TANKEROperator

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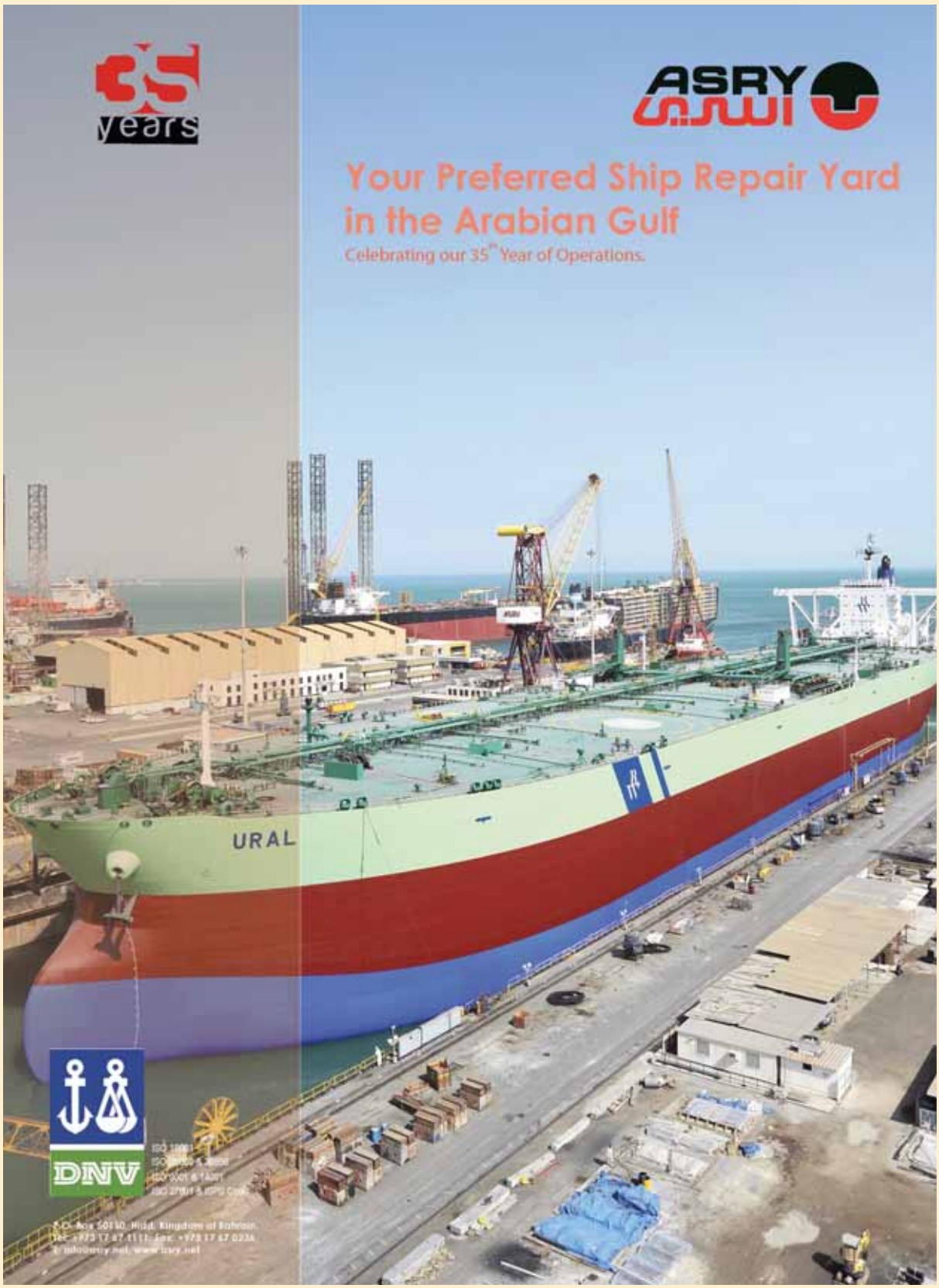

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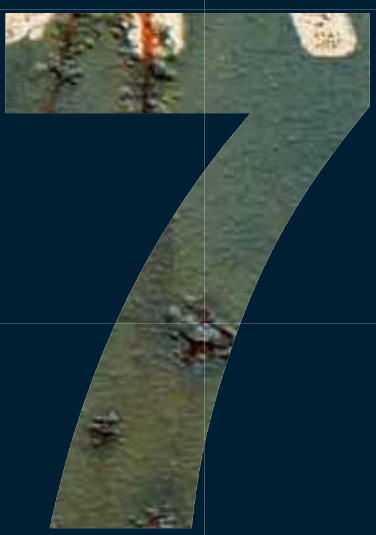

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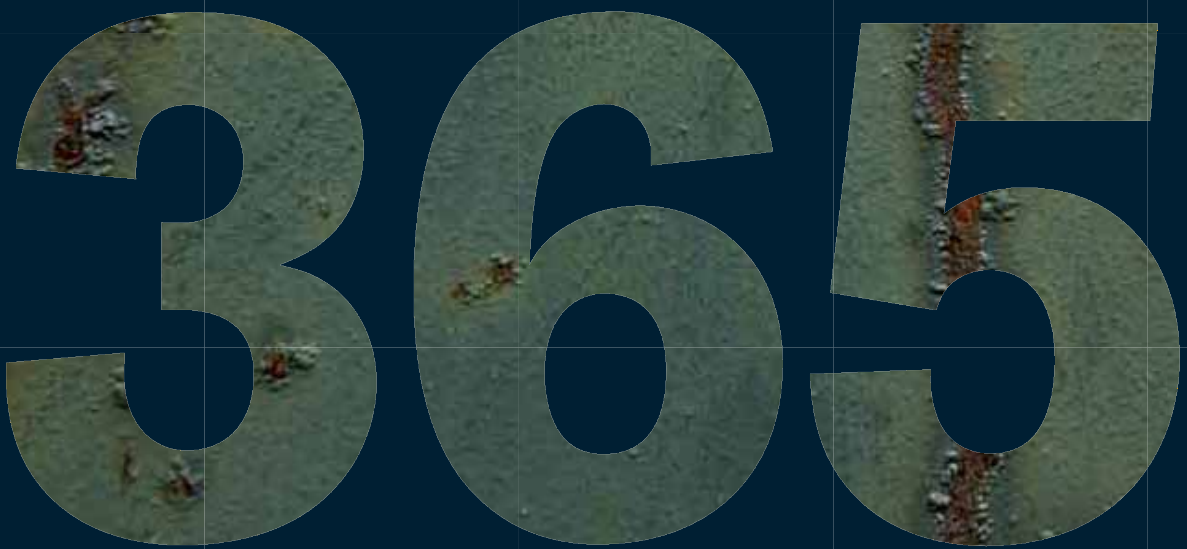

Contents

Front cover

Leading Bahrain-based shiprepairer ASRY has started the year well by handling three VLCCs. The company said that thus far, 2012 had mirrored 2011 in that the yard has seen the return of the large tanker. Last year ASRY handled 13 VLCCs out of a total of 52 tankers, which visited the yard in the 12-month period.

Have we learnt anything from the *Titanic*?

I was wondering how on earth I could get a reference to the 100th anniversary of the sinking of the *Titanic* in *Tanker Operator* and then those insurance boys and girls at Allianz answered my prayers.

Allianz (AGCS) has come up with a report highlighting new shipping risks and although it has greatly improved since 1912, key challenges still remain, the insurer said.

It should be remembered that the sinking of the *Titanic* and the subsequent enquiry spawned SOLAS - as major shipping disasters tend to spur the regulators into action – *Exxon Valdez*, *Erika* and *Prestige* being prime illustrations of this. In addition, the 1987 *Herald of Free Enterprise* disaster helped to produce the ISM Code.

Down the years, apart from the two World Wars and the Iran/Iraq War, shipping losses have dramatically reduced, despite the world's fleet trebling in numbers. However, Allianz said that the increase in vessel sizes, not particularly applicable to tankers here, the 'human error' factor and Arctic navigation were the next hurdles to be overcome.

Since 1912, the world's commercial shipping fleet has trebled to over 100,000 vessels (actual figures may vary, according to the criteria), yet overall shipping loss rates have declined from one ship per 100 per year in 1912 to one ship per 670 per year in 2009.

While factors such as new technologies and regulations have tremendously improved marine safety, new risks have emerged.

AGCS's comprehensive report, 'Safety and Shipping 1912-2012: From *Titanic* to *Costa Concordia*', based on research from Cardiff University's Seafarers' International Research Centre (SIRC), highlights several key challenges for the industry including the growing trend to 'super size' ships and cost pressures pushing shipowners to source crews from emerging economies where standards of training and assessment can be inconsistent.

Other significant safety risks include reduced crewing numbers, which may compromise margins of safety and encourage 'human error' risks; increasing bureaucracy on board ships; the continued threat of piracy off Somalia and elsewhere; and the emergence of ice shipping and its associated navigational and environmental complications.

Commenting on the findings of the report, Dr Sven Gerhard, AGCS's global product leader hull & marine liabilities, said: "While the seas are safer than ever today, the industry needs to address these new risks proactively. For example, ultra-large ships pose challenges for insurers due to their sheer size and value, while others raise concerns on structural integrity and failure.

"While scale alone does not make these ships riskier, the increased sizes introduce specific risks that need to be addressed, such as salvage and recovery considerations and emergency handling," he warned.

Although the days of the ULCC appear over, the largest modern containerships under construction are so big that there is space below deck for a basketball court, a full-sized American football stadium and a spectator-filled ice hockey arena. Ships of this size raise questions of adequate loss coverage in the event of an incident and of potential structural limitations, said AGCS.

Human error – the weakest link

The report also highlights the continued challenge of human error in maritime operations – a factor which remains critical despite 100 years of technological and regulatory improvements in safety.

Over 75% of marine losses can be attributed to a wide range of 'human error' factors, including fatigue, inadequate risk management and competitive pressures, as well as potential deficiencies in training and crewing levels.

Dr Gerhard explained: "As technological improvements reduce risk, so does the weakest link in the system – the human factor – become more important. This is where the industry should focus most closely, so that best practice risk management and a culture of safety becomes second nature across the world fleet."

While technologies such as Radar, or Global Positioning Systems (GPS) have driven improved safety, it has often been major accidents that have been the catalysts for key changes.

"Historically, high profile shipping disasters have led to improvements in marine safety. And *Costa Concordia* is certain to be no different, whatever the result of the official investigations into this cause will be," said Dr Gerhard.

AGCS' research boffins have come up with a list of key facts and figures taking in the 100 years since an iceberg inadvertently changed maritime history forever.

- Since 1910, world fleet tonnage has increased by a factor of 23 and has now approached one billion gross tonnes (2010 figures).
- World seaborne trade has trebled since 1970 to over 8.4 bill tonnes of cargo loaded per annum.

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- Professional seafarer fatality rates have fallen in many countries: for example, in the UK, in 1919 it was estimated that there would be 358 fatal accidents for every 100,000 seafarer years spent 'at risk' – a rate which had fallen to 11 by the period 1996-2005. However, this fatality rate is still 12 times higher than in the general workforce.
- Accident 'black spots' include South China, Indo-China, Indonesia and Philippines with 17% of total losses in 2001-2011, followed by East Mediterranean and Black Sea (13%), and Japan, Korea and North China (12%). The seas around the UK also show relatively high loss concentrations (8%).
- Technical innovations over the last 100 years include improved construction techniques, echo-sounding, Radar, Very High Frequency (VHF) radios, Automatic Radar Plotting Aid (ARPAs), satellite communications, GPS positioning finding, and Electronic Chart Display and Information Systems (ECDIS – all of which have supported marine safety.

I have deliberately deleted reference to passenger vessels with apology to AGCS. However, the cost in both human and monetary terms of a chemical tanker ploughing into a 200,000 gt cruise vessel doesn't bear thinking about, let alone what the final total of the Costa Concordia sinking will be. ■

Help – somebody get me a dictionary!

For all those who find the shipping language baffling with its range of acronyms made up for virtually anything, help is at hand.

In an attempt to explain the complexity of the industry's terminology in simple terms, Braemar, Incorporating the Salvage Association, surveying and technical consultancy arm, as the company likes to be called, has published a second edition of its Guide to Hull & Machinery.

For anyone baffled by jargon, the shipping industry isn't the best choice of workplace, Braemar acknowledged, a statement with which Tanker Operator's Editor fully concurs.

Although primarily aimed at the marine insurance industry, whose claims people have to wade through piles of incident reports packed with jargon, the book will be a godsend to anybody just starting out in the industry.

It is essentially a reference book covering some of the common terminology used for ships, their engines and related operations, which is often encountered in survey reports.

The first version of the Guide to Hull & Machinery, released last year, was met with such enthusiasm by the marine insurance market that Braemar have now produced a new enhanced version, the company said.

Marine survey reports frequently contain nautical and engineering technology, which can often be unfamiliar. Braemar drew on material from 24 authoritative sources to produce more than 70 pages of diagrams and explanations of terms relating to the key functions of ships and clear illustrations of ship components, which often figure in insurance claims.

The Guide to Hull and Machinery has been welcomed by the industry. "This is a unique source of reference," said John Hutley, vice president, P&C Claims, Swiss Re Services. "It will not only give support to the established claims professionals but also, with its considerable depth of information, to those who are new to the business."

This second edition of the guide has been updated in response to feedback from the marine insurance market and includes additional data, such as explanations on gross and net register tonnages, subdivision and load line, deck mooring fittings and lifting appliances, while some useful guide formulas are included on selection of wires and synthetic ropes.

In the machinery section, data can be found on gear boxes, fuel and lube oil systems, purifiers and transmission systems, while the sheer scale of marine engines in comparison to a human body can now be appreciated on the section of typical propulsion engines.

