market power and stifle competition. Meanwhile, some experts tend to attribute MOFCOM's P3 Alliance decision as a signal that China would have intervened when there were concerns over negative impact on its local industries, regardless of how other regulators decide.

Interestingly, although MOFCOM's decision *de facto* smashed the P3 Alliance, Maersk Line and MSC inked the 2M vessel sharing agreement (VSA) only one month later. This 10-year VSA is designed for the Asia–Europe, trans-Atlantic and trans-Pacific trades, which will encompass 185 vessels with a capacity of 2.1 million TEU deployed on 21 strings.

As to the 2M VSA, it has been explained that it differs from the P3 alliance in two prominent ways: (1) the combined market share is much smaller; (2) the co-operation is a pure VSA, which means no jointly owned independent entity with executional powers. Unlike the P3 Alliance London network operation centre, each party under 2M VSA continues its fully independent sales, pricing, marketing and customer service function. Instead, a "joint co-ordination committee" will be set up for monitoring the daily operations of 2M VSA.

If all goes according to plan, the 2M VSA is expected to start in early 2015, pending regulatory filings and approvals from the relevant authorities, most probably in the US, EU and China. For obvious reasons, China's stance will be crucial.

China's 2Q local GDP signals rebalanced recovery

China's provincial data in the second quarter suggested its regional economies enjoyed a revival in growth. According to local gross domestic product (GDP) data from 30 different regions and provinces, 23 reported first-half economic growth accelerated from the first quarter. About three-quarters posted growth that was higher than the national average of 7.4% in the first six months. Growth also diverged sharply between eastern and western China. The coastal and northeastern regions fared the worst, while activity was most buoyant in the central and western areas, where double-digit growth rates were concentrated.

For instance in Hebei province – China's top steel producer – GDP growth stayed sluggish in the first six months, even though activity picked up slightly to 5.8% compared with 4.2% in the first quarter. Hebei's drowsy performance is in part due to its efforts to remake itself. Hebei plans to slash total steel capacity by 60 million tonnes by 2017 and to shut several outdated steel mills this year with a view to cutting air pollution in northern China. In contrast, economies in the West such as Chongqing, Guizhou and Qinghai all posted double-digit GDP growth between January and June due to policy support. Meanwhile, the biggest export-oriented provinces of Guangdong and Zhejiang saw GDP growth slacken in the first-half of 2014 to between 7 and 7.5%.

This suggests that China's bid to rebalance its economy is paying off. From redefining job targets to shifting investment to inland areas and cutting obsolete capacity in energy-guzzling sectors in the North, China intends to overhaul the world's second-largest economy and encourage more sustainable and higher-quality growth. Cooling growth along China's eastern coast is in line with Beijing's goal of cutting its economic reliance on exports in favour of a more sustainable expansion in domestic consumption. (ZW)

Editor's Note: This report has been produced in co-operation with Reuters and Sinoship.

A Summer of fuel-related risks and safety awareness

The Summer months in Asia are not known for dynamic shipping policy announcements or the introduction of new regulatory proposals, but rather the shipping community stakeholders on both the commercial and regulatory side are more likely to be gearing up for the hectic months of Autumn when the conference and regulatory machinery is again in full swing.

However, there was quite a lot happening involving bunkers and the ships that carry them, some vessels who fell foul of regional pirates and others caught taking short-cuts in the sale of ship's fuel, with appropriate consequences. In the midst of all this, and on a more positive note, a new initiative was launched to encourage safety at sea.

Increase in small tankers hijacks

In its half-yearly report covering the first six months of 2014, Asia's regional piracy and armed robbery watchdog, ReCAAP, indicated that the level of incidents in the region had stabilised with one exception, that being an increase of incidents involving the siphoning of fuel/oil from product/oil tankers, a development that ReCAAP feels warrants careful monitoring and collective efforts by the shipping industry and authorities in addressing the situation.

The basis of this concern is the sudden return of incidents that ReCAAP qualifies as CAT 1 incidents, being very significant. There were no CAT 1 incidents reported in Asia in 2013, and only one CAT 1 incident reported in 2012, however, the first half of 2014 has already seen five CAT 1 incidents reported.

According to ReCAAP, the five CAT 1 incidents all involved the siphoning of fuel/oil. In contrast, previous CAT 1 incidents reported by ReCAAP mostly involved hijacking of tug boats for resale on the black market. Notably, these five incidents in 2014 did not involve the hijacking of vessels, but the transfer of fuel/oil from the victim's ship to another vessel. However, in common with the hijacking of tug boats, the pirates/robbers involved in the siphoning cases were also armed with guns and knives.

The Piracy Reporting Centre (PRC) of the International Chamber of Commerce (ICC) International Maritime Bureau (IMB) echoes ReCAAP's concerns regarding the worrying trend of small tanker incidents in its 2014 half-yearly report. The IMB PRC points out that in 2014, a total of 10 vessels were hijacked globally. Of the 10 hijacking incidents, at least six known cases of coastal tankers being hijacked for their cargoes of diesel or gas oil have been reported taking place in South East Asia since April this year, sparking fears of a new trend in pirate attacks in the area. Until then, the majority of attacks in the region had been on vessels, mainly at anchor, boarded for petty theft.

"The recent increase in the number of successful hijackings is a cause for concern," stated IMB Director, Pottengal Mukundan. "These serious attacks have so far targeted small coastal tankers. We advise these vessels to maintain strict anti-piracy measures in these waters, and to report all attacks and suspicious approaches by small craft."

Another unlicensed bunker supplier convicted

Meanwhile, the Maritime and Port Authority of Singapore (MPA) continues its strict campaign against infractions of bunker sales rules and regulations, with another conviction for such infractions to its credit.

Progressive Power Co. Pte. Ltd. pleaded guilty in court on 20 May 2014 to five charges of supplying bunkers on five occasions in the Port of Singapore without a valid bunker supplier licence issued by the Maritime and Port Authority of Singapore, as required under Regulation 64(a) of MPA Port Regulations and committed an offence punishable under Regulation 78(b) of the said Regulations. Another 10 charges were taken into consideration.

MPA had brought charges against Progressive Power Co. Pte. Ltd., for delivering bunkers on eight occasions as a bunker craft operator between 17 March 2013 and 5 July 2013, and for supplying bunkers on seven occasions as a bunker supplier between 11 October 2012 and 22 January 2013. Progressive Power Co. Pte. Ltd. had used the Bunker Delivery Notes (BDN) belonging to Lian Hoe Leong & Brothers Pte. Ltd. for the seven transactions as a bunker supplier.

MPA had cancelled Lian Hoe Leong & Brothers Pte. Ltd.'s bunker supplier licence on 15 January 2014 for their involvement in this case as their actions breached the terms and conditions of the Bunkering Licence (Bunker Supplier).

All bunker suppliers operating in the port of Singapore are required to be licensed

by MPA. The bunker supplier's licence is not transferable. Any bunker supplier or bunker craft operator found to have contravened any terms and conditions of the bunkering licences will have their bunkering licence suspended or cancelled. All licensed bunker craft operators are also advised not to make use of any bunker tankers to deliver bunkers on behalf of any person, firm or company that is not a bunker supplier licensed by MPA.

The bunkering industry is an important and integral part of the Port of Singapore. One of MPA's top priorities is to provide assurance to its customers of the quality and quantity of bunker fuel supplied in our port. Licensed bunker suppliers have to be accredited to conform to the Singapore Standard on Specification for Quality Management for Bunker Supply Chain (SS 524) and adhere to the Singapore Standard Code of Practice for Bunkering (SS 600) during bunkering operations.

MPA takes a serious view of any bunkering malpractice and will not hesitate to take action against any unlicensed entity operating in the bunkering industry in the Port of Singapore.

To report any instance of malpractice in the bunkering industry, please contact MPA's Marine Services Department at *msd@mpa.gov.sg.*

To reduce the risk of dealing with unlicensed bunker suppliers when taking bunkers at Singapore, BIMCO members can access updated lists of licensed bunker suppliers that are maintained by the MPA by using the links published on the BIMCO Website (*www.bimco.org*) under the heading: "Singapore: Bunker Suppliers Factsheets".

MPA launches campaign to promote safety-first culture at sea

The Safety@Sea Singapore campaign was launched on 31 July at Marina South Pier. Led by the Maritime and Port Authority of Singapore (MPA), the campaign is an industry-wide effort to increase awareness of safe practices and inculcate a safety-first culture at sea.

The Port of Singapore sees over 130,000 vessels calling annually. The size of vessels also increase each year, with annual vessel arrival tonnage hitting a record high of 2.33 billion gross tons in 2013. The number of major incidents over the last few years has remained low, with an average of about 0.012 and 0.016 incidents per 1,000 vessel movements in the port waters and Singapore Strait respectively. There were 13 major incidents in 2011, 8 in 2012, and 6 in 2013.

Mr. Andrew Tan, Chief Executive, MPA, said: "Singapore is the world's busiest port in terms of vessel arrival tonnage, and is located along a vital shipping lane and one of the world's busiest waterways. The Safety@Sea Singapore campaign focuses on the human element in marine incidents, we want to safeguard against complacency, raise safety standards, and get everyone in the community to do their part."

The logo of the Safety@Sea Singapore campaign was launched by Mr. Tan, together with representatives from the Association of Regional Ferry Operators, Singapore Maritime Employers Federation, Singapore Sailing Federation, Singapore Shipping Association, Singapore Power Boat Association, and PSA Marine. Information kits containing posters, decals and guidebooks were also distributed to members of the harbour craft and shipping community.

Amongst the material distributed was the pamphlet entitled *Safe Passage: The Straits of Singapore and Malacca* which was launched in May during a reception at the IMO. The Pamphlet was developed as a project within the Co-operative Mechanism, involving BIMCO and representatives from Indonesia, Malaysia and Singapore. The pamphlet is available for free as a PDF download from the BIMCO website.

Companies, vessels, and seafarers that display exemplary safety practices at sea will be recognised. Safety awards will also be presented during the inaugural Safety Awareness Week slated to be held in November 2014.

In addition to the distribution of information kits to promote a safety-first mind-set at sea, MPA will conduct industry-wide briefing sessions to share safety best practices. Passenger ferry safety standards will continue to be reinforced, which includes the screening of safety videos on board ferries and passenger terminals.

MPA will develop a safety reporting and suggestion framework to facilitate the reporting of good practices and near-miss cases. MPA will also explore the establishment of a National Maritime Safety at Sea Council to spearhead the drive for safety at sea and to ensure the sustainability of the safety efforts.

MPA will continue enforcement efforts to ensure the compliance of rules and regulations, with a greater emphasis on navigational and ship board safety. There will also be increased spot checks on vessels to ensure the observance of safety standards and maintenance of safety equipment. (TT)

Ongoing EU shipping issues

EU MRV legislation proposal

On 16 April, the European Parliament (EP) adopted its position Report on the EU Commission legislative proposal for CO_2 shipping emissions monitoring, reporting and verification (MRV) Regulation.

It rejected both the extension of the Regulation's scope to ships above 400 GT and the inclusion of NOx emissions, thus aligning its position with the Commission's proposal of solely monitoring CO_2 emissions from ships of 5,000 GT or above. During the 12 June Environment Council, the Greek Presidency of the Council presented a non-binding progress report on the proposal. However, further work by the Italian Presidency of the EU will still be needed on the Council position regarding a number of political/horizontal issues.

The Council is expected to discuss the topic at the next Environment Council, which will take place in October, where the Greek Presidency text will be presented by the incumbent Italian Presidency.

European Sustainable Shipping Forum (ESSF)

The ESSF was established in last September with the aim of assessing the compliance requirements of the MARPOL Annex VI 0.1% sulphur content in marine fuel (as translated into EU law through the Sulphur Directive), which is due to enter into force as from 1 January 2015 in the Sulphur Emission Control Areas (SECAs).

The Forum is chaired by the Commission and operates with a Plenary session and six non-permanent Technical Subgroups. BIMCO is participating in the key group on the use of scrubbers.

The second ESSF Plenary sitting took place on 26 June 2014. The meeting essentially focused on specific recommendations by the various technical subgroups. Whilst the ESSF has identified the needs and ways forward for solving a number of issues in order to enable smoother compliance/implementation with the requirements of the Sulphur Directive for both ship owners and Member States, it seems clear that by 1 January 2015, the majority of issues will still be pending.

Clean air package

A new policy package to clean up Europe's air

On 18 December 2013, the European Commission announced a package of measures, "The Clean Air Policy Package", which aims at updating existing legislation and further reducing harmful emissions from industry, traffic, energy plants and agriculture, with a view to reducing their impact on human health and the environment.

The European Commission is attempting to incentivize the reduction of NOx and SO_2 emissions as well as the emission of particulate matters (PM2.5) from shipping. Within the framework of the Environment Council of 12 June, a policy debate took place on the proposal for a Clean Air Programme for Europe.

During the debate, only one reference to the shipping sector was made. Specifically, doubts were expressed on the suggested flexibility incentives of the proposal. It was highlighted that any flexible mechanism associated to the proposal should not undermine the principle that shipping should be regulated at international level.

A new clean air package has been announced.

European elections/institutional changes

The European elections took place between 22-25 May, leading to a major institutional reshuffle. Most MEPs have arrived in Brussels for the Parliament's 8th legislature. The 14 Vice-Presidents and five Quaestors were elected during the first plenary session on 1-3 July.

Following political bargaining between the various groups, the composition of all European Parliament Committees (Chairs, Vice-Chairs and Members) has now been finalised. After an intense period of negotiations, most political groups have now been formed.

The European Commission is now in "caretaker" mode. Jean Claude Juncker, the

candidate supported by the European People's Party (EPP), was elected by the European Parliament as the new Commission President. He will now contact European Member States to form the College of Commissioners.

The new Commission is set to start its mandate on 1 November. The new Commission President can initiate structural reforms within the Commission by changing, adding, removing, or merging departments.

Liner consortia block exemption regulation

On 24 June, the European Commission announced its decision to extend the Liner Consortia Block Exemption Regulation (BER) for another five years, until April 2020.

The BER allows shipping lines with a combined market share of below 30% to enter into consortia agreements, usually allowing carriers to rationalise their activities and achieve economies of scale. If consortia face sufficient competition and are not used to fix prices or share the market, users of services provided by consortia are usually able to benefit from improvements in productivity and service quality.

The BER has been under review by DG COMP and after a public consultation, the Commission has concluded that the BER has worked well, providing legal certainty to agreements which bring benefits to customers and do not unduly distort competition, and that current market circumstances warrant a prolongation. The Commission has therefore exempted such agreements from the prohibition of anti-competitive agreements in Article 101 of the Treaty on the Functioning of the European Union (TFEU) for another five years.

Consortia and alliances exceeding the market share threshold established in the BER will be subject to a self-assessment, to be carried out by the companies participating therein.

Reporting Formalities Directive – state of play

The adoption in October 2010 of Directive 2010/65/EU on reporting formalities for ships arriving in and/or departing from ports of the member states is a milestone for the general use of information and communication technologies to facilitate maritime transport.

It aims at simplifying and harmonizing administrative procedures and rationalising reporting procedures. Thus, the directive requires the development of Single Windows by member states for administrative formalities when ships arrive in or leave European ports and introduces the electronic submission of notifications. Furthermore, it obliges the member states to share this information via SafeSeaNet with competent authorities thus removing the need for re-submitting the information.

The Commission has issued a report on the functioning of Directive 2010/65/EU, which recognises the various challenges and shortcomings with regard to the implementation of the Directive and the setting up of Single Windows. The report also acknowledges the position expressed by the shipping industry, including ECSA, that the absence of more interoperability standards and of harmonization of the information required at national level will increase implementation costs and reduce the benefits for the industry.

TTIP negotiations – state of play

EU and US negotiators are currently meeting in the context of the sixth Trans-Atlantic Trade and Investment Partnership (TTIP) negotiations round.

Negotiators from both sides are debating an ambitious agenda that should, in the event of an agreement, not only remove trade barriers in a wide range of economic sectors, but also tackle non-customs related trade barriers, such as differences in technical regulations, standards and approval procedures. Furthermore, the TTIP negotiations look at opening markets for services, investment, and public procurement.

ECSA participated in a stakeholders meeting and presented its position to negotiators from both sides. ECSA referred to the Jones Act and enquired as to the possibility of finding ways to grant full access for international carriers to engage in feedering operations as long as they do not constitute purely domestic operations (i.e. when international cargo must be transhipped from one vessel to another, often smaller, vessel in order to reach its end destination).

ECSA also advocated greater market access for dredging and offshore services as well as more flexibility as regards transport of empty containers.

Finally, ECSA suggested that the maritime chapter of TTIP should not just focus on market access restrictions. There are several other fields where progress can be made, for instance in the field of administrative procedures, performance of standard work on board vessels and security procedures. (CH)

Editor's Note: This report has been produced in co-operation with the European Community Shipowners' Associations (ECSA).

Ongoing US shipping issues

Ballast water – incidental discharges

US Senate Commerce Committee approves bill on ships incidental discharges, including ballast water

On 23 July 2014, the Senate Commerce Committee approved the Vessel Incidental Discharge Act (S 2094) with, not unexpectedly, two Members (Senators Boxer (CA) and Cantwell (WA)) voting against the bill.

While this is a positive development, procedurally, the bill must now be scheduled for a floor vote in the Senate and if passed, would be sent to the House of Representatives for similar committee review and floor action. If the bill is passed out of the House, it would then go to the President for signature at which time it would formally become US law.

This bill would remove discharges incidental to the operation of commercial vessels, including ballast water (excepting the usual exceptions including garbage, incinerator ash, oil/hazardous substances, sewage which are regulated elsewhere in US Coast Guard (USCG) regulations from the current Environmental Protection Agency (EPA) NPDES/VGP programme and would mandate the creation of regulations relating to these discharges. As proposed, the USCG would be the lead agency in promulgating these regulations but would co-ordinate these regulatory initiatives "in consultation" with EPA.

The timing of future action in the Senate and the House is uncertain at this time as Congress is about to depart on its Summer Recess and has limited work days for the remainder of the current Congressional session, which ends in January 2015. If the bill is not passed this session, the process begins anew in the next session including introduction of the bill, committee reviews and the procedural aspects of both the Senate and House voting on the bill as proposed. While we are hopeful that we can move this along towards enactment this session, past history has taught us that the remaining session days for this Congress will make it a significant challenge to make enactment a reality.

The initial ballast water performance standard to be implemented is the International Maritime Organization (IMO) Ballast Water Convention standard contained in regulation D-2 of the Convention which is defined as "best available technology economically achievable" at this point in time. Provisions are also included which would allow a State proposing more stringent standards to petition the USCG for review of feasibility/achievability of the more stringent standard and if the USCG agreed, the more stringent standard would supersede the less stringent national standard in place at the time.