Dino Levantis, Braemar's business director for the Mediterranean and Eastern Europe region is the lead author of the publication. "The intention has been to keep it simple," he explained. "Targeted at experienced marine professionals and newcomers alike, it is not intended as an unwieldy dictionary of terminology but as a quick reference tool with easily understood illustrations that covers the essentials in a user friendly way."

Much of the book taken up with technical explanations on the left hand page with the right hand page left blank for note taking.

The guide is available in hard copy, or pdf format and is free of charge to those working in the marine claims and insurance industry, but will be a useful tool for other sectors of maritime life. ■

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Are we on the rebound?

As the first quarter of this year is consigned to history, it is clear that the tumultuous situation seen 2011 was not a one-off.

Tensions between Iran and the West are supporting rising oil prices and have the potential to further destabilise an already shaky economy. Meanwhile, developments in Syria, Yemen and Sudan are also limiting oil supplies, reported McQuilling Services in the 'Short Term Outlook' report.

There have been some positive indicators out of the US, but other regional economies remain under pressure. The debt crisis in Europe continues to cast a cloud over the continent and recently, the European Union's (EU) statistics office released data confirming GDP contracted by 0.3% in Q4 2011.

Compounding concerns, China's official economic growth target of 7.5% for 2012 indicates that even the dragon economy may not be formidable enough to halt the slide.

Against this background, the tanker market has performed reasonably well and has even slightly outperformed McQuilling's January forecast. Despite this development, the tanker market will continue to be pressured by overcapacity and the currently high bunker prices.

Liftings out of the Arab Gulf have come under some pressure from a more narrow spread between Dated Brent and Dubai that has made West African grades comparatively cheaper.

During the January-for-February 60-day cycle, used by McQuilling to track fixtures, spot charters increased strongly in the middle of February, breaching the upper threshold of the five year range for the first time during this period, indeed since the May-for-June cycle in 2008.

This helped support rates, but after gaining too much momentum, charterers pulled out of the market and rates retreated. The February-for-March cycle has closely followed the five-year average and there has been much less activity between the middle and end of the fixing month.

The reduced fixing activity in this cycle has also likely been influenced by the rising price of crude, which has been strongly influenced by sanctions surrounding Iran. These sanctions have basically eliminated owner's ability to acquire shipping insurance for Iranian liftings, as importing nations look for alternative supply sources.

Suezmax fixtures were down sharply during February, but remained slightly above the previous years' levels. Fixtures from West Africa to the US Atlantic Coast were unchanged at seven, but with Sunoco's Philadelphia refinery due for closure in July, an upward shift is unlikely.

Although supply security is a permanent issue in West Africa, a new crude stream from the Usan field off Nigeria's coast is expected to add 180,000 barrels per day into the market by the end of 2012. In North Africa, China recently inked a deal to import 140,000 barrels per day of crude from Libya.

Following last year's civil war, Libya's oil production has steadily rebounded and was reported at 1.4 mill barrels per day in February.

In the Middle East, after several weather related delays, the first of four single point moorings (SPM) is reportedly ready to begin operations at Iraq's southern port of Basrah. The SPM has a capacity of 850,000 barrels per day and is expected to initially increase Basrah's export capacity by 400,000 barrels per day once operational, according to Platts.

In the clean tanker market, with the exception of the LR2s, activity declined. The downturn was likely influenced by relatively high levels of refinery maintenance. The most notable of these, McQuilling said was the 290,000 barrels per day central distillation unit at India's Jamnagar complex that was offline for three weeks for a planned turnaround.

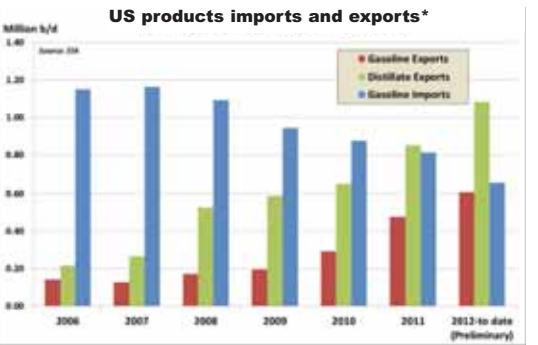
However, reduced US refinery throughput on the East coast and tight pipeline capacity combined with the looming start of the driving season should allow activity to rebound in the near-term.

MR2 fixtures recorded the steepest decline but still remain above year ago levels. The drop in MR activity was influenced by the closure of the St. Croix refinery in the Caribbean.

The expectation of continued deliveries from previous orderbooks continues to limit improvement in market sentiment. To date, McQuilling anticipated that 17% of its forecasted deliveries and exits would have transpired.

Market balanced

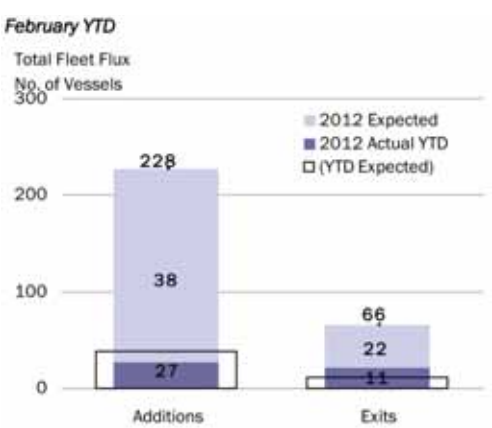
At the end of February, 27 tankers had been delivered and 22 were sent to the breakers. This represented 12% of the consultancy's year-to-date expected deliveries and 30% of the forecasted exits. As a result, at this point in the year (mid-March), market fundamentals



US products imports and exports*

* See page 7.

Source - Gibson Research.



Source - McQuilling Services.

are more balanced than had initially been anticipated.

The exit profile of Suezmaxes has been robust with seven deletions versus a forecast of four. All of the tankers sent to the breakers have been between 22 and 24 years old, highlighting the pressure owners of older tonnage are under.

With the exception of Panamaxes, delivery profiles have generally been below expectations. McQuilling expected a total of three Panamaxes to enter the trading fleet this year and to date two have been delivered. The *Nave Estella* and *SCF Progress* were delivered to Navios and Sovcomflot respectively from South Korean shipyards.

Looking forward, McQuilling expected rates to move sideways in the coming months, as economic concerns will reign in demand and vessel supply will continue to remain ample. The start of the US driving season should provide some support for clean tanker rates in the Atlantic Basin but demand may be capped by rising pump prices.

Despite high OPEC production levels as the producers group aims to limit the impact of global supply concerns, crude and residual tanker demand could be negatively impacted, if any other pressures occur.

Resilient MRs

Perhaps, one of the clearest examples of the recent major changes in the tanker sector was the shift in trading patterns in the Atlantic Basin MR market.

The gasoline flow from Europe to the US has traditionally been the dominant route for MRs in the West.

However, the economic turbulence coupled with high oil prices has translated into a reduction in US gasoline requirements in recent years, with total gasoline imports down by 0.35 mill barrels per day from peak levels in 2007 to 0.81 mill barrels per day last year, reported Gibson Research in a report.

Imports have been even more sluggish over the past few months, averaging just 0.66 mill barrels per day since the beginning of 2012.

However, these bearish developments have not been reflected in the Atlantic Basin MR market. In contrast, we have seen quite a few major spikes in rates in recent months, Gibson said.

TCE earnings for MRs trading UK/Continent - US Atlantic Coast rose to $23,000 per day at its highest peak on round voyage basis at design speed, while MRs in other regional markets in the West followed a similar pattern. This is in stark contrast to the East, where MR earnings have lately battled to remain above zero.

In terms of fundamentals, one of the key reasons for the firmer product tanker market in the West is the ongoing strong growth in US products exports. First, distillate exports out of US, primarily to Latin America and Europe, have been on a rapid upward trend since 2007 and surpassed in terms of volume the US gasoline imports seen last year.

This year, US distillate exports have seen further growth, with average daily shipments out of the country rising above 1 mill barrels per day. US gasoline exports, almost solely to Latin America, have also been rising fast, quadrupling since 2007.

As a result, gasoline trade out of US has reached 0.61 mill barrels per day this year, not far behind total gasoline imports over the same period, Gibson said. TO

Correction- Drewry Maritime Research

On Page 19 of the March issue of Tanker Operator, the sources quoted for the graphics were inadvertently transposed.

The top right graphic source should have read….Gibson Research, while the bottom left graphic should have been sourced to Drewry Maritime Research. We apologise for any embarrassment caused.

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Tanker expert heads up Thome's new wet division

Singapore-based third party shipmanagement concern Thome Ship Management has split its management portfolio into wet and dry divisions and appointed a new COO to run the wet operation.

Steffen Tunge has taken on the role as a director and new COO for Thome's tanker fleet and *Tanker Operator* asked him about his hopes and aspirations for the third party shipmanagement industry and the tanker sector in particular.

When asked, what were his priorities in his new position going forward, Tunge said that quality and experienced tanker officers, particularly senior officers, are still in short supply and this is not likely to get much better on the short term. Securing and retaining officers will therefore continue to be a priority.

"We will also with our new organisational structure focus very much on dedicated tankers procedures, which will improve our quality going forward. We have noticed that the requirements to the tanker industry are ever increasing and we intend to stay on top as a tanker manager," he said.

He also said that Thome intended to continue to grow the tanker side of it's portfolio as there is still a strong demand for quality shipmanagement and the company will continue to grow with existing clients, as well as bring in new ones if and when there is capacity to do so.

"We expect that we will grow but only in a controlled way with due respect to our existing principals and to the requirements of the charterers," he said. He estimated that the company could grow by another 10 – 15 tankers, but this would be subject to timing and conditions, "….as we do not want to jeopardise our quality standards," he stressed.

Talking of possible growth due to distressed tonnage in today's economic climate, he said that most probably there is a potential, but so far Thome has seen "…more talk and less action. We have noticed it is a complex system with many stakeholders, so we do not expect a rapid change in the way the industry works," he said.

He admitted that the current demand for increased safety is a never ending saga. The demands for reduced risks and improved safety will continue and every time there is a major incident, it leads to new SOLAS or MARPOL regulation, or industry demands.

"This has been the nature of our industry for several decades and is not likely to change. We have identified a strong vetting performance as our ticket to operate tankers, so we will maintain a very strong focus on keeping, or improving our results. The same goes for TMSA. A good result is needed to meet the requirements of the commercial people in our industry," he said.

All tanker types

Thome currently manages all ranges of oil tankers, as well as chemical tankers, bitumen carriers, plus LPG and LNG carriers. Tunge explained that the company was particularly strong in the chemical tanker sector, because a large number are under management. However, he stressed that all other tanker types are also under management and there was no particular preference.

Turning to InterManager's KPI initiative, Tunge said; "We like the InterManager KPI's, but also believe we still have a way to go to make the system operational."

The question of third party shipmanagement remuneration is never far away when talking with the third party shipmanagement concerns, especially today with increasing costs and increasing pressure to reduce operating costs.

Tunge countered; "This is a very competitive business and with shipping for the most part in a slump, there is not much appetite for any increased costs, including management fees. Improved productivity is what we have to strive for, but there is a limit of what can be achieved.

"We do however believe that the industry has to accept an increase in a not too distant future, as requirements continue to increase and charterers expect a flawless operation, which unfortunately cannot be done without cost. This of course also ties back to the charter hires offered and we believe any quality charterer will have to accept a certain level of operational expenditure, otherwise a quality operation cannot be delivered," he warned.

Some shipmanagers, especially the larger companies, have always said the economies of scale kick in once a critical mass of tonnage is reached. "There is obviously an advantage of scale and bigger is often better. However, there is a limit how big it can go before other issues become too complicated and may result in reduced performance.

"We are well aware of that and will be very attentive to our quality level. We do believe that a critical mass is more needed than ever, mainly due to the depressed market and the need for a quality operation," Tunge said.

Satcoms contract

Earlier this year, Thome signed a contract with Inmarsat and its distribution partner AND group to provide Inmarsat FleetBroadband and AND's IPSignature2 communications software to its managed vessels.

Under the new framework agreement, AND group became the exclusive communications provider to Thome for Inmarsat FleetBroadband and will deliver the FleetBroadband service through a combination of pricing packages, including the Very Large Allowance (VLA) package.

Tunge explained that the recent signing of the contract to offer the installation of FleetBroadband on board Thome's principals' vessels was for varying reasons. "We have made a competitive package we can offer to our principals, as we believe the future will belong to broadband on board ships - both for professional and operational reasons - but also to improve the communication our seafarers can have with their families and friends. So the agreement serves several purposes," he said.

Finally, he thought that going forward there will be consolidation among owners and managers. "We believe there will be some movements going forward, both from the owner side and perhaps also among managers. We would expect that smaller tanker managers will find it difficult to cope with the requirements and will perhaps also be in trouble in obtaining acceptance from certain charterers, which then will drive a certain consolidation in the manager industry," he concluded.

At the time of his appointment, Thome said that Tunge's arrival brought on board a vast amount of experience from the tanker industry and he will add valuable hands-on experience from his many years in leadership positions at Stolt Nielsen, B+H Equimar and MSI in Singapore.

Tunge is an active member of Intertanko and sits on Intertanko's Chemical Committee and is a Council member representing Singapore.

As COO, his role has been created to head the tanker fleet and it reinforces Thome's demand to uphold and deliver the highest level of service to its valued stakeholders, the company said.

Senior management

At the same time, three other senior management positions were filled internally. These included senior manager Yatin Gangla, who is the

newly appointed COO in Thome's bulk division.

In addition, Sandy Kumaran has been appointed senior manager to head up the newly created fleet services department. This department was established to assist and support the Thome fleet in a range of services in response to the company recognising that a more stringent level of quality check and support system is required in order to support the operation successfully.

Finally, Atul Vatsa has been promoted to senior manager in tanker operations and will be heading the marine standard and vetting function.

At the time of the appointments, Olav Eek Thorstensen, group chairman & CEO, said: The appointment of Steffen, Yatin, Sandy and Atul demonstrates our commitment to servicing our client base in a consistent and professional manner.

"Steffen Tunge joins Thome after a remarkable career in some of the world's leading shipping companies. I am delighted he is joining Thome as his experience will benefit our company greatly.

"I am particularly pleased we have been able to promote Yatin, Sandy and Atul from within. They are three senior managers who have been with us for some time, they understand our working culture, what is means to serve Thome principals and the standards they must maintain. I am certain they will excel in their new posts," he said.

Managing director, Carsten Brix Ostenfeldt, said: "These four appointments show Thome is moving ahead with the times and able to attract the very best experienced and talented managers available. I am looking forward to working with these four colleagues and I believe that together we can take Thome to the next level in terms of leadership in the international shipmanagement field."

Not stopping there, Thome's offshore services arm Thome Offshore Management (TOM) and Thome Oil & Gas (TOG) has appointed John Sydness, as managing director, effective immediately.

Buoyed by the rising offshore markets, the company said that its offshore and energy division is expanding its management capability to better support its activities and ensure its service standards are maintained and improved.

Steffen Tunge heads up Thome's tanker fleet.

Sydness took over from Claes Eek Thorstensen, who is moving into a group role in TSMI – the holding company of the Thome Group of companies. In his new role, Thorstensen will be supporting the development of all the companies within the group, including commercial and marketing activities.

TO

Could tensions stifle growth?

With US and EU sanctions coming in against trading with Iran in a couple of months, all eyes have turned to the Straits of Hormuz, the strategic waterway that commands the entrance to the Persian Gulf.

There has already been a certain amount of sabre rattling in the area with the Iranian Navy exercising in the Straits and threatening to close the vital shipping lanes, while units of the US fleet resides in Bahrain and elsewhere in the region.

If the Iranian oil ceases to flow, Saudi Arabia and Iraq could plug the gap and indeed, both have ramped up their oil production recently with Iraq opening an offshore export facility. Iraq could also look at the pipeline option, thus bypassing the Gulf altogether.

Qatar is awash with gas leading to huge export figures going through Ras Laffan. Most of the gas is shipped in large LNGCs, which have seen charter rates soar recently on the back of huge demand.

In addition, the petrochemicals industry is expected to grow significantly in the area with new refinery capacity coming on stream coupled with chemical and products storage facilities springing up.

Down the years, the ports and terminals straddling the Gulf have spawned a massive service industry to cater for the tankers and gas carriers, plus other types of vessels, now regularly calling in the region.

We have seen the growth of ports, such as Salalah in Oman, Jebel Ali, Khor Fakkan and Fujairah in the UAE. There are plans to expand others, such as those in Bahrain, Qatar and Iraq.

Taking Fujairah as an example, the waters off the former small village have been used as an anchorage for many years, long before the infrastructure ashore was built. It is strategically located just outside Hormuz and apart from the anchorage, which still plays home to around 100 vessels at any one time, it has thriving bunker facilities, a large container terminal, a drybulk loading terminal and an ever growing number of product and chemical storage facilities.

Fujairah is now a major oil storage port.

Tank farms have sprung up throughout the area.

Bunker hub

The port is today the leading bunkering hub after Singapore and Rotterdam and plans to more than double its oil storage capacity to 7 mill cu m in the next two to three years. By the middle of this year, Fujairah will have been boosted still further with the opening of a crude oil export pipeline connecting Habshan in Abu Dhabi to Fujairah.

The commissioning of the $3.3 bill, 370 km Habshan-Fujairah pipeline is due to take place in April, or May and it will be ready to transport oil a couple of months after this. Once in service, the pipeline will handle up to 1.5 mill barrels per day, although according to local reports, its capacity could increase to 1.8 mill barrels per day at a later stage.

This will give Abu Dhabi direct access to the Indian Ocean cutting out transiting the Straits and avoiding loading tankers at the UAE's oil terminals. The new pipeline is also expected to lower shipping costs for the UAE's oil exports, as a premium is charged, if the area is deemed a War Risk by insurers.

The conceptual design of the pipeline was completed in 2006 and the construction related contracts were awarded in 2007 with the actual building starting on 19th March, 2008.

Again according to local reports, during the first year of operation, the pipeline will enable the Abu Dhabi Company for Onshore Oil Operations (ADCO) to export roughly half its total production. The pipeline is owned by the International Petroleum Investment Company (IPIC), an investment arm of the Abu Dhabi Government.

The Murban blend crude will be carried through a single 48-inch diameter pipe. The project comprises the pipeline, main oil terminal at Fujairah, offshore loading facilities and the ancillary services needed.

Under the plan, a strategic crude reservoir will be set up in Fujairah. The pipeline will also serve a planned $3.3 bill, 200,000 barrels per day refinery to be built in Fujairah by IPIC, local sources said.

A.t Fujairah, there are already several oil berths. For example, three were commissioned in January 2006 (Terminal No 1) able to handle up to 115,000 dwt tankers at 15 m draft. Terminal No 2 was opened in June 2010 and has four berths for vessels of up to 180,000 dwt at 18 m draft.

According to the port's website, another 1,000 m of berths are being built dredged down to 20 m and a master plan is in place for another 11 berths in the future.

Storage facilities

There are several independent storage concerns in Fujairah, including Vopak Horizon, which in 2010 decided to expand its storage area capacity for products by 606,000 cu m.

The company said at the time, that this expansion project was on the back of the growing demand and development of a refining centre in the Middle East region. As a result, Fujairah was developing from a regional hub into a global logistics hub. This in turn has led to an increase in international trade flows that fostered a growing need for make-bulk and breakbulk services and blending.

After completion of the expansion project in the first quarter of 2012, the total storage capacity will be more than 2.1 mill cu m, the company said. The expansion consists of 20 new tanks with sizes ranging from 20,000 cu m to 40,000 cu m for the storage of fuel oil and clean petroleum products.

This year, a port spokesman said that Fujairah planned to raise its overall fuel storage capacity by about two thirds, as tank operators expand.

The port will raise tank capacity to 10 mill cu m by 2014 from about 6 mill cu m today, general manager Mousa Murad said in a March 12 interview with Bloomberg. He also said that the Emirate may also add power facilities and a natural gas import plant at the site.

Fujairah is seeking to compete with Singapore and Rotterdam as a hub for bunker fuel. Traders in Fujairah supply about 24 mill tonnes of fuel a year, Murad said, reported Bloomberg.

Both the Vitol Group and Vopak lease fuel storage capacity in Fujairah. In addition, State Oil Co of Azerbaijan (SOCAR) is building a terminal that should receive its first oil-product shipment by the time that *Tanker Operator* goes to press.

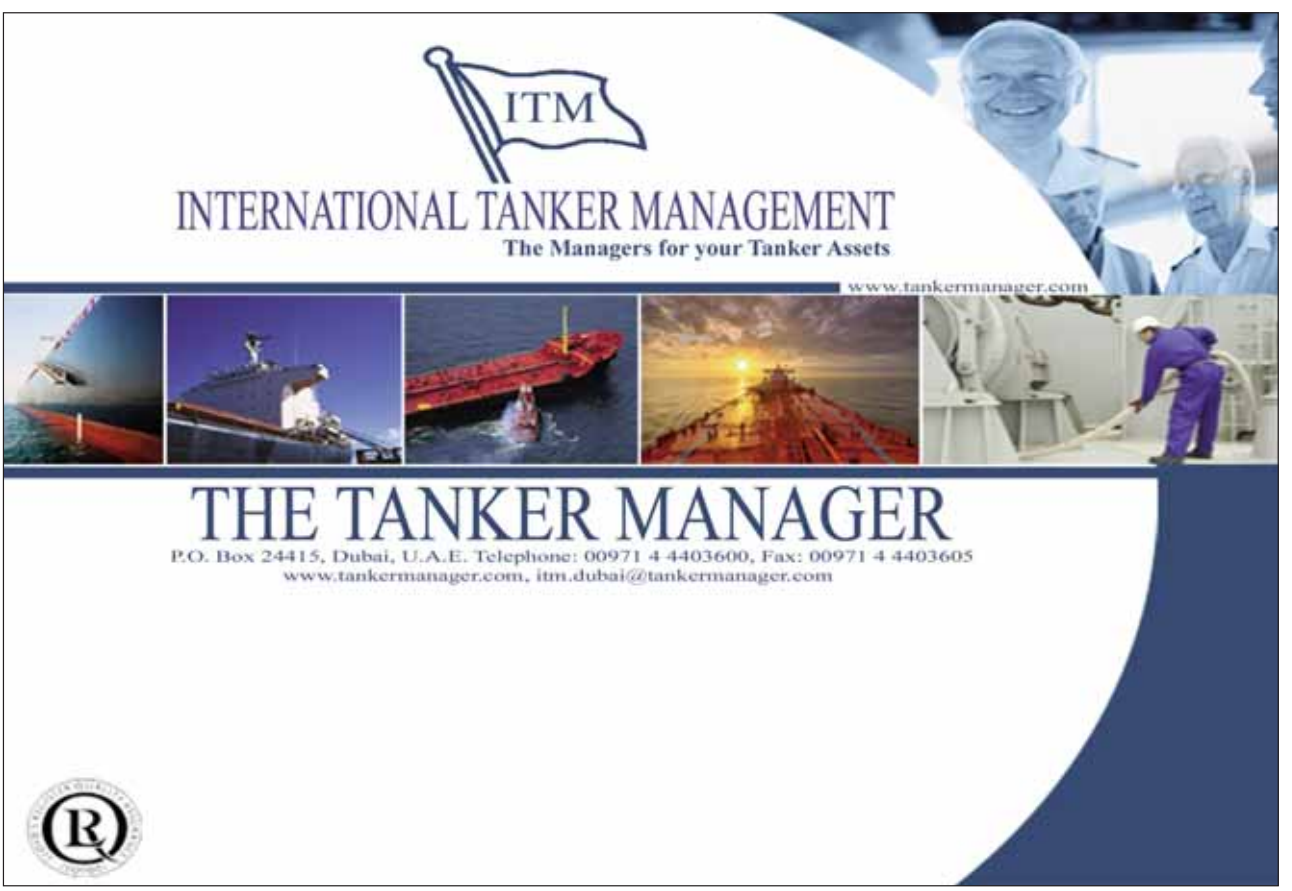
Murad said that his forecast for growth assumes the completion of all tank terminal projects planned in the Emirate. That includes the potential addition of tanks on reclaimed land at the Vitol and Vopak sites.

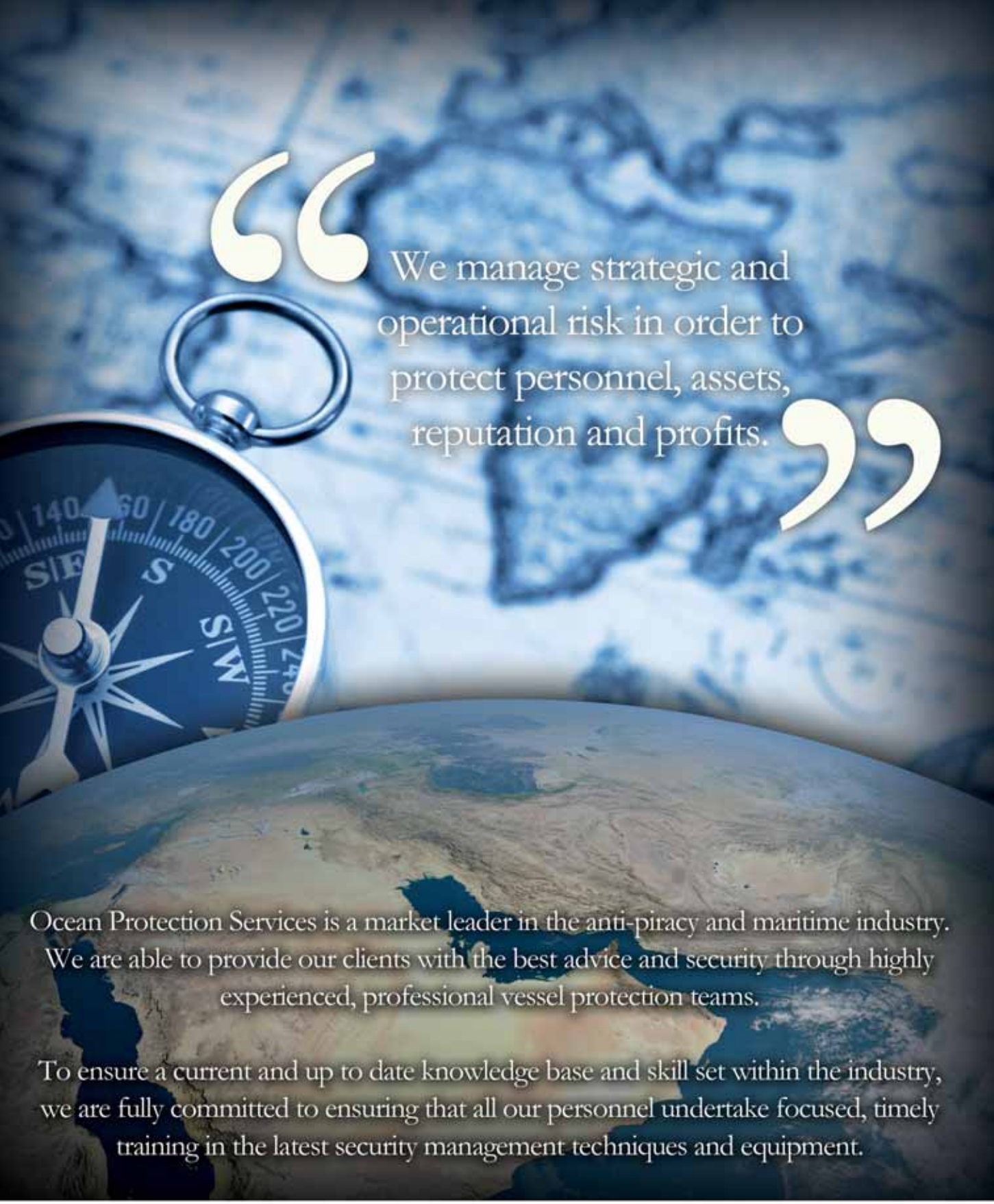
The SOCAR facility has a storage capacity of 114,000 cu m, or about 640,000 barrels, of oil. The 20 tanks will be able to store fuel oil, gasoline, naphtha, middle distillate products and blending components. A plan to further boost its capacity to 350,000 cu m is also on the drawing board, according to reports from the area.