In addition, the legislation would require the USCG to issue a more stringent standard (100 times IMO) no later than 1 January 2022 if a feasibility review conducted by 1 January 2020 indicates that this more stringent standard is achievable. If the feasibility study indicates the ability of ballast water treatment systems to meet a performance standard higher than the initial (IMO) standard, but not capable of meeting the 100 times IMO standard, then the performance standard would be revised to reflect the capabilities of systems at that point in time. In the long term, the language in the legislation ties establishment of new performance standards to the capability of ballast water treatment technologies at the time feasibility reviews are conducted e.g. best available technology.

As regards any future changes to the performance standards, an accelerated implementation schedule would be adopted which would provide at least 24 months advance notice before the new implementation date takes effect.

On 23 July 2014, the Senate Commerce Committee approved the Vessel Incidental Discharge Act. (Photo: ABS)

While this text may provide some concern to the industry, it should be noted that the legislation contains adequate grandfathering text such that a vessel on which a compliant (at the time of installation) ballast water treatment system is in operation, the vessel may continue to use that system, regardless of future changes to the performance standards, until the expiration of the service life of the system. The legislation also contains provisions of the issuance of compliance date extensions similar to the process currently in place as well as a US type approval ("certification") process also similar to the programme currently in place.

Regarding pre-emption of State requirements by Federal requirements, hard pre-emption language is contained in Section 4(2) which would prevent States from imposing additional specific requirements after the date of enactment. There is, however, a savings clause which recognises the legality of more stringent State requirements which are in effect at the date of enactment, providing the USCG and EPA agree that these requirements are achievable, the technology is commercially available and the requirements "are consistent with obligations" under international law.

While at first read this may seem troublesome, we believe the safety net of requiring USCG and EPA to sign off on any existing State provisions provides the necessary dose of reality to States which may choose to continue to live in an ideal world without regard to the realities of vessel operations and practical limitations on treatment technologies.

Meeting with EPA

Meeting with US Environmental Protection Agency (EPA) on aspects of Emission Control Area (ECA) enforcement programme

At the request of the US EPA, CSA and another trade association met with the civil enforcement division to discuss the various commercial agreements which govern the movement of vessels and provisions of each of these agreements.

EPA was particularly interested in the specific mechanisms by which vessels receive their voyage orders and the level of predictability in anticipating future voyages, especially those which include port calls in the US ECA and how this predictability (or lack thereof) impact the ability of a vessel to secure ECA-compliant fuels prior to entry into the US ECA (currently 1% sulphur; 0.1% sulphur, effective 1 January 2015).

The industry participants reviewed in general aspects of the liner trades, time and spot charters associated with the bulk (dry and wet) trades, tramp trades typically associated with break bulk vessels and pooling agreements. To EPA's credit, they explained that they are trying to understand better the various aspects of commercial shipping including which party(s) to the various agreements are responsible for fuel purchases. They explained their need for this understanding within the context of evaluating fuel oil notices of non-availability reports (FONARs) the legitimacy of specific FONARS where the vessel is claiming that ECA compliant fuel was not available in ports of call leading up to the US port of call or the US port of call was not anticipated thus triggering a FONAR filing.

EPA's request to discuss these issues should be seen as a positive sign that they now recognise the variations in the predictability of a future US port call based on the type of commercial agreement governing the routes of vessels and thus provide them with the necessary tools to make a proper determination on the legitimacy of a particular FONAR filing.

The issue of establishing a level playing field was also discussed and CSA expressed their support for an enforcement programme that identifies vessel owners and charterers that are trying to "game the system" and repeatedly enter the US ECA with non-compliant fuel (even though they are properly filing FONARS) at the competitive expense of those vessel owners and charterers who do secure the higher cost ECA compliant fuels.

Anti-foulant systems in Californian waters

Clarification of California State Lands Commission (CSLC) position on vessels with copper-based anti-foulant systems (AFS) operating in California waters

A number of questions have arisen with regard to California's perspective on ships with copper-based AFS operating in California waters.

In one particular case, we learned from the American Coatings Association that at least one classification society has been advising European-based owners that ships with copper-based AFS would be prohibited from operating in Californian waters for more than 30 days.

This is not true. As contained in a response from CSLC, vessels with copper-based AFS are not restricted from normal operations in Californian waters. The only restriction with regard to these ships is with regard to in water hull cleaning in copper-impaired waters. (MLU)

Editor's Note: This report has been produced in co-operation with the Chamber of Shipping of America (CSA).

Ship to ship transfers... what is the extent of owners' control?

Did clause preclude VLCC to VLCC transfers? Did Owners unreasonably refuse to grant approval for STS operation? Falkonera Shipping Company v Arcadia Energy Pte. Ltd. [2012] EWHC 3678 (Comm.) and [2014] EWCA Civ. 713

In November 2010, Falkonera Shipping Company (Owners) chartered their VLCC, the *Falkonera*, to Arcadia Energy Pte. Ltd. (Charterers) for a voyage carrying crude oil from Yemen to "1-2 ports far east". The charter was on BP4 terms. Clause 8 provided that:

"8.1 Charterers shall have the option of transferring the whole or part of the cargo…. to or from any other vessel including, but not limited to, an-ocean-going vessel, barge and/or lighter (the "Transfer Vessel")….

All transfers of cargo to or from Transfer Vessels shall be carried out in accordance with the recommendations set out in the latest edition of the "ICS/OCIMF Ship to Ship Transfer Guide (Petroleum)".

Owners undertake that the Vessel and her crew shall comply with such recommendations, and similarly Charterers undertake that the Transfer Vessel and her crew shall comply with such recommendations. Charterers shall provide and pay for all necessary equipment including suitable fenders and cargo hoses. Charterers shall have the right, at their expense, to appoint supervisory personnel to attend on board the Vessel, including a mooring master, to assist in such transfers of cargo."

An STS [Ship to Ship] lightering clause further provided that:

"(i) if charterers require a ship to ship transfer operation or lightening by lightering barges to be performed then all tankers and/or lightering barges to be used in the transhipment/lightening shall be subject to prior approval of owners, which not to be unreasonably withheld, and all relevant certificates must be valid.

(ii) all ship to ship transfer operations shall be conducted in accordance with the recommendations set out in the latest edition of the ics/ocimf ship to ship transfer guide (petroleum).

(iii) all such lightering ships must have a fully working inert gas system (igs), unless the cargo flash point exceeds 60f and only with express approval of the owners/master."

The facts

After loading, and while on voyage to Singapore for orders, Charterers requested Owners to approve two vessels for discharge by STS transfer at Pasir Gudang, Malaysia. One, the *Kythira*, was accepted while further information was requested about the other nominated vessel. Charterers then decided to discharge cargo into three floating storage vessels using the *Kythira*, which was smaller than the *Falkonera*, and two VLCCs, the *Front Queen* and *Front Ace*, which were the same length as the *Falkonera*.

Owners objected to the latter two *"Frontline"* vessels on grounds of past difficulties with similar transfers and also given that the then current 4th Edition (2005) *ICS/OCIMF Ship to Ship Transfer Guide (Petroleum)* contained no references or recommendations for transfers between VLCCs. Owners withheld their approval and alternative arrangements were put in place for the discharge operation.

First instance

The dispute reached the High Court. The court noted that the "sts lightering clause" did not entitle Owners to approve or refuse an STS transfer, their right was limited to reviewing a nominated vessel to determine its suitability for STS operations. On the question whether the STS Clause precluded VLCC to VLCC transfers, Owners submitted that the ICS/OCIMF Guide did not make any recommendations about VLCC to VLCC transfers, that such operations could not be conducted in accordance with the Guide and they were therefore precluded. However, while acknowledging that there was no specific section on same-size or VLCC-VLCC STS operations, the court did not agree that the Guide precluded such transfers. Accordingly, based on its wording, the charter did not exclude VLCC to VLCC transfers. Owners' primary case therefore failed.

The second issue was whether the Owners had acted reasonably (or not unreasonably) in withholding approval from the *Frontline* vessels. In brief summary, Owners' concern about VLCC to VLCC transfers was influenced by a separate past incident. During exchanges between the parties, proposals covering practical and mooring arrangements for STS discharge to the Frontline vessels were put forward by charterers to allay concerns expressed but were rejected by Owners. Owners also declined to accept an indemnity offered by charterers against any "problem, cost or consequence". Following evidence over a four day period, much of it of an expert nature about the vessels in question and the intended operation, it was held on the facts that the refusal to agree to such transfer based on practicalities and safety-related issues was unreasonable.

On appeal

The Owners appealed to the Court of Appeal on whether the judge had been right to hold that they had unreasonably withheld their approval of another VLCC for use in ship to ship cargo transfer. Two grounds were put forward. The first was that VLCC/VLCC STS was not routine and created additional complexities. Thus, while such operations might be undertaken without incident, this did not mean that they were not riskier or more complex than routine lighter-

ing of VLCCs to smaller vessels. The second ground was that the judge had confined the clause to cases where the proposed transfer would be unsafe thus requiring the Owners to go beyond reasonableness and show that the proposed operation would be unsafe.

Held that the charter gave a right to transfer cargo to any vessel, which included a VLCC, and that while VLCC operations might be a non-standard transfer that was not a "reasonable ground for refusal". If it were, the right under the STS Clause would be an illusory one. Owners must be taken to have accepted such risks as might arise under VLCC-VLCC transfer.

Furthermore, Owners' contention that they would be justified in withholding approval if there were any uncertainty that a suitable plan could be devised for STS operations and that the Charterers had to seek the Owners' approval (and much of the evidence and argumentation centred on the detail and safety implications of proposed mooring arrangements between the vessels) was wrong. Owners' approval was confined to the receiving vessel and did not allow them to vet STS plans before deciding whether to approve the transferee vessel. The question was whether the characteristics of the receiving vessel meant that the proposed transfer would be unsafe i.e. that it created a risk that a prudent owner who had agreed to the principle would not reasonably be prepared to accept.