Meanwhile, it was reported earlier this year that UAE-based trader Gulf Petrochem had agreed to sell a 12% stake in its planned oil storage terminal to the government of Fujairah, according to Reuters. Gulf Petrochem has been building a $136.4 mill, 412,000 cu m oil storage terminal in Fujairah..

Although outside the Straits of Hormuz, Fujairah Anchorage could become a 'sitting duck' for pirates. At as recent conference in London, it was said local coastguard patrols of the area were at best intermittent. There had already been a reported attack only 65 miles away, or so.

Most vessels anchor with their accommodation ladders down ready to receive the various supply boats operating out of Fujairah. In addition, the anchored vessels are usually floodlit as supplies and repairs are carried out 24/7. TO





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Shiprepair sector has its ups and downs

The Middle East Gulf area is home to four major shipyard complexes and several smaller ones of varying capacities.

The four largest yards are ASRY, Drydocks World-Dubai, Nakilat-Keppel Offshore & Marine (N-KOM) at Ras Laffan, Qatar and the newest -Oman Drydock Company, located at Duqm, Oman.

They have all experienced mixed fortunes, but for ASRY, the return of VLCCs has given the yard a welcome boost.

As for ASRY, the first quarter of 2012 mirrors the year 2011 for the Kingdom of Bahrain's Arab Shipbuilding & Repair Co with the return of the large tanker market, a company spokesman explained..

In the first three months of 2012 the Persian Gulf-based repairer drydocked three vessels in excess of 300,000 dwt for repairs, all owned by the National Shipping Corp of Saudi Arabia (NSCSA) and managed by Dubai's Mideast Shipmanagement – the 302,977 dwt *Marjan*, the 317,788 dwt *Wafrah* and the 303,138 dwt *Safwah*.

Last year turned out to be an acceptable 12 months for ASRY. Following the false dawn of an expected market upturn in 2010, the year started slowly and then picked-up with the Bahrain yard repairing a total of 200 vessels to the end of 2011.

An encouraging trend was the large number of tanker repairs undertaken during 2011, especially on VLCCs and LPG carriers. These vessels came from the fleets of Iraq Oil Tanker Co, Kuwait Oil Tanker Co (KOTC); NSCSA (Mideast Shipmanagement); Vela International Marine, Red Sea Marine Services, Springfield Shipping, Greece, Sun Enterprises, Greece; Pratibha Shipping, India; MARCAS-V Ships, Monaco; Nordic Maritime Services, Norway; Odfjell Management, Norway; BW Fleet Management, Norway; Pakistan National Shipping Co; Selandia Shipmanagement, Singapore and Thome Ship Management, Singapore;

The total number of tankers repaired at ASRY last year was 52 – including 13 VLCCs, seven large LPG carriers and 16 chemical tankers. Noteworthy, according to the company, was the return of the large tanker market, especially from Middle East owners.

NSCSA's VLCC *Wafrah* seen undocking at ASRY.

During 2011, ASRY repaired some 13 tankers of over 300,000 dwt, of which 10 came from the Arab market and three from the international market. NSCSA/Mideast Shipmanagement led the way with four VLCCs: the 303,115 dwt *Harad*, and the three 300,361 dwt sisterships *Ramlah*, *Ghawar* and *Safaniyah*.

KOTC drydocked three large tankers – the 317,250 dwt *Kazimah III*, 310,543 dwt Al *Salheia* and the 310,513 dwt *Al Shegaya*, the latter being one of the largest repairs in terms of value during 2011.

Meanwhile Saudi Arabia's Vela International Marine also docked three VLCCs - the 316,808 dwt *Pisces Star*, 316,476 dwt *Aries Star* and the 301,824 dwt *Alphard Star.*

Finally, the three VLCCs from the international market all came from Greek owners. Two vessels were stemmed by Springfield Shipping - the 303,184 dwt *Olympic Loyalty* and the 302,789 dwt *Olympic Legacy*, while Sun Enterprises docked the 301,824 dwt *Chios*.

In December of last year, ASRY completed its $188 mill expansion programme with the opening of a 1.38 km repair quay (see *Tanker Operator*, January/February 2012, page 10).

N-KOM

Further north, last year, the giant N-KOM shipyard received the first Qatargas-chartered LNGC *Al Wakrah* to drydock at the Erhama Bin Jaber Al Jalahma Shipyard, Qatar's new, offshore and marine hub at Ras Laffan.

The 1998-built 135,300 cu m *Al Wakrah*, which is owned by a Japanese consortium led by Mitsui OSK Lines and managed by MOL LNG Transport underwent general maintenance work, such as main and generator turbine inspections, cargo pump overhauling, main switchboard and high voltage cargo switchboard maintenance, electric motor overhauling, main boiler cleaning, and hull painting at the yard.
The new yard was officially inaugurated on 23rd November 2010. Previously, there was only a limited range of offshore and marine services in Qatar. With the build up of primarily gas carriers calling at Ras Laffan, vessels will no longer have to wait for drydocks to become available in Singapore, the UAE, South Korea or China for general maintenance work, the company said.

Nakilat's fleet of LNG carriers is expected to take up about 25% of the yard's repair and maintenance capacity at any one time, leaving 75% free for other vessels on a commercial basis.

Highlighting the yard's potential, the company said that by 2020, some 4,000 ships are expected to call at Ras Laffan port every year.

Dubai complex

Further south towards the entrance of the Gulf

lies Drydocks World-Dubai. This huge facility seemed to have been badly hit by the economic events in the UAE and Dubai in particular.

The repair company's parent Drydocks World (DDW) has been in discussions with its main group of lenders to restructure its debt obligations under its $2.2 bill syndicated loan facility since late last year.

In a statement last month, the company said that significant progress had been made over recent months in all aspects of the restructuring. As a result, DDW said that it was confident that it would receive the support of a majority of its syndicated lenders to the terms of its debt restructuring.

Consequently, on 8th March 2012, DDW presented the terms of its proposal and the steps required to implement it's plan along with the associated timeline to all its syndicated lenders. DDW has targeted a completion date of all aspects of its restructuring by July 2012, according to Khamis Juma Buamim, DDW and Maritime World chairman.

"The Company remains extremely confident it can gain support for its proposals and that it will secure the necessary support of its lenders to successfully implement its' restructuring. This will leave the group in a strong position to continue to develop and implement its strategic plans," said Buamim.

The company exceeded its budget in 2011 – the actual EBITDA for CY 2011 for Drydocks showed an increase of 65% over budget. Strong growth has been witnessed by the company over the recent past and at this point in time, Drydocks Dubai expected to close CY 2012 with a higher EBITDA than budgeted.

Furthermore, the company has won contracts totaling $255 mill since the turn of the year, which puts it in a strong position to achieve its 2012 business plan, Buamim claimed.

The huge complex was designed and built with three giant drydocks in the mid 1970s at a time when it was envisaged that ULCCs were here to stay and a 1 mill dwt tanker was on the drawing board.

Today, the company has diversified into the offshore and conversion fields, building supply vessels, bunker barges, tugs and converting older tankers and gas carriers into FPSOs and FSOs.

Oman to open

Located outside the Straits of Hormuz at Duqm is the brand new shiprepair complex of Oman Drydock Company (ODC), which is due to be officially inaugurated next month. However, since it opened for business in April 2011, ODC has been gradually ramping up its operations. Starting with the handling of relatively small vessels, ODC has since handled more than 32 vessels of varying sizes.

For example, last November, ODC received its first LNGC, the *Muscat LNG*, owned by Oman Shipping Corp.

As part of its mid-life service, the vessel underwent an 11-day docking period at ODC and was redelivered within the estimated 12 days.

The repairs included the mechanical cleaning of the main boilers and the fire sides. She was pressure tested and the LNG cargo pumps, ballast pumps and the safety and mounting valves for the main boiler were overhauled.

In addition, the cable hangers and cables were renewed at five locations and new cable supports (20 sets) for the cable way were installed during the passage and the core wires were modified in tube type fluorescent light. As part of the regular maintenance work, the hull was recoated.

After docking at ODC, the ship loaded LNG at the Qalhat Terminal and left for the Far East.

DMC facilities

At the smaller end of the scale, Dubai Maritime City (DMC) recently signed a Land Lease (Mustaha) agreement for 25 years with shiprepair and building entity, Dubai Ship Building.

The area of the land is over 11,196 sq m and is a shiprepair plot within DMC's business district.

"We continue to strengthen our operations in Dubai Maritime City, since the formal launch of the maritime district last year. This partnership will help us take greater strides at promoting the region as a global maritime hub. We are keen to promote local and international players within the City, which will be a unique meeting point offering wide-ranging choices for the industry," said Khamis Juma Buamim, chairman of Drydocks World and Maritime World.

DMC's head Bader bin Mubarak, said, "Dubai Maritime City, being the mammoth project that it is, has been a part of our long term planning for relocating our extensive projects. Being a part of the maritime history of Dubai and representing the national spirit, we at Dubai Ship Building aim to partner with the pioneering group of Drydocks World and Maritime World to further strengthen the maritime industry within the region and bring into focus national proficiency."

Maritime activity at DMC primarily revolves around the maritime and business districts. The maritime district is built on 148,989 gross sq m of land and will be centre for marine and maritime related facilities and the industrial precinct of the business district will cover a gross area of 519,780 sq m, consisting of industrial and retail facilities.

Another company to pledge its support for DMC was Goltens who last October carried out a ground breaking ceremony of its new office and workshop facility in DMC.

Goltens, which has a strong presence in the Middle East and across 21 locations worldwide, has signed a long term Mustaha ground development agreement with DMC for two plots within the complex. These are of about 23,000 sq m each and have been leased to the company for 25 years.

"When we announced the opening of the maritime zone of the city in March 2011, we were determined to develop Dubai Maritime City as part of the Strategic Plan of 2014. The vast collection of amenities and facilities provided by DMC to encourage business by sea is an opportunity for real growth and development of this vital sector. Infrastructure development is progressing rapidly and we see heightened interest from companies all over the world in this unique facility," said Buamim at the signing ceremony.

"The Middle East marine repair market is expected to grow significantly medium to long term and Goltens Dubai will for the foreseeable future be a large hub for the Middle East and we especially see a future growth within our specialist core disciplines diesel, in situ and mechanical", said Paul Friedberg, president – Goltens Worldwide Services.

DMC has rapidly evolved since the launch of Phase 1 in early 2011 when 110 units of different sizes were constructed and declared operational. More offices, shops, showrooms, yacht manufacturing workshops, and warehouse and workshop units will be released on completion of Phase II. TO

DDW chairman Khamis Juma Buamin.

Gulf owners see a brighter future emerging

A few years ago, the Middle East countries started to invest in their own tonnage in an effort to woo cargoes away from the independent companies' hulls.

This has met with only limited success mainly due to the general downturn in freight rates experienced for the past four years, or so.

However, with the build up of refinery capacity and petrochemical plants in the region, those companies investing in chemical/product tankers seem to have a brighter future than those opting for large crude oil carriers. Several companies chose both.

One, Dubai-based Gulf Navigation (GulfNav), could benefit from both the large and the chemical/product sectors, as at the time of writing, Asian refinery demand was pushing VLCC rates north again. However, whether this rise is sustainable in the wake of an increase in the supply of vessels, remains to be seen.

US and EU sanctions against companies buying oil from Iran has already led to Indian and Chinese oil importers seeking other sources of crude oil, which could give the market for large tankers a further boost by increasing tonne/miles, given that some oil will be imported from West Africa, the Caribbean and the North Sea, despite other Gulf states ramping up their production.

GulfNav is also active in the IMO II and IMO III chemical sectors and in 2009, formed Gulf Stolt Ship Management (GSSM), a joint venture company with Stolt Tankers, to provide a more focused and complete range of integrated marine services. At present four chemical tankers are managed by GSSM.

In addition, the company has two VLCCs and eight chemical tankers, plus two VLCC newbuildings, due to be delivered next year. They are believed to have been fixed to China's Hainan Group for 10 years.

Also based in Dubai is Gulf Energy Maritime (GEM). This tanker owner was formed in 2004 as a joint venture shipping company with Emirates National Oil Co (ENOC).

GEM currently has the fleet of 19 tankers, comprising eight modern Panamaxes and nine chemical/product tankers- six MRs and three Handysize vessels. Two Aframaxes are to be delivered later this year from Samsung.

Middle East owners are strong in the VLCC sector

Profit downturn

Perhaps illustrating the problems facing tanker owners and not only those located in the Gulf was the annual consolidated financial results for 2011 recently released by the National Shipping Corp of Saudi Arabia (NSCSA).

Net profit totalled SAR287.8 mill, compared to a net profit of SAR414.9 mill for 2010, a decrease of 30.6%. Earnings per share from net profit (EPS) amounted to SAR0.91 compared to SAR1.32 for 2010, the company said.

Gross profit totalled SAR339.2 mill, compared to SAR557.4 mill for 2010, a decrease of 39.1%, while operating profit was reported as SAR229.5 mill compared to SAR453.6 mill, a decrease of 49.4%.

NSCSA CEO, Saleh Nasser Al-Jasser, said that the decrease in net profit last year was due to the following reasons:

1) A decrease in average TCE rates in the VLCC spot market, due to excess capacity of tonnage resulting from the entry of new tonnage into the market.

2) The expiries of three VLCC timecharter contracts during the year, which had negatively affected the results of crude oil transport sector, in addition to the rising bunker costs.

He said that other sectors had shown improvement in their net income results, which helped to minimise the negative impact on the overall consolidated net income compared to net income of last year.

The bunker subsidy item has been reclassified, which impacted on the gross profit and operating profit. Similarly, corresponding items in the consolidated income statement for the 2010 financial year have been reclassified for comparison purposes.

NSCSA currently owns a fleet of 17 VLCCs, manages 20 chemical carriers and four conros. In addition, another five 46,000 dwt chemical carriers are due to be delivered this year, plus a larger 75,000 dwt chemical carrier to be delivered in 2013.

All of the chemical tankers are operated by National Chemical Carriers (NCC), an 80:20 joint venture company with SABIC.

In 2009, NCC entered into a 50:50 joint agreement with Odfjell and established an operating concern in Dubai. The company also has a 30.3% stake in LPG carrier operator Petredec.

Saudi Aramco subsidiary Vela International Marine, also managed from Dubai, currently owns 15 VLCCs, one LR2 and five MRs.

According to its website, Vela also has up to 40 tankers ranging from VLCCs downward on charter at any one time.

There are other companies in the Gulf, such as Kuwait Oil Tanker Co (KOTC), a subsidiary of Kuwait Petroleum Corp and NITC, which is the subject of much conjecture at present.

Just outside the Gulf is Oman Shipping Co (OSC), which has 14 VLCCs, plus four more on order; two LR2s; two methanol carriers; two chemical tankers and two product tankers in operation. TO

IACS to submit CSR harmonisation rules to IMO

The International Association of Classification Societies (IACS) has a busy year coming up, not least with the harmonisation of the Common Structural Rues (CSR).

At IACS Council's winter meeting at the end of last year, the members considered the current position regarding the important project to harmonise the CSR.

This will lead to the submission of the harmonised rules to the IMO for verification of compliance with the IMO Goal Based Standards by the end of 2013.

During the meeting Industry representatives from shipowning and shipbuilding associations were consulted and their input assisted in the preparation of a robust, consistent and thorough set of rules, which it is anticipated will be well received, IACS said.

Council also took the opportunity to introduce new quality measures, which will greatly enhance the performance of their Accredited Certification Bodies who have taken over the auditing of the 13 IACS members.

Finally, under the leadership of Russian Maritime Register of Shipping's Pavel Shikhov, IACS said that it was resolved to support the CSR harmonisation process with the continuing substantial investment of time, finance and human force from its members.

In March of this year, IACS released an updated version of its Blue Book. This is an electronic library of technical resolutions (both past and present) adopted by IACS, as a result of its technical work for the benefit of international shipping since its establishment in 1968.

It contains -

- IACS 'Unified Requirements', which IACS members incorporate into their rules.
- 'Unified Interpretations' of IMO convention requirements, which members apply uniformly when acting on behalf of authorising flag administrations, unless instructed otherwise.
- 'Procedural Requirements' governing practices among IACS members.
- 'IACS Charter' and 'IACS Procedures', which define the purpose, aim and working procedures of the Association.
- 'Recommendations' relating to adopted resolutions that are not necessarily matters of class but which IACS considers would be helpful to offer some advice to the marine industry.
- 'UR - Unified Requirements Status' advising on implementation status.
- 'UR HF & TB' containing the history and technical background files for the Unified Requirements.
- 'Quality Documents' containing QSCS (IACS' quality system certification scheme) description, quality management system requirements, audit requirements, ACB (accredited certification bodies) requirements and other quality procedures.

Improve access

To improve access, speed and availability of the Blue Book at any time, the latest version will be made available for downloading from the IACS website.

Ship designers, shipbuilders, classification societies, shipowners, shipbrokers, insurers, associations, accredited certification bodies and the shipping industry at large will be able to download the package free of charge.

IACS permanent secretary Derek Hodgson said; "The latest release of the IACS Blue Book package continues and enhances our technical support to the shipping industry through IACS work on research and development both at the classification and statutory level." TO

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>
> **- Derek Hodgson, IACS Permanent Secretary**

Russian class society speaks its mind

Currently, the Russian Maritime Register of Shipping's (RS) chairs the 13-member International Association of Classification Societies (IACS). RS is represented by its director of classification and development Pavel Shikhov.

Shikhov took over the chair from ClassNK's Noboru Ueda at a time when the class societies have a lot on their plate with several major issues coming to the fore in the shipping industry.

In a wide ranging interview, Mikhail G Ayvazov, RS' director general gave its views on a number of topics affecting shipping today.

Perhaps the most urgent consideration is the fitting of ballast water treatment plants in view of the impending Ballast Water Management (BWM) convention, which at the time of writing was very near to ratification.

RS said that it urged shipowners to install approved equipment as soon as possible, ahead of the BWM convention ratification. "RS strongly recommends to shipowners to be aware of the development of the required documentation and to choose the ballast water treatment system for their ships with ballast water volume less than 5,000 cu m, constructed in 2009, or later," Ayvazov said.

This is to be done without delay for the following reasons:

1) According to rule B-3.3 of the BWM convention, the first date of the Ballast Water Performance Standard D-2 application, in case of the BWM convention entering into force, will be defined for the above-mentioned vessels.
2) It will be difficult to fit the ships with the necessary equipment in such a short space of time.

In the near future, shipowners will have to modify ballast water systems on their existing vessels. In the case of approved BWT systems installation, the individual approach to every vessel in service is required. However, the integration of such systems on board vessels under construction is much easier, as the system can be designed into the vessel in advance.

During the development of the project documentation for BWT systems, for installation on existing vessels, the following is to be assessed.

A) Sufficient space in which to install the system.
B) Adequate power within the electrical system on board.
C) The provision of the required ballast pump pressure in the event of a pressure loss in the ballast water treatment system.
D) The possibility of the BWT system installation subject to the existing ballast system structure (eg, ballast pumps are situated in different spaces, there are several discharge outlets, cargo tank is used as ballast water tank, etc).

In the event that there is not enough space to install the system and its pipelines, several decisions will have to be taken, such as to place the system on deck in a container, or in a cargo tank with the installation of an additional bulkhead. In this case, RS will review the technical documentation for compliance with the RS' rules.

Integration of a BWT system at the ship design stage is an important issue for the shipowner together with the classification society. For example, in most cases at the approval of technical documentation stage, RS will require the corresponding calculations to

RS has specialised in the classing of ice class shuttle tankers.

prove the system's compliance with that of the class requirements.

Arctic considerations

Turning the increasing summer use of the Northern Sea route (NSR), the shortest maritime routes connecting Northwest European markets with the Pacific region pass through the Arctic.

According to the experts, the NSR is about 35% shorter than the traditional southern routes (through the Suez Canal) and therefore may become a new alternative navigation route. In 2010 - 2011 about 20 large tankers and bulkers transited the NSR.

Moreover, the development of Russian offshore fields in the Arctic requires an effective transport system to supply offshore oil and gas units and to safely ship energy resources.

One of the solutions is to extend the capacity of the NSR. Its safe navigation should be accomplished with the aid of a powerful icebreaking fleet, large Arctic ships, plus communications, navigation and hydrographic systems.

The icebreaking fleet is the basis for the safe operation along the NSR, Ayvazov said. Nuclear powered icebreakers enable the efficiency of the NSR to be increased, ensuring year round navigation in the western part of the Arctic. An icebreaking fleet is essential for ice navigation.

He confirmed that RS is currently involved in all Russia's icebreaker construction projects. Besides traditional hull designs, the most up-to-date icebreakers feature innovative solutions. After the development of the double-acting (DAT) ships, the next step for ice class is an asymmetric hull.

Under the Russian Federal Target Programme on ship construction, a new asymmetric icebreaker (a project developed by Aker Arctic Technology) will be constructed to RS class by the Yantar shipyard (Kaliningrad, Russia) in co-operation with Arctech Helsinki Shipyard.

The vessel will feature a patented oblique design with an asymmetric hull and three azimuth propulsors, which will allow the vessel to operate efficiently ahead, astern and at other angles. The vessel will be able to proceed at a continuous speed in 1 m thick level ice both ahead and astern and in an oblique mode, the vessel will be able to generate a 50 m wide channel in 0.6 m thick level ice.

In addition, the vessel will feature high manoeuvrability during ice operations. Besides icebreaking, the vessel may be used for environmental protection purposes. The additional functions of the asymmetric icebreaker will include firefighting and rescue operations, as well as ability to deal with oil-spills on the sea.

In January 2012, RS took part in a keel laying ceremony for the two multi-functional icebreaking supply vessels ordered by SCF Sovcomflot at Arctech Helsinki Shipyard. The vessels are intended for offshore supply and are being built as a result of an agreement signed by SCF and Exxon Neftegas.

The vessels will be assigned dual RS/LR class with the RS Class notation - **KM(*) Icebreaker7[1] AUT1 EPP OMBO FF3WS DYNPOS-2 supply vessel.**

In view of the growing interest/demand for exploration and transportation of hydrocarbons from the Russian Arctic, most of the research studies RS is now undertaking are aimed at the development of an adequate and efficient regulatory framework for the common use by all the parties involved, Ayvazov explained.

These activities could further the idea that the NSR could be an alternative seaway from Europe to East Asia. The passage through the Arctic Ocean is significantly shorter in distance, but there are still many challenges to be addressed, with a lot of work ahead to

make the navigation along the northern coast of Russia feasible, safe and economically effective, he said.Today, with the growing interest in hydrocarbons production and transportation from the Russian Arctic, RS foresaw a significant increase in the number of large ice class offshore units, oil tankers and LNG carriers designed to operate in heavy ice conditions.

Enhanced documentation

Being seriously concerned about communications improvement with RS' clients, the class society recently launched an optimisation programme for documentation management, which will speed up and simplify the applications and requests processing, thus increasing efficiency of information exchange, management and access, as well as minimising its loss.

The class society explained that in recent years, the number of applications and requests from shipowners to RS had significantly increased. The uniform system will connect the RS divisions in 34 countries.

"All the changes will significantly benefit our partners and clients and therefore are essential for the wellbeing of our society", emphasised Ayvazov.

According to the class society, "RS annually processes around 60,000 documents. Timely implementation of the corporate document management system will provide reliable and effective document control at all stages and will significantly benefit the RS clients".

The first phase of the project implementation includes docflow automatisation in 25 RS branch offices in Europe and St Petersburg.

In addition, RS plans to broaden the range of its services. Having gained experience in in-service survey of modern LNGCs, in 2012 for the first time RS will provide technical support during design and construction of this type of vessel.

Two LNGCs of 170,000 cu m capacity each will be built by STX Offshore & Shipbuilding to a dual RS/LR class with RS acting as the leading society. The RS class notation will be **- KM (*) Ice2 AUT1 OMBO EPP ANTI-ICE LI CCO ECO-S WINTERIZATION(-30) Gas carrier type 2G (methane).**

The specific feature of these newbuildings is a tri-fuel diesel-electric propulsion plant allowing the use of the LNG cargo carried as fuel. This will enable reduction of nitrogen and sulphur emissions to the atmosphere, which is an important step towards reduction of the maritime transport share in the environment pollution.

The agreement with STX Offshore on the classification of the LNGCs triggered an establishment of an additional RS office in South Korea, which will technically support ship design and construction, optimise co-operation with South Korean shipbuilders, as well as develop services in the region.

The Centre was established in line with the RS' strategic global expansion plans. The main objectives of the newly established office are:

- To foster closer contacts with clients and partners within one time zone.
- To provide technical support to RS surveyors involved in newbuilding projects at Korean yards.
- To render the full range of RS services in newbuilding for Korean market, including design review, surveys of ships during construction, certification of marine equipment.
- To liaise and hold joint seminars with representatives of the Korean maritime industry.

The official opening ceremony and evening reception took place on 7th March 2012 in Busan. At the ceremony Ayvazov said: "Our clients' ambitious fleet construction plans have prompted us to expand our global presence, especially within the major shipbuilding centres.

"The first RS office in the Republic of Korea was established back in 1996 with the main focus on ships in operation. Since 2005, RS has continuously been involved in various newbuilding projects in Korea and has acquired substantial experience of co-operation with the major Korean shipyards.

"The high-tech marine projects involving RS participation in Korea range from Arctic shuttle tankers to state-of-the-art drilling units. These projects have enabled us to establish good relationships with the local maritime industry," he said.

Another office has been opened in Panama to facilitate the organisation of quality and timely request performance in the Republic of Panama, the US, Canada, Mexico, the Caribbean, Colombia, as well as Venezuela and Ecuador. This forms part of RS' strategic plans for the expansion of the class society's worldwide presence.

For example, the RS Regional Office for the Atlantic Area, opened in December 2011 in Hamburg co-ordinates all requests in Europe, plus North and South America.

RS is also heavily involved in maritime scientific research. On 19th December 2011, the class society held the annual meeting of the RS Scientific and Technical Council (STC) Presidium.

Leading scientists and experts in the maritime industry attended the meeting at which STC members summarised the 2011 research results and prioritised future developments.

STC was established in 1915 for maritime safety scientific research co-ordination. Now the council comprises about 300 leading scientists and high-profile professionals within the industry, representatives of research institutes, design bureaus and universities. TO

Russian Register CEO Mikhail Ayvazov.

DNV takes on a more proactive role in vessel operations

By now, the maritime world now knows that the IMO requires that CO2 emissions from vessels be regulated starting with all vessels ordered from 1st January 2013.

Tankers will have to comply with a specified Energy Efficiency Design Index (EEDI), plus a ship specific Ship Energy Efficiency Plan (SEEMP) containing operational guidelines for the vessel's fuel efficient operation, which must be kept on board.

The EEDI will become more stringent for vessels ordered in future years. For example, it is required to be reduced by 10%, 20% and 30% for vessels ordered from 2015, 2020 and 2025 respectively.