The Court of Appeal agreed with the conclusions reached by the judge and dismissed the appeal. (DC)

Editor's Note: An updated version of the ICS/OCIMF Guide, published In November 2013, now addresses the specific issue of ship to ship transfers between vessels of similar length.

BIMCO Ship to Ship Transfer Clause for Time Charter Parties

The BIMCO Ship to Ship Transfer Clause for Time Charter Parties was issued as Special Circular No. 3 in December 2008 (updating the earlier Double Banking Clause) for use in wet and dry trades.

The Clause establishes charterers' right to undertake ship to ship cargo operations. All such transfers are at charterers' cost, expense and time and must be undertaken in a safe area, subject to Master's approval.

The ICS/OCIMF Guide was drawn up specifically for use in tanker trades but as the BIMCO provision is available for both wet and dry cargoes, the clause sets a "best industry practice" as the benchmark operational standard.

The Master has discretion on safety issues and may, as necessary, stop or suspend operations, move the vessel or order the other vessel away. Other provisions address additional insurance and indemnities by charterers against loss or damage.

Work is now underway to develop a voyage charter party version of the clause for dry bulk trades.

BIMCO Ship to Ship Transfer Clause for Time Charter Parties

(a) The Charterers shall have the right to order the Vessel to conduct ship to ship cargo operations, including the use of floating cranes and barges. All such ship to ship transfers shall be at the Charterers' risk, cost, expense and time.

(b) The Charterers shall direct the Vessel to a safe area for the conduct of such ship to ship operations where the Vessel can safely proceed to, lie and depart from, always afloat, but always subject to the Master's approval. The Charterers shall provide adequate fendering, securing and mooring equipment, and hoses and/or other equipment, as necessary for these operations, to the satisfaction of the Master.

(c) The Charterers shall obtain any and all relevant permissions from proper authorities to perform ship to ship operations and such operations shall be carried out in conformity with best industry practice.

(d) If, at any time, the Master considers that the operations are, or may become, unsafe, he may order them to be suspended or discontinued. In either event the Master shall have the right to order the other vessel away from the Vessel or to remove the Vessel.

(e) If the Owners are required to extend their existing insurance policies to cover ship to ship operations or incur any other additional cost/expense, the Charterers shall reimburse the Owners for any additional premium or cost/expense incurred.

(f) The Charterers shall indemnify the Owners against any and all consequences arising out of the ship to ship operations including but not limited to damage to the Vessel and other costs and expenses incurred as a result of such damage, including any loss of hire; damage to or claims arising from other alongside vessels, equipment, floating cranes or barges; loss of or damage to cargo; and pollution.

Breach and damages

Charter party – Anticipatory breach – Damages – Time-charterers redelivering vessel early – Whether owners bound to give credit for value of vessel sold on repudiation for greater sum than value of vessel at contractual date of redelivery. Fulton Shipping Inc. of Panama v Globalia Business Travel SAU (*The "New Flamenco"*) – QBD (Comm. Ct.) (Popplewell J) [2014] EWHC 1547 (Comm.) – 21 May 2014

The vessel *New Flamenco*, a small cruise ship, was time-chartered by the claimant owners to the defendant charterers on the NYPE form from 13 February 2004 to (as found by the arbitrator) 2 November 2009.

In the event, the charterers redelivered the vessel early, on 28 October 2007 and the owners treated the charterers as being in anticipatory repudiatory breach. Shortly before 28 October 2007 the owners entered into a memorandum of agreement for the sale of the vessel for USD 23,765,000.

It subsequently became apparent that, due to the global financial crisis, there was a significant difference in the value of the vessel between October 2007, when the owners sold her, and November 2009, when she would have been redelivered to the owners had the charterers not been in breach of the charter party. The value, had she been redelivered in November 2009 was (as the arbitrator subsequently found) USD 7 million. The owners claimed damages calculated by reference to the net loss of profits during the remaining two-year period amounting to EUR 7,558,375. The charterers argued that the owners were bound to give credit for the difference between the amount for which the vessel had been sold in October 2007 (USD 23,765,000) and her value in November 2009 (USD 7 million). The owners argued that the difference in value was legally irrelevant and did not fall to be taken into account.

The arbitrator accepted the charterers' submissions and found that the owners had to give credit for the difference.

The owners appealed.

Held, that: (1) In order for a benefit to be taken into account in reducing the loss recoverable by the innocent party for a breach of contract, it was generally necessary that the benefit was caused by the breach.

(2) The causation test involved taking into account all the circumstances, including the nature and effects of the breach and the nature of the benefit and loss, the manner in which they occurred and any pre-existing, intervening or collateral factors which played a part in their occurrence.

(3) The test was whether the breach had caused the benefit; it was not sufficient if the breach had merely provided the occasion or context for the innocent party to obtain the benefit, or merely triggered his doing so. Nor was it sufficient merely that the benefit would not have been obtained but for the breach.

(4) It should make no difference whether the question was approached as one of mitigation of loss, or measure of damage.

(5) The fact that a mitigating step might be reasonable did not of itself render it one which was sufficiently caused by the breach. A step taken by the innocent party which was a reasonable response to the breach and designed to reduce losses caused thereby might be triggered by a breach but not legally caused by the breach.

(6) Whilst a mitigation analysis required a sufficient causal connection between the breach and the mitigating step, it was not sufficient merely to show in two stages that there was: (a) a causative nexus between breach and mitigating step; and (b) a causative nexus between mitigating step and benefit. The inquiry was also for a direct causative connection between breach and benefit, in cases approached by a mitigation analysis no less than in cases adopting a measure of loss approach. Accordingly, benefits flowing from a step taken in reasonable mitigation of loss were to be taken into account only if and to the extent that they were caused by the breach.

(7) Where, and to the extent that, the benefit arose from a transaction of a kind which the innocent party would have been able to undertake for his own account irrespective of the breach, that

was suggestive that the breach was not sufficiently causative of the benefit.

(8) There was no requirement that the benefit had to be of the same kind as the loss being claimed or mitigated, but such a difference in kind might be indicative that the benefit was not legally caused by the breach.

(9) Subject to those principles, whether a benefit was caused by a breach was a question of fact and degree which had to be answered by considering all the relevant circumstances in order to form a common-sense overall judgment on the sufficiency of the causal nexus between breach and benefit.

(10) Although causation between breach and benefit was generally a necessary requirement, it was not always sufficient. Considerations of justice, fairness and public policy had a role to play and might preclude a defendant from reducing his liability by reference to some types of benefits or in some circumstances even where the causation test was satisfied.

(11) In particular, benefits did not fall to be taken into account, even where caused by the breach, where it would be contrary to fairness and justice for the defendant wrongdoer to be allowed to appropriate them for his benefit because they were the fruits of something the innocent party had done or acquired for his own benefit.

On the facts of the present case, the owners were not required to give credit for any benefit in realising the capital value of the vessel in October 2007, by reference to its capital value in November 2009, because it was not a benefit which was legally caused by the breach. The difference in the value of the vessel was not caused by the charterers' breach of the charter; it was caused by the fall in the market which occurred irrespective of such breach.

Accordingly, the appeal would be allowed.

Editor's Note: The above is a summary of a London judgment which appeared in Lloyd's Maritime Law Newsletter No. 900 of 30 May 2014, and which is reproduced by kind permission of the publishers, Informa Law.

Speed and consumption

Charter party – Speed and consumption – Whether warranted performance absolute or subject to good weather criteria – Whether vessel in breach of performance warranty

Disputes arose under a time charter party. The charterers alleged that the vessel, a bulk carrier built in 1998, had under-performed during a Winter voyage from the Atlantic Coast of the United States to South Korea, and they made deductions from hire.

The owners brought arbitration proceedings claiming the balance of hire.

The key issue was which of the two routing company reports, namely that produced by X Corp. (favoured by the owners), and that produced by Y Inc. (favoured by the charterers), more accurately described the performance of the vessel during the relevant voyage.

The charter party provided, *inter alia*:

"Clause 63 Vessel's Description
… abt 13.5/14.0kts on ifo 380cst 34mt(l)/34mt(b) per day +0.1mt mgo per day port cons. 3.8mt ifo +0.1mt mgo per day"

but that description was qualified by the acronym "ADA" which, it was common ground, stood for "all details about".

Clause 63 continued:

"SPEED AND CONSUMPTIONS OF THE VESSEL AS PER DESCRIPTION ARE REPRESENTATIONS BY THE OWNERS AND ARE A CONTINUOUS WARRANTY THROUGHOUT THIS CHARTER."

Lines 19/20, reading "capable of steaming fully laden under good weather conditions at a speed of …", were deleted.

"Clause 100 Speed Consumption
The words 'good weather conditions' in line 20 of this Charter shall mean any weather condition in which the wind does not exceed Force 4 at the Beaufort Scale and/or Douglas sea state 3 no advance current/no negative influence of swell …"

"Clause 113 Ocean's Routes clause
The vessel shall be capable at all times during the currency of this Charter of steaming as per description.

For the purpose of this charter 'good weather conditions' are to be defined as weather conditions not exceeding Beaufort force 4 and Douglas 3 no advance currents/no negative influence of swell.