This is likely to drive both vessel designers and equipment manufacturers to further develop energy efficient systems, which could affect the freight and secondhand market for vessels. For example, when future vessels are 10 years old, they may be competing in the charter market with newer vessels that are at least 30% more fuel efficient.

To help shipowners, vessel designers, etc to come to terms with this new index, DNV, together with the independent privately-owned German Hamburg Ship Model testing facility HSVA, has published 'DNV Fuel Saving Guideline - for Tankers'. This is part of a trilogy of guidelines - the other two concern containerships and bulk carriers.

At the guide's launch, DNV's business director Jost Bergmann illustrated this point by saying recently MOL had sold a 14-year old VLCC for recycling. Although the reasons for selling the vessel were unknown to DNV, Bergmann suggested that with today's high fuel costs, the vessel might not be as competitive as when it was designed and built in the mid 1990s.

With new designs offering up to 30% higher fuel efficiency is is expected that charterers will focus more on fuel efficiency in the future, Bergmann warned.

DNV said that any measure considered for reducing EEDI must affect one or more of the index's equation's parameters. For example, the most effective method is to reduce the vessel's design speed. A 10% reduction in the design speed results in at least a 25% reduction in installed power, giving an EEDI reduction of around 20%. It is the installed power that reduces the EEDI and not the power demand, the guideline pointed out.

The Guideline listed some of the possibilities on offer today for reducing EEDI, together with the parameter affected. DNV gave the following examples;

M/e installed power reduction - the hull and propeller efficiency can be improved and/or the speed reduction can be achieved by de-rating the engine.

The Guide includes reference to hull coatings. Source - International Paint.

Lower specific fuel consumption – switch to a more efficient engine/engine control tuning.

Increase the speed without increasing installed power – improved hull and propeller efficiency (ie, fitting Mewis Duct, prop boss cap fin, or other flow devices).

Fuel as an energy source with lower carbon content - eg LNG, biofuel (no guideline in place).

Innovative mechanical energy efficient technology – eg kites (no guideline in place)

Innovative electrical energy efficient technology – eg waste heat recovery.

Increase the capacity – larger vessels.

In addition there will be compensation when using shaft generators and applying ice strengthening. Other correction factors are under development, eg voluntary structural enhancements.

Some of the suggestions, such as kites and solar panels, cannot provide the power needed all the time for the main engine and thus the EEDI will not be reduced. There are no guidelines in place for the use of these measures to reduce EEDI, but they are expected to be developed at a later stage, DNV said.

Propulsion efficiency devices are not expected to reduce the engine power, but will enable the vessel to attain a higher speed, while the use of biofuels is not covered in the current framework as their cargo content cannot easily be ascertained.

Efficiency indicator

DNV said that it is essential to be aware that EEDI is basically an indicator for the potential fuel efficiency for a specific vessel for one single operation condition – speed, cargo on board, draft, trim etc. For most vessels, high fuel efficiency over a range of conditions will be preferred, based on the likely vessel operations profile. This will require considerations beyond what is required to meet the IMO requirements.

The bottom line for fuel efficiency is very much influenced by the vessel's operation. SEEMP can be regarded as a formality with minimum content to guide the persons on board to fuel efficiency. However, it can also be an efficient and more detailed and practical guide for those on board.

Updating SEEMP and the content's

Eidesvik's OSV *Viking Lady* is at the heart of DNV's FellowSHIP project.

continuous improvement in line with TMSA is an opportunity for those who wish to use SEEMP as an active tool for the management of fuel consumption, the guide said.

The guide then goes into the main fuel saving elements and descriptions, such as reducing hull resistance and their measures, such as hull coatings, hull form optimisation and propeller polishing/hull cleaning, giving the costs and benefits accrued for each measure.

A part of the guide is given over to improving the propeller's efficiency looking at the separation in the aft body, frictional losses, rotational losses, axial jet losses, hub vortex losses, tip vortex losses and a combination of several effects. This chapter analyses the various types of propellers and attachments on offer, such as the many ducts and fins available.

Power plant efficiency is also covered in depth, including the low load/part load performance, energy recovery, other sources of energy and other measures that could be used for the main engine. They include engine de-rating, electronic engine control, exhaust gas bypass, variable turbine area, shaft generator and waste heat recovery.

A chapter is included on operational efficiency tasking in tactical speed optimisation, weather routing and voyage planning, trim optimisation, engine tuning and performance monitoring.

Finally, the guide gives a summary in tabular form of the upper bound of fuel savings potential of the various measures contained in the book, including the percentage savings possible where applicable.

As for the future, DNV and HSVA said that promising technologies are already under development, which should be available soon, including added resistance to waves, ship performance modeling in realistic conditions and the development of lightweight, composite materials.

Both of the publishers pointed out that they have advisory services available and the guide comes with a 'Return on Investment' user guide tool, for which a password will be needed.

FellowSHIP project

The DNV led FellowSHIP project, involving partners Wärtsilä, and Eidesvik, has now reached its third phase.

This entails introducing an energy storage capability in the form of a battery pack on board an offshore supply vessel already fitted with a fuel cell and powered by LNG.

Although being tested on board an OSV, DNV's principal researcher, maritime transport and FellowSHIP project manager Bjorn Johan Vartdal told *Tanker Operator* that this hybrid energy system has the potential to be used on board shuttle tankers, bunker and chemical tankers, or any other type of vessel on coastal voyages.

He also said a battery pack and fuel cell could be installed on vessels for use when in, entering, or leaving ports and harbours when full power is not often needed. A battery pack can easily be re-charged in port, once the suitable infrastructure is in place. It can also meet the requirements for redundancy.

The three-year old LNG-fuelled vessel Eidesvik's *Viking Lady* had already made

history by being the world's first vessel to be fitted with a fuel cell as part of her propulsion system. Once the battery is installed, the partners claim that the vessel will be fitted with a true hybrid system.

When the new system is complete, the operation of the engine will be smoother and more cost effective, giving further emission reductions. For example, gas burning engines can have a methane emissions problem, DNV said.

The OSV's fuel cell, which generates an electric output of 330 kW, was installed in the autumn of 2009 and has successfully run for more than 18,500 hours.

DNV said that once the battery pack is in place, the ship will operate using a hybrid system similar to that which has been installed in hybrid cars for a number of years. However, the potential emission reductions are higher and the return on investment period is shorter for ships than it is for cars.

As for Capex, this involves the battery energy storage system and the size of the battery will be fully dependant of the vessel's size. For those vessels trading along the Norwegian coast, Norway's NOx Fund can be triggered, whereby an owner investing in environmentally friendly equipment can claim a government grant towards the cost. However, in most cases it will be the charterer who will benefit from cheaper fuel costs.

As for Opex, this is dependant on the type of vessel and its trade, although the benefits will include reduced maintenance costs and adherence to local emissions regulations. Both oil majors and other leading charterers are now looking for more environmentally friendly ways of transporting cargo and offering services, such as for the offshore sector.

The primary potential benefits of the hybrid energy system for a vessel, such as the *Viking Lady* are a 20%-30% reduction in fuel consumption and CO2 emissions through smoother and more efficient operation of the engines and fuel cell. The reductions of other exhaust components are even higher, it was claimed.

The whole shipping industry is currently facing record-high fuel costs, which are forecast to go up to about $1,320 per tonne by 2030, according to DNV. Based on these actual costs, the return on investment period for the hybrid system is estimated to be less than two years.

Vartdal explained: "We know that the hybrid system will reduce the energy consumption. When operating, for example, on dynamic positioning, there will be a major fuel saving potential. When in harbour, too, the ship should be able to operate on the fuel cell and its battery power alone, which will reduce emissions significantly. For environmentally sensitive areas, this will be an essential benefit. Additional benefits are related to reductions in machinery maintenance costs and in noise and vibrations."

A comprehensive measurement programme will be carried out to verify the savings potential. The hybrid system will also be modelled in detail. Calibrated and verified process models will facilitate simulation and optimisation of future hybrid systems for various types of vessels.

New DNV class rules for battery-powered ships have been developed in parallel with this project. These are the first class rules developed to facilitate the use of batteries to be used as part of a vessel's propulsion energy - both as hybrid solutions and for 'pure' battery-driven vessels.

Henrik Madsen has become CEO of the DNV Group.

The first phase of the project from 2003-2005 entailed a feasibility study into the installing of fuel cells on board ship. The second phase (2006-2010) involved the design of the system and its installation on board the *Viking Lady*, which took place in 2009. The third phase was implemented this year when the system will be tested onshore and the simulation modeling will commence. The whole project is due for completion in 2013 and on board testing and measuring equipment will be installed.

FellowSHIP is financially supported by the Research Council of Norway, which put up some 40% of the estimated NOK37 mill total cost with the three partners picking up 60%. TO

DNV splits into three divisions

Following the transfer of the majority shareholding in KEMA, DNV has established a group structure to manage the strong industry positions it now holds.

As of 1st March, DNV's operations are carried out through three separate companies - DNV Maritime and Oil & Gas, DNV KEMA Energy & Sustainability and DNV Business Assurance. Each company in the DNV Group has a dedicated leadership team.

CEO Henrik O Madsen has become CEO of the DNV Group, which now has more than 10,000 employees and has offices in 100 countries. The company has a strong foothold in the US, where DNV has 1,700 employees, as well as in China where it has more than 1,200 employees.

"Historically, DNV has been strongest in the shipping industry and this is still true today. Our solid base in the maritime industry has allowed us to branch out into the oil and gas sector, where we now have a firmly established presence.

"From there, we have expanded into cleaner energy and built up our work in certification. Now we are further expanding into the fields of power generation and transmission, gas distribution and sustainable energy use by joining forces with KEMA," explained Madsen.

DNV Maritime and Oil & Gas, headquartered in Oslo, Norway, provides services to DNV's traditional core markets. The company has a strong foothold in the offshore and oil & gas sectors. It is headed by CEO Remi Eriksen, the former COO of DNV's Asian operations.

Tor Svensen continues in his role as president of the maritime and oil & gas division.

DNV KEMA Energy & Sustainability, headquartered in Arnhem, the Netherlands, provides services covering the entire energy value chain from energy source to end user. The company is headed by Thijs Aarten, the former CEO of KEMA.

DNV Business Assurance, headquartered in Milan, Italy, has operated as a separate legal entity in DNV since 2010. It is one of the world's leading certification and is headed by Luca Crisciotti, the former director of operations of DNV Business Assurance, division Asia and Australia. ■

GL discusses the future of shipping at Greek meeting

Hamburg-based class society Germanischer Lloyd (GL) has said that its goal was to identify and seize chances for improvement in a difficult business environment.

This was the theme that ran through this year's annual meeting of GL's Hellenic technical committee, held in Athens on 8th March.

The dramatic increases in fuel prices, new regulations and an increased awareness of the importance of protecting the environment are leading shipbuilders, designers and owners to push against the established boundaries, developing smarter ships for tougher times.

Every year, this meeting brings together representatives from the Greek maritime community to hear and discuss presentations from both GL and external experts.

Dimitrios Korkodilos, the chairman of the committee and Athanasios Reisopoulos, GL's area manager for Southern Europe, joined with the CEO of the GL Group Erik van der Noordaa to welcome the participants.

The shipping industry was still going through a difficult period, Matthias Ritters, GL's region manager Europe/Middle East/Africa noted.

Looking over the status and outlook for the shipping markets in 2012, the persistent weakness of the world economy and the oversupply in all segments would continue to have a significant impact, Ritters said.

In shipbuilding, contracting at South Korean yards had been relatively strong in 2011, he said, but even so there was significant capacity still idle at both South Korean and Chinese yards.

Chinese yards had increased their capacity over the past years and were taking steps to further diversify their product portfolio, such as large container vessels, LNG carriers and offshore vessels.

The future

Looking ahead, he said, the impact of new energy efficient ship designs would be felt, while over capacity would put further downward pressure on newbuilding prices.

Hellenic Technical Committee Speakers (from left to right): Christian von Oldershausen (GL senior vice president global sales), Matthias Ritters (GL region manager Europe/Middle East/Africa), Nicholas Skiadaresis (managing director of ENES Marine Service), Athanasios Reisopoulos, (GL area manager for Southern Europe), Dimitrios Korkodilos (managing director of Andriaki Shipping and chairman of the committee), Erik van der Noordaa (GL Group CEO), Dr Tjerk de Vries(senior executive vice president classification) and Fridtjof Rohde (GL FutureShip).

Fridtjof Rohde from GL's consulting subsidiary FutureShip in his presentation 'Chances of Improvement' looked at how, even in the tight conditions facing the industry today, there are many opportunities for finding and exploiting efficiencies to save fuel and money.

He said that the use of new computational techniques has opened up the design space for shipping, both in the development of new designs and in the ability to make improvements during conversions or upgrades.

Upgrades to propellers, improving the wake field and appendages, and installing new 'smart' software systems such as FutureShip's ECO-Assistant, could significantly improve a vessel's performance. While in newbuildings, the use of computational fluid dynamic (CFD) techniques to optimise the hull form of an existing design, selecting the right engine and 'smarting up' auxiliary systems, could result in improved competitiveness and a better bottom line.

Aristidis Efstathiou, GL business development manager area Southern Europe, concluded the meeting with his presentations on 'SEEMP: Introduction and Implementation.'

Efstathiou, highlighted the fact that the SEEMP will soon become mandatory for all vessels (larger than 400 gt) at their first IAPP renewal, or intermediate survey after 1st January 2013.

In order to support its clients, GL has developed a clear guidance on the form and implementation of the SEEMP. He showed how GL's user friendly standardised templates and energy management expertise could make it easier for a vessel's operators to create a SEEMP, either as a stand alone document or as an integral part of a broader management system.

New members of the committee included Michael Androulakakis, technical manager of Avin International, Chondros Pantelis, technical manager of Efnav Co, Georgios Kavounis, technical manager of Allseas Marine, Dimitrios Kyriakakos, technical manager of Goldenport Shipmanagement, Kostas Maounis, managing director of Phoenix Energy Navigation, Spyros Psychas, technical manager of Odysea Carriers and Stylianos Vatistas, technical manager of Navarone.

TO

Owners looking for eco-friendly vessels

At a recent presentation, Lloyd's Register's (LR) marine director Tom Boardley tried to analyse the future of classification as he saw it in today's difficult market environment.

He said that owners were asking – how can I save money by using the new conventions? How do I avoid a lot of additional expense in complying with these conventions?

Boardley noted that port state control was increasingly looking at the management systems on board a vessel in an effort to check that the boxes are not just being ticked and then forgotten about.

In ship design, gone are the days of planning for 10 years hence, as shipowners want an eco-friendly, efficient ship now. He expressed fears that the EEDI calculations could lead to the design of an underpowered vessel.

LR is currently working on eco systems and designs as Boardley believed that buyers would return to the shipbuilding market by next year. More designers are looking at design systems, such as computational fluid dynamics (CFD), even for redesigns. For example, a lot more work is undertaken today on optimising the vessels and their engines, he said.

Boardley will take the chair at IACS in June of this year and said that his agenda was to push the association into playing a more significant leadership role at the IMO, as he firmly believed that self-regulation worked in the shipping industry.

"IACS needs to step forward again with a louder voice, since the EU has recognised the association as a legal entity," he said.

New standard

Speaking of the new marinised ISO 50001 standard, Boardley said that it delivered real payback in terms efficiency, especially in the tanker sector in which OCIMF is developing guidelines. He described the new standard as "similar to SEEMP".

Basically, the ISO 50001 standard enables organisations to improve energy efficiency by establishing an energy management system.

Through LR's certification, gap analysis and training services, the class society said that it could help an owner, manager, or operator to gain certification to the standard and help ensure that the management system meets the requirements.

LR explained that ISO 50001 is a certifiable voluntary international standard that enables organisations to 'establish the systems and processes necessary to improve energy performance, including energy efficiency, use and consumption'.

The requirements of the standard are similar to any management system and can be easily integrated into a company's existing management system.

Implementation of an energy management plan can help -:

- Develop a baseline of energy use.
- Actively manage energy use and costs.
- Reduce emissions without negatively affecting operations.
- Continue to improve energy use/product output over time.
- Incorporate specific energy efficiency plans like the Ship Energy Efficiency Plan (SEEMP) into a corporate energy management system.

LR explained that the benefits of gaining a certificate can -

- Cut costs through increased efficiency.
- Reduce energy security risks through improved energy performance.
- Increase stakeholder confidence (eg oil majors) and employee engagement due to organisational commitment to an integrated climate change emissions reduction strategy.
- Create competitive advantage through the implementation of industry best practices, eg OCIMF energy efficiency guidance, TMSA.
- Improve productivity and compliance.
- Formalise policies.
- Integrate easily with existing systems and Standards such as ISM, ISO 14001 and the SEEMP.

LR said that any shipping company regardless of its size and range of activities can be certified against ISO 50001.

As for LR becoming involved, the class society said that it could –

- Conduct a gap analysis to ensure that your energy management system meets the requirements of the standard.
- Provide certification against ISO 50001 to enable an owner to increase his or her energy performance and reduce the

LR's marine director Tom Boardley.

organisational energy security risk.

- Provide training to help educate staff: LR offers both public and in-company training, including customised training solutions.

Hector Sewell, LR's head of marine sales and marketing said that there was "a lot more innovation in the market and the technologists were getting the ear of the financiers."

Today, a class society needed to conduct quick engineering appraisals at the pre-contract and contract stages. "Engineers know the envelope of existing rules and how to help satisfy those rules," he said. He also thought that risk assessments were no longer the complete answers.

He urged owners looking to order vessels to employ class before the finance and contract stage to ensure the design process is a quality operation. By and large, he said that LR's clients prefer to go by the rules in place when considering a newbuilding.

ECA calculator

LR has also recently introduced an ECA Calculator, a tool which is claimed to assist with strategic planning for SOX compliance with MARPOL Annex VI, Regulation 14.

At present, the majority of vessels choose to comply with the current 1% ECA requirement by operating with a fuel of lower sulphur figure content where required. In the majority of cases this is residual fuel oil. In the future, however, in order to meet the 0.10% and 0.50% maximum allowable sulphur contents required within an ECA from 2015 onwards and in all other areas from 2020/2025 respectively, distillate fuel is likely to be used.

Crucially, however, MARPOL Annex VI allows, under Regulation 4, the use of an equivalent compliance method, which is at least as effective in terms of emissions reduction as the levels required by regulation 14 (which limits the sulphur content of fuel). One of these methods is the use of an Exhaust Gas Cleaning System (EGCS).

As a result of the current and impending situation, (ie 2015 = 0.10% limit within an ECA and 2020/2025 = 0.50% outside an ECA) operators may need to evaluate their position in terms of SOX compliance costs and alternative options, LR said.

Decisions can be affected by a number of factors, including the size and type of the fleet, the time spent within an ECA, potential introduction of additional ECAs in the future, the relative cost of installing an EGCS (and payback period versus age of the vessel), the cost of fuel and price differential between fuels of different sulphur contents and many more.

In this complex environment, some decisions may affect the viability of a vessel's service or operation. To assist with making such strategic decisions (which may involve either fitting an exhaust gas cleaning system, or operating on distillate fuels), LR developed the ECA Calculator.

Assuming a core (but realistic) operational scenario and using inputs, which are easily available, the ECA Calculator projects the cost for the different scenarios in the future and, as the reduced fuel sulphur content requirements enter into force, allows for different fuel price scenarios to be used.

Also, parameters which have increased impact on the decision making process and, quite often, are associated with a high degree of uncertainty, can be easily adjusted providing an instant update of the results. With the ECA Calculator, LR said that it aimed to provide a tool to support a company's strategic planning.

Ultimately, however, the input and decisions are left with the user of this tool. The tool should be seen as a relative and comparative guide for reference and not absolute in its final determination.

The main output of the ECA Calculator is a fuel cost projection using either exclusively fuel switchover (as per Regulation 14) or an EGCS (as an equivalent compliance method). The EGCS investment is also evaluated in terms of Net Present Value (NPV) for which the payback period is calculated.

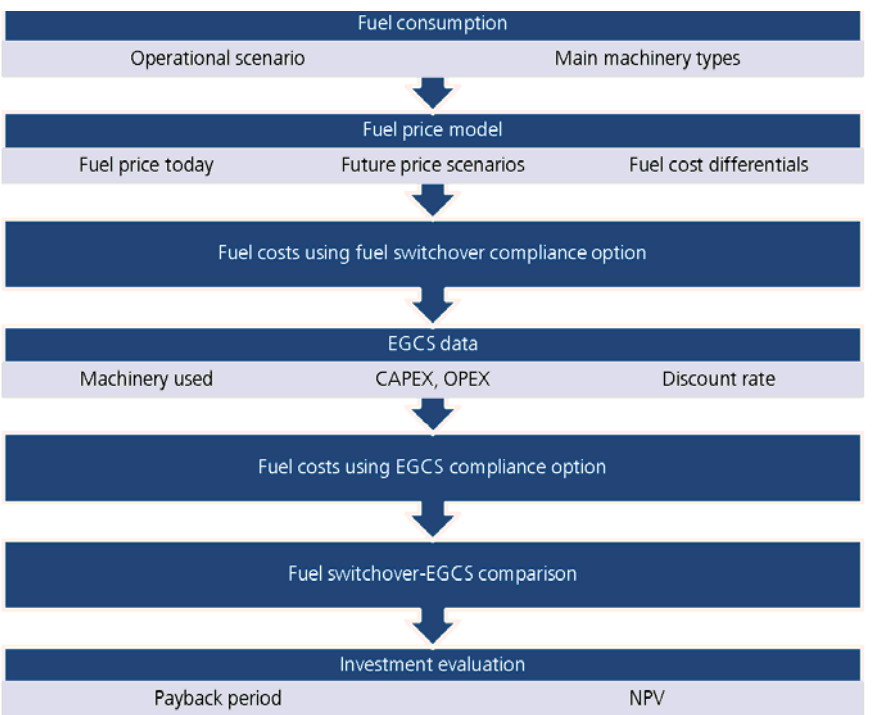
In addition to these main outputs, other useful information is calculated at different stages of the tool, such as annual fuel consumption figures, average cost breakdowns for key periods, etc.

It essentially provides an estimate of the annual fuel consumption, taking into account machinery types and operational scenarios. By combining the annual fuel consumption with a simplified fuel price model (which is dependent on price scenarios and cost of different types of fuel required for compliance), the future fuel cost is projected, based on present fuel consumption and prices. This is compared to the fuel cost using an EGCS. The EGCS investment is then evaluated by considering potential fuel cost savings as positive cash-flows.

The ECA Calculator is designed to accommodate up to six different cases, compared side by side.

This allows quick comparison and evaluation of:

- Different ships in the fleet;
- The same ship but in different operational scenarios and time spent within an ECA;
- The same ship but with different EGCS configuration or type;
- A combination of the above.



ECA calculator mechanics. Source: Lloyd's Register.

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The pirates have not gone away

In the face of less reported piracy attacks in the Indian Ocean/Gulf of Aden region during the last few months, experts have warned against complacency saying that the problem has not gone away.

This was illustrated by the hijacking of a chemical tanker in March of this year. Although the number of hijackings have been drastically reduced – from March to December 2011 there were just three- the ransom level now demanded is spiralling as the pirates become more desperate.

EU NAVFOR - Captain Philip Haslam.

Capt Philip Haslam, Chief of Staff EU NAVFOR, at the recent Navigate/IPTA Chemical and Product Tanker conference said that the use of private armed guards had made a difference by way of alerting the military to a vessel's exact location when under attack, or threat of attack.

He claimed that around 70% vessels passing through the area were adhering to Best Management Practice (BMP) - others claim the figure is nearer 80%. However, we warned against what he called 'tokenism' that is just agreeing to comply with BMP without actually doing anything about it, or just addressing it to a minimum, thus claiming to be compliant.

He also said that the shipping industry, including the authorities, needed to weigh up the cost of protecting vessels in the High Risk Areas (HRA) against the economics of providing such protection.

Vessels at designated anchorages were proving to be cause for concern at EU NAVFOR. For example, one of the major concerns is a possible attack in the Fujairah Anchorage, where normally around 100 vessels are gathered at any one time up to 25 miles offshore.

A precedent has already been set with the hijacking of the chemical tanker *Fairchem Bogey* while at anchor in Salalah, Capt Haslam said. In this particular case, both the Citadel and BMP proved to be ineffective.

Off Fujairah, vessels anchor with their embarkation ladders down and are usually well lit. The local UAE Coastguard patrols of the area were of an unknown frequency and duration, he warned.

He said that in general, while port security was good, anchorage security was unknown in the area. Illustrating his point, Capt Haslam said that last year there was a pirate attack reported within 65 miles of Fujairah. "The strategic effect of pirates in Fujairah is unthinkable," he said.

He concluded by saying that the piracy situation as a whole needed legal closure aided by Masters' testimonies. He also called for greater efforts to trace the ransom money, once it was paid.

Ashore, alternative livelihoods needed to be developed to give the local people an alternative to joining the pirate gangs.

EU NAVFOR has signed up to continue naval patrols until at least 2014. This month the force's strength will be 10 naval vessels.

Speaking at the same conference, Harmut Hesse, special representative of the IMO's secretary general for maritime security and anti-piracy programmes, said globally there were 544 attacks in 2011, compared with 489 the year before, a rise of 11.3%.

Ransoms

	Total	Average	Number
2010	$79.8 mill	$3.19 mill	25
2011	$146.2 mill	$4.87 mill	30
2012*	$9.4 mill	$4.7 mill	2

**To beginning of March.*

Source - EU NAVFOR.

Looking at the figures on a regional basis, in Southeast Asia and the Malacca Straits, there were 113 and 22 attacks reported, compared with 134 and zero respectively in 2010.

West Africa saw the biggest jump to 61 attacks last year, compared with just 14 in 2010.

IMO - Harmut Hesse.

As for East Africa, including the Gulf of Aden/Indian Ocean areas, there were 287 in 2011 as against 172 the year before.

Speaking specifically at the Indian Ocean/Gulf of Aden situation, he said that the 2011 pirate success rate went down to 33 from the 50 recorded in 2010 (11.5%, compared with 29%). The number of vessels held by pirates fell from 45 as at January 2011 to just 14 by November last year and falling by a further one by the end of December.

Vessels held

At the end of last year, 13 vessels together with 261 seafarers were being held, compared with 28 vessels and 656 seafarers at the end of 2010. As of March this year, the number of seafarers held hostage had dropped to 246, but the number of vessels remained the same.

Hesse, said that the reasons for the apparent success in the Indian Ocean/Gulf of Aden regions were:-

- Naval forces patrol.
- LRIT data provision.
- Improved guidelines and BMP implementation.
- Imprisonment of 1,000 pirates and several hundreds lost.
- The use of PCASPs on board ship.

However, he warned that the consequences of these actions had lead to the pirates expanding their geographical reach, for example, up to 1,750 miles off the Somali coastline, or 2.8 mill sq miles of ocean, plus the increased use of 'motherships' often captured vessels and dhows.

The increase in the number of attacks seen since 2005 has led to several IMO and UN Security Council resolutions and the forming of the Contact Group on Piracy off the Coast of Somalia (CGPCS), the Gulf of Aden Internationally Recommended Transfer Corridor (IRTC), the Djibouti Code of Conduct (DCoC) and the Kampala Process.

He explained that the DCoC was formed in January 2009 and today 18 of the 21 states in the region are members. Its aims are to co-operate in the investigation, arrest and prosecute suspected pirates; interdict and seize; rescue vessels, people and property; and to agree a conduct for any shared operation.

The so called 'four pillars' are the implementation of national legislation; establish law enforcement/coastguard capability; capacity development through training and other technical assistance and the improvement of maritime situational awareness.