Charterers may in their option and at their cost engage independent weather routing company to monitor vessel's course, position, speed, etc in order to maximize vessel's performance, master is to follow independent weather routing company suggestion concerning navigation but master, at his reasonable discretion, may not follow suggested route in which case he has to detail in log book the reason for departing from them …"

The charterers made two submissions on the true construction of those provisions. The first was that the words of clause 63:

"Speed and consumptions of the vessel as per description … are a continuous warranty throughout this charter"

and of clause 113:

"The vessel shall be capable at all times during the currency of this Charter of steaming as per description"

amounted to a warranty that the vessel would perform in accordance with her charter party description at all times and in all weathers during the currency of the charter party. In other words, the warranty was absolute. In support of their view, the charterers pointed to the deletion of the words "capable of steaming fully laden under good weather conditions at a speed of ..." from the printed text of the charter party in lines 19/20.

The charterers' second submission was that the words "no advance currents" were to be interpreted as meaning that no current "which helps the vessel to proceed faster than warranted can be taken into account". That meaning was then qualified by later wording to the effect that:

"If the performance of the vessel is to be assessed in light of the fact that her warranties have only been given for good weather periods, then any positive or advance current would need to be assessed and, if present, deducted from the vessel's good weather speed."

The owners disputed both submissions. As to the first, they maintained that the warranties cited were qualified by the term "as per description". Inherent in that description was the definition of good weather set out in clause 100 and repeated in clause 113. They maintained that the inclusion of a definition of good weather was a clear indication that the warranted performance was subject to the good weather criteria and they submitted:

"No commercial owners are willing to agree warranties of speed and fuel consumption which apply to all weather conditions. The suggestion of the charterers that the owners did so makes no business sense, bearing

in mind the reference to the definition of the good weather in the charterparty."

They further pointed out that both routing companies had calculated the speed and consumption claims on the basis of good weather periods, as defined in the charte party, and that a claim on another voyage had been settled on that basis.

As to the meaning of "no advance currents", the owners maintained that the phrase had to be read as "no adverse current" or "no negative currents" which, they said, was the normal phrasing encountered when any qualification regarding currents was included in a performance warranty.

Held, that on the question of a continuous warranty the owners' interpretation was to be preferred. The repeated definition of "good weather conditions" in clauses 100 and 113 of the charter party was a strong indication that, in accordance with general practice, the description of the vessel's performance capacity was to be interpreted as subject to the good weather conditions and was therefore applicable only in such conditions. The tribunal did not place any importance on the deletion of lines 19/20 from the printed text of the charter party. That was probably a clerical error on the part of the brokers when the formal charter party was drawn up. If the interpretation for which the charterers contended were to prevail, stronger wording would be needed in the charter party.

As to the interpretation of "no advance currents", the owners' interpretation would again be preferred, namely that the word "advance" was simply a misprint for the word "adverse" which was commonly used in that context. The essential purpose of a definition of "good weather" was to limit the application of the performance warranties to such conditions of wind and sea in which the vessel could realistically be expected to perform to her description. Where there was mention of currents, the intention was to ensure that the vessel's performance in the prescribed wind and sea conditions was not impeded by them. The reference to swell – "no negative influence of swell" – was designed to serve the same purpose, namely to ensure that the vessel's performance in those conditions of wind and sea was not impeded by adverse swell.

Given those criteria, how did the respective reports measure the vessel's performance? The X Corp. report (favoured by the owners) calculated that the vessel under-performed by 23.98 hours, whilst the Y Inc. report (favoured by the charterers) calculated the under-performance at 50.89 hours. Both reports, in reliance on the decision in *Didymi Corporation v Atlantic Lines and Navigation Co. Inc.* [1987] 2 Lloyd's Rep. 166, assessed the speed of the vessel on "good weather days" as defined in the charter party, but did not reach the same conclusion.

The X Corp. report was based on four readings each day, whereas the Y Inc. report was based on a single reading each day, which the tribunal interpreted as giving the X Corp. report the greater accuracy. The X Corp. report calculated the vessel's good weather speed per hour at 12.68 knots, whilst the Y Inc. report calculated it at 12.46 knots, which it then reduced to 12.26 knots by deducting "advance currents" to the value of 0.20 knots. Having regard to the tribunal's conclusions on the construction of the charter, that deduction was incorrect. The difference between a speed of 12.68 knots and one of 12.46 knots, was, however, modest – only 1.7%.

The reports differed also in their selection of "good weather" days. Both reports accepted that 26 and 31 December and 1 and 2 January were good weather days. In addition, the Y Inc. report treated 22 December and 3, 4, 5 and 16 January as good weather days. X Corp. did not consider 22 December as a good weather day, because the vessel's sea time on that day was too short and the distance travelled uncertain.

As for the remaining days, 3 January showed winds of force 5 on the Beaufort scale, a sea state of 2 metres and a swell of 1.5 metres. That violated the wind force limit set out in the charter party and gave a sea state in excess of that permitted under the X Corp. formula (see below). 4 January showed a sea state of 1 metre and a swell of 1.8 metres; again, under the X Corp. formula, that did not qualify as a good weather day. The same applied to 5 January and to 16 January, where swells of 2 metres were recorded.

X Corp. had explained that the *average* wave heights corresponding to Douglas sea state 3 lay between 0.5 m and 1.25 metres, which – at the highest end of the scale – meant that the actual wave heights could vary between 0.6 metres and 1.8 metres. X Corp. had pointed to research to show that there was a correlation between *average* wave heights and *significant* wave heights, in which sea states today were commonly measured. That correlation for an all-waves average of 1.25 metres was a significant wave height of just under 2 metres. Thus, X Corp. maintained, if they used a significant wave height of 2 metres to judge fair weather days, they were in full compliance with the original meaning of Douglas sea state 3.

Then how was a day, where the significant wave-height was less than 2 metres, still categorised as a non-good weather day? The answer lay in the swell wave. That was a factor different in kind from the wind-driven waves to be expected from the various levels of the Beaufort scale. It was possible for a swell wave of a given height, once added to the height of the wind waves, to produce a significant wave-height in excess of 2 metres, thus taking that day out of the definition of a "good weather" day.

In the absence of any judicial authority on the point, X Corp. had evolved the following formula: a total seaway with wind wave *plus* swell wave giving a significant wave height of 2 metres or less would be considered a "good weather" day. If the combined figure exceeded 2 metres, the day did not qualify as a "good weather day" and would

be disregarded in the calculation of the "good weather" speed. The Y Inc. approach was to include within "good weather" days those with swell waves of up to 2 metres, in addition to whatever the wind waves on that day might be – subject to the limitation of Douglas sea state 3.

Of the two methods of calculation, the tribunal preferred that adopted by X Corp., on the grounds that their formula limited the sea state to a significant wave height of 2 metres, whatever the respective contribution to that height was made by wind or swell. That seemed consonant with the charter party description of a "good weather" day, which specifically provided "no negative influence of swell". Further, on the days in question, the general direction of the swell was either on, or forward of, the vessel's port beam, that was to say, a negative influence on her passage through the water. Therefore, the tribunal preferred the selection of good weather days made in the X Corp. report and preferred their calculation of the vessel's good weather speed.

The next point of difference between the two reports was the way in which the good weather speed was used to calculate the vessel's overall performance. Both reports claimed to be applying the principles enunciated in the *Didymi Corporation* case.

The Y Inc. method was first to divide the total voyage distance by the charter party warranted speed (which both reports accepted as 13 knots, making an allowance of 0.5 knots for the qualification "about"), to give the time in which the voyage should have been completed, then to calculate the time the vessel would have taken to complete the voyage at the good weather speed, and finally to deduct the second from the first, to give the overall loss of time attributable to the good weather speed being less than the warranted speed. To give some figures to that calculation, the Y Inc. formula was the following:

> Step 1: Total distance sailed – 10,960.9 nmn. = 843.15 hrs.
> CP warranted speed – 13 knots
> Step 2: Total distance sailed – 10,960.9 nmn. = 894.04 hrs.
> Good weather speed – 12.26 knots
> Step 3: 894.04 hrs. minus 843.15 hrs. = Excess time of 50.89 hrs.

X Corp. had pointed out, however, that that calculation related to two virtual voyages, neither of which the vessel performed. They maintained that the actual time taken on the voyage should be factored in, to take account of other times when the vessel might not have made her good weather speed for operational or navigational reasons. That was to take account of the "necessary adjustments and extrapolations" to which the court in the *Didymi Corporation* case had made reference. Thus the X Corp. calculation was to add the speed variation calculated in good weather to the voyage average speed to find the speed the vessel should have taken to fulfil her charter party commitments. Their calculation for the voyage in issue was as follows:

> Step 1: Voyage Distance 10,988.9 nm. = Time taken
> CP speed 13 knots + Average speed 11.88 knots – Performance Speed 12.68 knots 900.73 hrs.
> Step 2: Deduct time of 900.73 hrs. from time actually taken of 924.70 hrs. = Excess time of 23.98 hrs.

The tribunal noted that the voyage distance in the X Corp. report was 10,988.9 nm., compared with a distance of 10,960.9 nm. in the Y Inc. report. The X Corp. figures corresponded with those in the Master's arrival reports. They would therefore be preferred to those used by Y Inc.

In summary, the tribunal preferred the X Corp. report to that of Y Inc., as a more accurate reflection of the performance of the vessel on the voyage in issue. Their identification of "good weather" days accorded more closely with the charter party warranties, particularly in regard to the swell factor; their calculation of the "good weather" speed was more accurate; and their application of the *Didymi Corporation* case principles was closer to the reality of the voyage the vessel in fact performed.

In support of that conclusion the tribunal had done a simple arithmetical calculation. A "good weather" speed of 12.68 knots, compared with a warranted speed of 13.00 knots, represented an underperformance of about 2.5%. That in turn meant that the time the vessel actually took on the voyage, namely 924.7 hours, represented approximately 102.5% more than the time the vessel should have taken. If that time was then reduced to 100%, the time the vessel should have taken amounted to 902.15 hours, giving a time loss of 22.55 hours, a result much closer to the X Corp. figure of 23.98 hours, than the Y Inc. figure of 50.89 hours.

As regards the overconsumption claim, Y Inc. had concluded that the vessel overconsumed 71 mt of bunkers. X Corp. had concluded that the vessel did not overconsume at all. There were two reasons for the difference. In the first place, Y Inc. made no allowance for the "about" factor of (as was common ground) 5%. Secondly, Y Inc. calculated the bunkers allowed on the basis of a formula of "Daily CP Allowance x (Time *en route* less Time Loss)", namely that the Y Inc. time loss of 50.89 hrs. (which the tribunal regarded as overstated) was taken into account.

On both grounds, the tribunal would hold Y Inc's calculation to be faulty and would prefer the X Corp. conclusion that there was, in fact, no over-consumption.

Further, even the charterers had considered that Y Inc's calculations did not seem to be in line with the calculations usually used for assessing consumption because Y Inc. did "not seem to have pulled out the consumption data during the good weather periods".

Accordingly, the owners' claim for the balance of hire, in the amount of USD 63,435.10, succeeded in full. The owners would be awarded that amount together with interest at the rate of 4.25% per annum compounded at three-monthly intervals.

Editor's Note: The above is a summary of a London Arbitration Award (No. 12/14) which appeared in Lloyd's Maritime Law Newsletter No. 900 of 30 May 2014 and which is reproduced by the kind permission of the publishers, Informa Law.

Two months delay in berthing due to ice – who pays?

Charter party – Ice clause – Vessel delayed in ice getting to loading port – Whether notice of readiness valid – Whether charterers liable for delays after vessel reached ice edge – Whether charterers entitled to repayment of sums alleged to have been overpaid in error

The vessel was chartered on the GENCON form, as amended, for the carriage of cargo from the port of Rostov-on-Don to one of a number of destinations in the Mediterranean.

The parties had anticipated that an end-January arrival in the Sea of Azov would expose the vessel to problems of ice and had inserted an Ice Clause (see below) in preference to or in addition to the Ice Clause (clause 17) in the printed GENCON 1976 charter form.

The vessel reached the Kerch Strait at the entrance to the Sea of Azov at 13:20 on 29 January. She was ordered to an anchorage at 45.12N/36.30E (anchorage 455), from where the Master tendered a notice of readiness (NOR). After waiting at the anchorage for some hours the vessel sailed north later that day to a position in the Sea of Azov where the ice edge was located, arriving there about 20.00.

The vessel waited there until she joined an inbound ice convoy at 16:10 on 2 February, behind an ice-breaker. However, weather conditions worsened and the convoy stopped at 01:50 on 3 February. The ice-breaker left the convoy to conduct an emergency rescue. The vessel waited a further six days before ice-breaker assistance again became available. At 13:15 on 9 February the vessel set off once more towards Rostov, following two ice-breakers. Again, progress was limited and the convoy halted at 05:15 on 10 February, when the ice-breakers were diverted to Taganrog Bay.

On 13 February the Harbour Masters of Azov and Rostov-on-Don issued orders restricting navigation in the ice conditions. Because the vessel did "not comply with the latest Ice Class restriction" and because the vessel could not proceed to the port of Rostov-on-Don due to restrictions of ice navigation, the vessel was ordered to join an ice-breaker convoy to the South, and on 23 February she joined an outbound convoy behind two ice-breakers and proceeded to position 45.08N/36.30E in the Black Sea at the southern entrance to the Kerch Strait.

The vessel reached that point on 24 February and waited there until 23 March, when at 00:00 that day the Rostov Harbour Master lifted the navigation restriction. Later that day, at 14:50, the vessel joined an inbound convoy and eventually reached anchorage 464 of the port of Azov at 19:40 on 28 March. From there she proceeded by the Azov-Don Ship Channel, or Azov-Don Kanal (ADK), to the River Don. At 23:20 the pilot boarded and the vessel proceeded to Anchorage No. 2 of the port of Azov by order of the Coastal Vessel Traffic System (VTS) to await daylight. At 06:50 the following day, 29 March, the vessel received permission from VTS "to pass to Rostov port" and at 09:30 the vessel arrived on Nizhnegnilovskoy Road of Rostov-on-Don port (NG Road). By 10:50 inward clearance was granted, the pilot boarded and the vessel shifted from the NG Road to her berth, where she was all fast at 12:00.

Disputes arose as to whether the time that the vessel was delayed in the ice was for the charterers' account or the owners' account. The owners relied on the Ice Clause (see below) and asserted that they were entitled to demurrage, alternatively damages for detention.

The charter party was contained in a fixture note that provided, *inter alia*, as follows:

"– LOADPORT: 1/1 GSB ALWAYS AFLOAT OF PORT ROSTOV BB …

– LOADING: 1000 MT PER WWD OF 24 CONSEC HRS SSHEX EIU …

– IN CASE OF CONGESTION AT PORT OF ROSTOV VSL HAS RIGHT TO TENDER NOR AT ADK PROVIDED THERE IS NO ICE AT PORT

DEMURRAGE: DEM USD 3000.00 PAYABLE PDPR/FD BENDS

DEMURRAGE, IF ANY, PAYABLE W/I MAX 10 RUNNING DAYS AFTER COMPLETION OF VOYAGE AND AFTER PRESENTATION OF LAYTIME CALCULATION + SOF AND NOR BY FAX …

– THE RULE 'ONCE ON DEMURRAGE, ALWAYS ON DEMURRAGE' TO BE ALSO APPLIED.

– AT ALL PORTS ANY TIME LOST SHIFTING FROM WAITING PLACE TO BERTH SHALL NOT COUNT AS LAYTIME OR AS TIME ON DEMURRAGE

– NOR TO BE TENDERED/ACCEPTED

Did you know?
BIMCO members can access ice information free of charge which is updated on a daily basis throughout the ice season. An archive also enables members to study the ice situation from previous years in the relevant area.

Go to ***www.bimco.org***, select the "Operations" tab and then see "Ice" in the task bar.

WWWW BY CABLE.VHF/FAX BENDS … – ICE CLAUSE

(A) COST OF ICE-DUES ANC ICE-BREAKERS ASSISTANCE ON THE WAY TO LOAD AND ON THE WAY TO DISCHARGE PORT TO BE FOR OWNERS ACCT

(B) ALL TIME LOST IN EXCESS OF TTL 72 RUNNING HRS FOR AWAITING ICE-BREAKERS ASSISTANCE UPON ARRIVAL AT THE ICE EDGE OR BEFORE DEPARTURE FROM LOADING PORT TO BE FOR CHRTRS ACCOUNT, TO COUNT BASIS SSHINC AND PAID AT DEMURRAGE RATE. BUT TIME LOST FOR LEADING TO/FROM PORT NOT TO COUNT.

(C) TIME IN WAITING FOR ICE BREAKERS STARTS COUNTING AS FROM THE MOMENT OF ARRIVAL AT THE ICE EDGE BASIS SSHINC AS STATED IN THE SHIPS LOG BOOK IN CASE THE VESSEL PROCEEDS TO THE PORT OF LOADING AND AS FROM THE TIME OF PRESENTATION OF NOTICE OF READINESS TO SAIL TO CHARTERERS AGENT IN CASE THE VESSEL PROCEEDS FROM THE PORT OF LOADING.

– OWISE GENCON-76 CHRTS PROFORMA LOGICALLY AMENDED/ ALTERED AS PER MAIN TERMS AGREED."

The reference to the tender of notice at "ADK" was a reference to the Azov-Don Kanal (the Azov-Don Ship Channel), situated within the Sea of Azov on the approaches to the ports of Azov and Rostov.

The owners' primary case was that the NOR given at 13:20 on 29 January was a valid notice. The abbreviation "WWWW" meant "Whether in port of not – WIPON", Whether in Berth or not – WIBON", "Whether in Free Pratique or not – WIFPON" and "Whether Customs Cleared on not – WCCON". Under the WIPON provision, the owners were entitled to tender NOR whether the vessel was in port or not, provided she was in a usual waiting area for ships seeking to enter the port (see *The Adolf Leonhardt* [1986] 2 Lloyd's Rep. 395). The anchorage from which the vessel had tendered NOR on 29 January was such a place for ships seeking to enter the port of Rostov-on-Don. In a situation where the vessel could not reach the berth by reason of ice the situation was the subject of a special clause, the Ice Clause, which set out a bespoke laytime and demurrage regime that was to apply in the case of ice. The ice clause modified the usual conditions for the commencement of laytime by advancing the beginning of laytime to the point where the vessel was off the port of Rostov and at the ice edge. Accordingly, the owners had the right to tender NOR outside the limits of the port at the ice edge and/or the parties had designated the ice edge as a usual waiting area for ships waiting to enter the port of Rostov and/or the requirement that the vessel be an arrived ship before laytime could commence was displaced.

Accordingly, the owners said that laytime started to count immediately under the Ice Clause. The 72 hours allowed by that clause expired on 1 February at 13:20 and from that time onwards the vessel was on demurrage, save for the following periods spent in navigating towards the port of loading behind the ice-breakers:

(i) from 16.10 on 2 February until 01.50 on 3 February; (ii) from 13.15 on 9 February until 05.15 on 10 February; and (iii) from 14.50 on 23 March until 09.30 on 29 March, and also time spent at Rostov from 09.30 on 29 March until 08.00 on 2 April.

On that basis, the owners said that the vessel was on demurrage for 51 days, three hours and 42 minutes, amounting to USD 147,688.20. The owners gave credit for a payment by the charterers of USD 31,963.01, leaving a net claim of USD 115,725.19.

The owners' alternative case was that the Ice Clause was a provision by which the charterers agreed to compensate the owners at the demurrage rate for the time the vessel spent waiting at the ice edge and in the ice for ice-breaker assistance. Pursuant to sub-para. (C) of the Ice Clause, the vessel's arrival at the ice edge was the trigger for time to start running under sub-para. (B). Accordingly, if the NOR given on 29 January was for some reason invalid, the owners were entitled to damages for detention (calculated at the demurrage rate) under the Ice Clause for the time the vessel spent waiting at the ice edge and in the ice for ice-breaker assistance.

The charterers' denied the owners' claim. They said that the Ice Clause did not provide for a laytime and demurrage regime. Clear words would be needed to establish the owners' right to give a NOR when the vessel was off Kerch, some 400 nautical miles from the port of Rostov. The "WIPON" provision was insufficient to have that effect. As no other NOR had been tendered, laytime could begin to run only after the vessel had finally berthed at Rostov on 29 March.

As to the owners' alternative case, the charterers accepted that time spent waiting for ice-breaker assistance at the ice edge was for their account. But they denied that the Ice Clause made for their account time waiting for such assistance *in the ice*. The point at which time was to start counting against the charterers was *upon arrival* at the ice edge. The words "TIME LOST FOR LEADING TO/FROM PORT NOT TO COUNT" were included for the avoidance of doubt. The phrase made it clear that time for charterers' account ceased to run from the time when the vessel started to proceed towards the loadport, i.e. on leaving the ice edge.

The charterers also made a counterclaim. They said that they had paid the USD 31,963.01 on the basis of an erroneous calculation. They thought that time waiting in the ice was for their account but they now submitted that the Ice Clause did not support that interpretation. Their revised calculation showed only an amount of USD 5,012.99 was due to the owners, and they counterclaimed the difference overpaid of USD 29,950.02.

Held, that the owners' primary case depended upon whether the NOR given at 13:20 on 29 January from anchorage 455 in the Kerch Strait was valid. The charter party was a berth charter party. That meant that the vessel could not, in the absence of contrary provisions in the charter party, give a valid NOR until she had arrived in her berth at Rostov-on-Don. But there were contrary provisions in the charter party. The first was the provision that:
"IN CASE OF CONGESTION AT PORT OF ROSTOV VSL HAS RIGHT TO TENDER NOR AT ADK PROVIDED THERE IS NO ICE IN THE PORT".

The second was:
"NOR TO BE TENDERED/ACCEPTED WWWW BY CABLE/VHF/FAX BENDS".

The significance of the first provision was to establish that, in the event of ice, other provisions of the charter party were to apply and, in particular, the Ice Clause.

The significance of the second provision was that NOR could be tendered, amongst other matters, whether in port or not. The issue was at what point outside the limits of the port NOR could be tendered. The precise limits of the port of Rostov were not in evidence but there were a number of anchorages at which the vessel could have arrived for the purposes of the WIPON provision much closer to Rostov than anchorage 455 in the Kerch Strait. In particular, there was the area at the entrance to the ADK, which the vessel reached at 19:40 on 28 March, anchorage No 2 of the port of Azov, at which the vessel waited from 00:00 28 March until 06:50 on 29 March and the NG Road of the port of Rostov, at which the vessel waited from 09:30 on 29 March until 10:50 that day.

In the tribunal's view the WIPON provision was not sufficient to extend to the vessel's arrival at the anchorage 455 in the Kerch Strait. That was the place on the vessel's approach voyage at which she was ordered to await ice-breaker assistance. That was not the place at which she became an "arrived ship" for the purposes of commencing laytime.

The Ice Clause did not have any relevance to the point at which a NOR could be given under the other terms of the charter party. The Ice Clause was independent of and separate from the laytime and demurrage provisions of the charter party. The juxtaposition of the laytime and demurrage clauses on the one hand and the Ice Clause on the other indicated that the parties intended that the two regimes were to be separate and independent. That was reinforced by the facts that there was no mention of a NOR in the Ice Clause, and the Ice Clause had its own provisions as to when time waiting for ice-breaker assistance was to count. The manner in which non-working time was to be reckoned differed between the Ice Clause (SSHINC – Saturdays, Sundays and Holidays included) and the laytime/demurrage regime (SSHEX EIU – Saturday, Sundays and Holidays excepted, even if used). Moreover, the mention of the word "demurrage" in the Ice Clause was a reference to waiting time being paid for at the demurrage rate, namely USD 3,000 per day and *pro rata*. That was very different from saying that the vessel would be *on demurrage* during the waiting time.

As to the owners' alternative case, time started to count against the charterers from the moment that the vessel arrived "at the ice edge". Those words could not be interpreted literally since the ice edge was constantly shifting and was not a place at which vessels would have been permitted to wait. Effectively, vessels reached the ice edge when they had progressed to the point where they could go no further without the permission of the authorities and the provision of ice-breaker assistance. Accordingly, time started to count against the charterers under the Ice Clause when the vessel arrived at anchorage 455 in the Kerch Strait, where she had been ordered to wait for the ice-breaker convoy.

The time that counted against the charterers under the Ice Clause was the time the vessel spent waiting for ice-breaker assistance on her first arrival at the ice edge/anchorage 455 on 29 January. That did not include time spent *thereafter in the ice* awaiting ice-breaker assistance, once the initial convoy had got under way. The Ice Clause was silent on that point. It followed that delays in the ice were part of the approach voyage to the port, where the risk of delay was upon the owners. Had the parties intended that all delays in the ice waiting for ice-breaker assistance were for the charterers' account, they could have provided for that in clear terms.

It was true that that interpretation might render superfluous the words "BUT TIME LOST FOR LEADING TO/FROM PORT NOT TO COUNT", but the tribunal would accept the charterers' submission that the words were included for the avoidance of doubt. Furthermore, the presumption against surplusage in commercial documents, such as charter parties, was not a strong one.

As to the charterers' counterclaim, when the charterers made the payment of USD 31,963.01, which they now categorised as "erroneous", they did so in the belief that it discharged their legal liability to the owners under the charter party contract. If that payment were erroneous it followed that charterers made a mistake of law. Since the decision of the House of Lords in *Kleinwort Benson Ltd. v Lincoln City Council* [1998] Lloyd's Rep. Bank 387; [1999] 2 AC 349, the rule of English law that payments made under a mistake of law were, in general terms, unrecoverable, had been abolished. In its place, the recoverability of such payments was governed by the law of restitution, itself based upon the principle of unjust enrichment. But no submissions, from either side, had been made to the tribunal on the law of restitution or on the defences to a claim for the recovery of a mistaken payment, for example, the defence of change of position or of compromise of an honest claim. In those circumstances it was appropriate to let the loss lie where it had fallen, i.e. to hold that the charterers had not convinced the tribunal that they were entitled to recover it. The charterers' counterclaim therefore failed.

Accordingly, the owners' claims failed, and the charterers' counterclaim also failed.

Editor's Note: The above is a summary of a London Arbitration Award (No. 13/14) which appeared in Lloyd's Maritime Law Newsletter No. 901 of 13 June 2014 and which is reproduced by the kind permission of the publishers, Informa Law.

Asbatankvoy – Cargo contamination claim – Where and how caused disputed

This arbitration concerns a claim by Claimant's cargo underwriters against Respondents owners for alleged contamination damage to a part cargo of 3,500 mt of Acrylonitrile (ACN).

The cargo was carried by the *MT Siteam Explorer* (Vessel) from Houston to Ulsan pursuant to an Asbatankvoy Charter Party dated 10 June 2008, between Team Tankers A.S., as Owner, and Vinmar International Limited, Inc., (Vinmar) as Charterer.

The Vessel loaded 3,474.090 mts of ACN in apparent good order and condition, as confirmed by pre-loading and post-loading tests at Houston and also discharged that same quantity to shore tanks in the same apparent good order and condition, as confirmed by pre-discharge and post discharge tests at Ulsan. However, six weeks after discharge the cargo in the shore tanks was again tested and found to have "yellowed" to APHA 13, which was beyond Vinmar's maximum permitted resale specification of APHA 10.

It is alleged by Zurich American Insurance Company (Zurich), as subrogee of its insured Vinmar, that the cause of the increased colour occurred from an external source while the cargo was still aboard the vessel. Respondents denied these allegations and the claim was submitted to arbitration. Eventually, all relevant samples were tested and retested. The expert witnesses drew different inferences from the analytical results. The dispute was submitted to arbitration.

This award addresses several issues

Claimants burden to establish a *prime facie* case

Respondents burden to establish that it used "due diligence" in the carriage of the cargo
The proper measure and calculation of Claimants' claim in a rapidly falling market
The proper parties in interest
The *Prima Facie* Cargo Claim

The Panel majority (consisting of Mr. Siciliano and Mr. Szostak hereinafter the "Panel") began with the description of Acrylonitrile taken from Claimant's brief:

"It is a clear, colourless liquid that contains both olefinic (carbon-carbon double bond) and nitrile (cyano) groups, which give the molecule its unique and varied reactivity, making it a versatile raw material. It is an important component in the manufacture of many plastics. While ACN is designed for its reactive versatility, that reactivity must be stabilized to facilitate its transport and handling in liquid form while preventing unintended polymerization (a highly exothermic reaction) pending ACN's final use in one of its applications.

Today, ACN is normally stabilized against premature polymerization during storage, transport and handling by adding 0.2 to 0.5 weight percent of water and 35-45 ppm of the inhibitor Methyl Hydroquinone (MEHQ). Water and MEHQ interrupt potential polymerization by consuming trace reactive intermediates before polymerization begins or becomes uncontrolled. Water inhibits ionic polymerization by trapping basic or acidic intermediates, and MEHQ inhibits free-radical polymerization by trapping free radical intermediates."

At the hearings, Claimant's expert was firm in his testimony that the "contamination" did not occur prior to or during the loading process. Rather, he opined that the contamination took place during the voyage by reason of the ACN coming into contact with and absorbing some 33 gallons of the ship's prior cargo of pygas.

In contrast, Respondent's expert testified that, given the tendency for ACN to polymerize and yellow over time, the more likely cause was a deficiency in the MEHQ inhibitor as it was consumed during the stressful Summer high temperatures experienced at Houston and during the 47-day sea voyage through tropical zones to Ulsan. Although no deficiency in MEHQ was noted at the time of discharge, he opined that the weakened inhibitor caused the ACN to slightly polymerize and turn slightly more yellow while stored in the UTT shore tanks.

The documents confirm that the cargo was loaded in apparent good order and condition and outturned in the same apparent good order and condition. When discharged into UTT tanks 910 and 1106 on 15-16 August 2008, the ACN was tested and found to have a colour rating of only

3 APHA (less than the 5 APHA noted at the load port). But additional testing on 26 September 2008 of a "composite" sample from both those shore tanks showed the cargo to have an APHA rating of 13, as opposed to Vinmar's specification of Maximum 10 APHA.

From 6 October 2008 through 2 December 2008, SGS tested samples of the ACN from UTT Tanks 910 and 1106 for colour with results that ranged from lows of 4 and 5 (7 and 21 October) to highs of 15 and 16.

The Panel considered that the MEHQ factor of 37 ppm reportedly found by SGS at Ulsan to be in line with expectations. Despite the rigours of the sea passage, the Ulsan finding of 37 ppm was slightly higher than the 36 ppm first found by Caleb Brett at Houston but marginally below the 38 ppm found by Caleb Brett on its recheck of the shore tanks on 24 June 2008.

The Ulsan MEHQ finding is also in keeping with the 37.56 ppm shown in the Cargo Inhibitor Report. Given the expert testimony describing the function of the inhibitor, had the cargo polymerized while aboard the *Siteam Explorer*, we would have expected the MEHQ noted at Ulsan to be substantially below the 36-38 ppm found at Houston.

The fact that the MEHQ outturn readings remained consistent with those confirmed at Houston, is evidence that the inhibitor functioned as intended while the cargo was in the custody of the vessel. It was only after the cargo had been discharged and remained in the UTT shore tanks for some time that the MEHQ was noted to have increased to 40/41 ppm. Moreover, those SGS tests also detected an increase in the cargo's Non Volatile Matter (NVM), which according to Respondent's expert is strong evidence that the MEHQ inhibitor had briefly stopped working and that polymerization had occurred in the shore tanks.

Consequently, the majority finds that Claimants have not shown, by a preponderance of evidence or otherwise, that the alleged contamination took place while the cargo was in the custody of the *Siteam Explorer*. Nor have Claimants shown that the nature of the alleged damage is so unique that it could only have occurred while still aboard the vessel. Other plausible scenarios such as those suggested by Respondent's expert are possible, if not probable. It follows that Claimants have not overcome the COGSA statutory presumption of clean delivery imposed by their late notice of damage. Accordingly, the majority is obliged to deny the Claimants' claim in its entirety.

Claimants had failed to establish a *prima facie* case.

Owner's Due Diligence defence

Had the Panel been persuaded otherwise (which they were not), Claimants would only have succeeded to restore themselves to a *"prima facie"* claim posture and shift the burden onto the Respondent Owner to show that the "damage" was caused by circumstances for which it is legally excused. In order to do so, Respondents must demonstrate that they exercised the requisite statutory "due diligence" to make the ship seaworthy. In pertinent part, COGSA's Section 4(1), reads:

"Neither the carrier nor the ship shall be liable for loss or damage arising from unseaworthiness unless caused by want of due diligence on the part of the carrier to make the ship seaworthy… Whenever loss or damage has resulted from unseaworthiness, the burden of proving the exercise of due diligence shall be on the carrier or other person claiming exemption under this rule."

At the time of these events, the *Siteam Explorer* was just one year old. Cargo tanks 4BP and 8P were both coated with Dimecote inorganic zinc and each was fitted with its own segregated piping system and deep well cargo pump. There is ample evidence that ship's crew properly cleaned the two cargo tanks using both seawater and fresh water. In fact the Master testified that the protocol was to clean to a water-white standard and that owner had supplied the ship with extra fresh water for that purpose.

The Master further advised that the prior cargo carried in Tank 8P was ethylene dichloride, a clean product which would discourage residue build-up by the following pygas cargo. In addition, as required by printed Clause 18 of the Asbatankvoy charter party, Vinmar's appointed shore inspectors twice examined and approved those tanks as fit to receive and carry the sensitive ACN cargo.

Those approvals were given despite the shore inspectors being aware (as confirmed by Caleb Brett's own Tank Inspection Reports) and no doubt taking into account that the last cargoes carried in Tanks 8P and 4BP were pygas and benzene respectively.

The ACN cargoes were loaded through separate dedicated lines connected at the off-

shore manifold by a ship supplied flexible cargo hose, which the Master testified and Claimant's expert accepted steam cleaned and dried.

Furthermore, the majority feels obliged to comment on Claimants' suggestion that the mere presence of minor residues from a prior cargo renders a vessel "unseaworthy" and, therefore, any ill affect suffered by that cargo is to be made good by the "carrier" or vessel owner. However, such a position would effectively elevate the carrier's COGSA burden from one of "due diligence" to that of a guarantor or insurer for the safe and complete outturn of a cargo. But, as argued by Counsel for Respondents, that is not the standard to which the carrier is to be held.

US District Courts have described due diligence as "a legal term of art designed to enable [the] judge to evaluate various criteria, including community standards, industry custom, human fallibility, and competing interests of other parties. As a general principle, due diligence is that action which would or should be exercised by a reasonably competent carrier," and, "...whatever a reasonably competent vessel owner would do under the circumstances.

After careful review of the testimony and other evidence, the majority is satisfied that Respondents did exercise the "due diligence" required by the statute.

Calculation of Damages

Independent and separate from our finding in favour of Respondents on the liability issues, the Panel felt obliged to comment on Claimants' method of calculating the claimed damages. Taking the totality of the situation into account, the still plunging market as well as the costs, difficulties and uncertainties associated with attempts to remediate the cargo, we think it was reasonable for Vinmar to sell rather than attempt to remediate the cargo. That said, we do not agree that the measure of loss sought from Respondents is either Vinmar's costs or the market price when the "damage" was first discovered, less the "salvage" sale proceeds.

The aim of permitted damages is to restore the injured party to the same position had no damage occurred. Here, Claimants' damages are to be measured against the plunging market for sound ACN, and the inability of Vinmar to sell the cargo before and after the colour increase was discovered. However, we have seen no contemporary evidence that Continent sought or that Vinmar granted a reduced price due to the cargo having an APHA factor greater than 10. In fact, the contract of sale to Continent does not describe the cargo as distressed product.

Thus if required the Panel would have substantially reduced Claimant's damages.

Real Parties in Interest

Respondents main post hearing brief for the first time objected to Eitzen Chemical USA, *in personam*, and the *Siteam Explorer*, *in rem*, being named as parties to this arbitration because neither was a party to the governing charter and in rem claims may not be adjudicated through arbitration. Claimants' post hearing reply brief, pointed out that this very issue was discussed with Respondents' P&I Club which thereafter, on behalf of all the named Respondents, granted Claimants the critical extension of time under which this proceeding was brought.

Thus, Claimants argued that Respondents not only initially waived those objections, but also continued to do so by failing to raise those objections at the outset of this proceeding. Although the point is now moot, the majority considers Claimants to have the better argument. Had we decided the main dispute in Claimants' favour, the majority would have been inclined to issue a joint and several award against all named Respondents and leave enforcement of that award to the appropriate courts.

Award

In view of the foregoing, the majority consisting of arbitrators Szostak and Siciliano are obliged to deny the claims put forward by Claimants against each and all of the named Respondents. Furthermore, as the prevailing party, we hereby award Respondents, the sum of USD 250,000 as an allowance against the legal fees and expenses incurred by them for this proceeding. The parties are directed to share the cost of the transcript

Patrick V. Martin

Parties

Zurich American Insurance Company as subrogee of Vinmar International Limited, Inc. and Vinmar International Limited, Inc., Claimants, and Team Tankers A/S, as Owner of the MT *Siteam Explorer*, Eitzen Chemical, USA, *in personam* and the MT *Siteam Explorer*, *in rem*, Respondents under an Asbatankvoy Form of charter party dated 10 June 2008.

Before

Louis P. Sheinbaum, A. J. Siciliano, Donald J. Szostak (Chairman)

Appearances

For Claimants

Kennedy Lillis Schmidt & English by John T. Lillis Jr., Esq., Nathan T. Williams, Esq.

For Respondents

Holland & Knight LLP, by Michael J. Frevola, Esq., F. Robert Denig, Esq.

(Society of Maritime Arbitrators (SMA) Final Award No. 4216, dated 26 August 2013)

Editor's Note: This summary has been prepared by Patrick V. Martin Esq., counsel to the Society of Maritime Arbitrators of New York (SMA)

Quality is never an accident;
it is always the result of high
intention, sincere effort,
intelligent direction and skillful
execution; it represents the wise
choice of many alternatives.

(William A. Foster)

The BIMCO House, July 2014

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