In addition, information sharing centres are being set up, such as the MRCC in Mombasa, RCC in Dar es Salaam, a regional security information centre in Sana'a, Yemen and a regional training centre in Djibouti, which is due to be opened by the end of this year.

He said that the IMO's guidelines were continuing to be revised, as was BMP, now in its fourth edition, with more experience gained. In addition, the IMO is working on guidelines to assist in the investigation of piracy and armed robbery against ships.

Interim guidelines on the use of PCASCs on board ship in the HRA will be reviewed. They are split into three circulars aimed at shipowners, flag states and coastal states. He said that around 25% of all vessels transiting the HRAs embark armed guards.

Under MSC 89 the use of armed guards was deemed to be the sole responsibility of flag states, although he said port states may have different rules in place.

Future action by the IMO includes a

SAMI - Peter Cook.

ministerial DCoC signatory meeting in May of this year and a conference on counter-piracy capacity building. MSC 90 will include a high-level segment on arms on board ships.

He concluded that there were many initiatives taking place to bring Somalia into the maritime and social international community in an effort to dissuade its people from turning to lawlessness for a living.

Financial burden

Peter Cook, founder and director of Security Association for the Maritime Industry (SAMI) addressed the financial burden of Somali piracy to the maritime industry last year.

He said that the total cost of anti-piracy initiatives to the maritime industry in 2011 was $5.3 bill. This was split between -

- Total cost of increasing speed when passing through an HRA = $2.71 bill.
- Fitting of security equipment and hiring of private maritime security companies = $1.11 bill.
- Extra insurance = $635 mill.
- Vessel re-routings = $583 mill.
- Ransom payments = $160 mill.
- Labour costs = $195 mill.

"And what of consequential losses", he asked.

Costing the methods for countering piracy taken from figures taken from an Oceans Beyond Piracy (OBP) report, he said that the three naval coalition forces, plus other forces cost around $1.3 bill.

Taking around 80% of the 42,450 vessels transiting the HRA each year utilise BMP 4 effectively, including the use of citadels costs the industry $4.2 bill, while a significant use of PMSCs for vessels transiting the HRA was $531 mill.

Currently SAMI has 130 members out of the more than 200 PMSCs claiming to offer anti-piracy solutions in and around the Indian Ocean region. Cook said that the growth in companies was expediential with about three to five per week springing up.

Demand growth for PMSCs is running at around 25% and Cook claimed that reputable firms were having to turn away business, as around 90% of the unsuccessful attacks were deterred by armed security teams, according to EU NAVFOR and no vessel had been successfully hijacked with an armed security team on board, thus far, Cook claimed.

The attraction for PMSCs is that they can see their income grow by 350% per annum in this fast evolving market. For example, SAMI members conduct some 95% of the armed and 5% of the unarmed vessel transits in the HRA, amounting to about 1,500 per month.

As for the question of regulating this fledgling industry, Cook said that there was a major drive by its membership for self-regulation, which he claimed "….would be more nimble and responsive than a centralised governmental organisation."

The conference's chairman Capt Ian Finley of the IMO countered that any accreditation should be undertaken by a legislative body, as he said that a fleet may have vessels attached to different flag states.

Cook said that the future lay in accrediting SAMI members giving potential contractors the ability to look at reports via the association's licensing process. PMSC engagement contracts should be used, such as BIMCO's GUARDCON.

He also saw the need to formulate a training and education structure for PMSC personnel to put the maritime security industry under a more professional footing. SAMI should also represent this sector to industry bodies and naval coalition forces to improve relations and to provide information exchange for better intelligence gathering.

Also in the future, Cook saw the need to introduce an equipment, technology & hardware (ET&H) division within the association to promote a more 'holistic' approach to maritime security and take advantage of new technologies designed to mitigate the risk of maritime crime.

He also stressed that the association was not just trying to address piracy off East Africa, as the volume of world trade is due to increase by 50% over the next 20 years, while at the same time, the strength of western navies will shrink by about 30%.

Offshore R&D is now taking place in almost inaccessible areas, which will be difficult to police and with the world's increasing population, cargoes will become increasingly more valuable, putting huge pressure on ports worldwide to cope with security.

Legal aspects

The last word on piracy at the conference was left to Ince & Co's Stephen Askins, himself an ex Royal Marine.

He outlined the onus placed on the Master when making a decision as to whether to transit the HRA and referred to the case of the bulker *Triton Lark* and CONWARTIME 1993, which was recently the subject of a Commercial Court decision.

In this particular case, the Court considered the true construction and implementation of the CONWARTIME 1993 clause in a timecharter on the NYPE form (Pacific Basin IHX Limited v Bulkhandling Handymax AS). Bulkhandling was represented by Ince & Co's Michael Stockwood and Katy Hanks.

Triton Lark was chartered to carry a cargo from Hamburg to China, via Suez and the Gulf of Aden. The defendant owners refused to proceed on that route, due to the risk of pirate attack and instead proceeded via the Cape of Good Hope. As a result, extra costs were incurred, which a Tribunal held should be borne by the charterers. The charterers then appealed.

According to the various articles written concerning this case, this appeal centred on the construction of sub-clause (2) of CONWARTIME 1993, in particular as to:

(i) The meaning of the words "may be, or are likely to be, exposed to War Risks".

(ii) Whether on the facts owners had made the reasonable judgment required by the clause.

(iii) Whether the clause gives owners a discretion and if so, whether they are obliged to make proper enquiries before exercising it.

The charterers' appeal was allowed. Owners were required to show a 'real likelihood', based on evidence rather than speculation, that the vessel would be exposed to acts of piracy. A refusal of orders required owners to make an objectively reasonable judgment as to whether such a real likelihood existed. In order to do this, all necessary enquiries must be made. If owners make enquiries, which they consider sufficient, but do not make all necessary enquiries, the judgment may still be objectively reasonable.

The judge recommended that the award be remitted to the Tribunal in order for it to reconsider whether, in owners' reasonable judgment, there was a 'real likelihood' that the vessel would be exposed to acts of piracy.

When the question arises - do I have to go? - in the case of a Master refusing to transit the Gulf of Aden, or Indian Ocean, according to Conwartime – 'War risks' – includes acts of piracy. 'The vessel shall not be ordered to or ….through…any area….where it appears that the vessel in the reasonable judgement of the Master and/or the owners, maybe, or are likely to be, exposed to War Risks.'

A Master can refuse if in his/her reasonable judgment it -"maybe dangerous, or are likely to be or to become dangerous to the vessel, her cargo, crew…."

As to the question on whether to deviate away from the area, thus prolonging the voyage, here the key question is whether there is a real likelihood that the vessel would be exposed to acts of piracy in the sense that the Gulf of Aden will be dangerous on account of

the acts of piracy, as the judge said. (The case summary can be viewed on Ince & Co's website).

Askins warned that any decision must be based on evidence and not speculation, while 'dangerousness' depends on facts and will turn on the likelihood that piracy might occur and owners can have regard to seriousness of consequences.

According to the BIMCO Piracy Clause-….'The Vessel shall not be obliged to proceed, or required to continue to or through any….area or zone….which in the reasonable judgement of the Master and/or owners is dangerous to the vessel…. due to any actual, threatened or reported acts of piracy …whether such risk existed at the time of entering into the charterparty…..'

If an owner refuses to allow his vessel to transit an area deemed at risk, then the charterer must give alternative voyage orders. However, if an owner consents to the passage, the charterer must pay any reasonable extra costs for protection and the possible use of security guards and pay for hire for lost time. If the vessel is seized by pirates, then the hire is payable for 90 days, under BIMCO's clause.

Turning to the use of firearms, Askins explained that in the UK, licenses and permits for the carriage of firearms are contained in the Fire Arms Act of 1968. Under Section 5 (Licensing), the applicant needs an existing contract and will have to have carried out a risk assessment. Details of the weapons to be carried and the personnel delegated to carry them need to be submitted. For Export Control licenses, local end user certificates need to be attained.

He warned that when a company was facing a crisis management situation, its aim should be to minimise financial losses and to safeguard its assets. In addition, negative reaction needs to be minimised and any personal liability needs to be reduced.

The main areas of concern once a vessel has been hijacked is the possibility of general average being declared where there is more than one cargo owner involved. Another concern is the possible low value of the vessel today, compared with the ransom being demanded and also the exclusion of all the stakeholders in the negotiating process could cause problems, Askins said.

He also said that choosing the right security company is paramount. Here IMO Guideline 1405 should be adhered to and the personnel involved should have the relevant experience. All the parties involved should have a full understanding of BMP and a knowledge of the company's structure plus the extent of the insurance cover.

Following an incident at sea involving a pirate attack, possible issues for armed guards to be conscious of, is damage to the vessel and/or its cargo, death or injury to the crew, death or injury to third parties, the possibility of criminal liability and any delay to the vessel's voyage directly caused by the security company.

Askins was involved with the drafting of BIMCO's new GUARDCON clause. He said that the key areas in this particular clause were the contractors obligations, the Master's authority, insurance and liability and what is called 'knock for knock'.

He concluded by saying that a lot of responsibility is now being put on the owners' shoulders at a time when many stakeholders are becoming involved in the anti-piracy decision making, such as whether to avoid the piracy areas altogether, to put armed guards on board, or to do nothing. "The cargo owners and charterers have been given a bigger stick against the owners," he warned. TO

Gulf of Guinea problems hot up

While most of the world's anti-piracy efforts seemed to have been focused on the Indian Ocean/Gulf of Aden areas, problems in the Gulf of Guinea located on the other side of the African continent have escalated.

According to Harmut Hesse, special representative of the IMO's secretary general for maritime security and anti-piracy programmes, also speaking at the Navigate/IPTA Chemical and Products Tanker conference, there were 61 attacks last year off West Africa, compared with just 14 in 2010.

However, the Gulf of Guinea pirates aim is totally different in that their goal is to steal cargoes while vessels are at anchor and in the case of tankers, transfer the cargoes in a ship-to-ship transfer (STS) operation, rather than hold out for ransoms.

To illegally take cargoes using this method, medium size vessels are needed, most of which come from Nigeria. Once transferred, the cargoes are then taken to Nigeria, or Cotonou in Benin.

One analyst recently told Bloomberg that eight vessels were attacked last February, raising the total to 12 for the first two months of this year.

Tanker Operator talked with Richard Mcenery of Ocean Protection Services (OPS) about the growing problem and how companies, such as OPS, can help.

He acknowledged that it is a lot more difficult for vessels to enter the territorial waters of the Gulf of Guinea with Western security guards. He said that in most cases, OPS uses local national navies. He also warned that many PMSCs would be trying to offer the same services, as seen in the Indian Ocean/Gulf of Guinea.

However, he said that the local navies have been doing a good job not to warrant PMSCs working in the area. It is only in the last month, or so that the situation started to change in favour of the use of PMSCs.

Last resort

Countering criticism that private armed guards would only escalate the problem, he said this would only be a problem if PMSCs used security guards with no understanding of the rules for the use of force, as firearms would only be used as a last resort.

As with the Indian Ocean/Gulf of Guinea situation, Mcenery said that it would definitely help by having PMSCs on vessels, as they could liaise and co-ordinate operations with the local naval forces. However, he said that at present, he would only recommend the use of armed guards on board those vessels already at anchor.

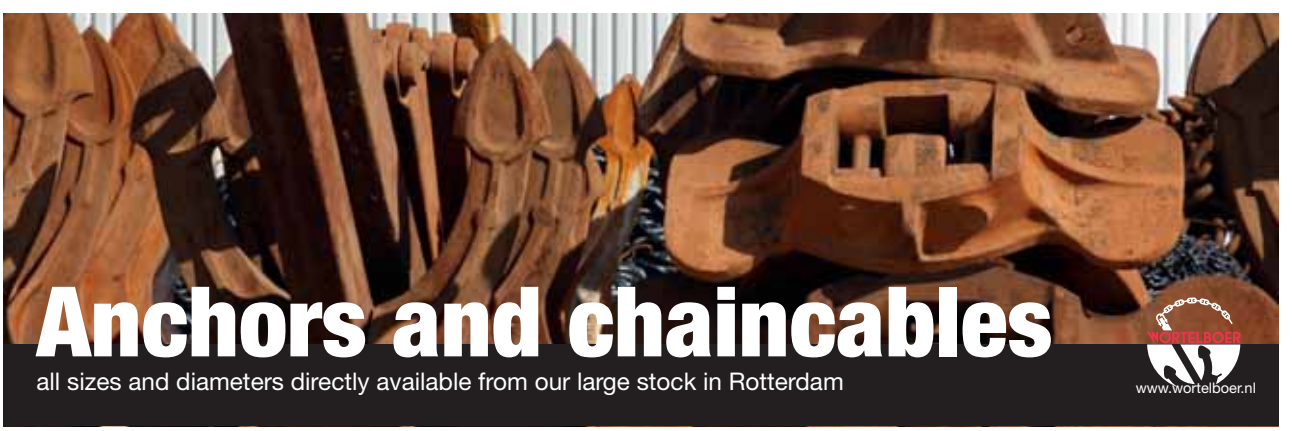
One commentator recently said that the Nigerian vessels could be easily pinpointed using LRIT and/or AIS, but as Mcenery pointed out, the pirates usually switch all communications off, including the AIS, during an operation.

He said that he didn't think that this area would become as big a hunting ground for pirates compared with East Africa, as the Gulf of Guinea tends to be a congested area. As there will be more vessels in the area, the local navies will have an easier task in identifying the pirates.

Mcenery recommended that all vessels have a risk assessment undertaken if they are to enter the Gulf of Guinea in much the same way as vessels transiting the Indian Ocean/Gulf of Aden.

He explained that thus far, BMP4 was only meant for protection against Somali pirates, however, many of the procedures could be used for vessels in the Gulf of Guinea. The new BIMCO clause GUARDCON only applies to security guards on vessels and does not specify the area of operation. However, this may change, Mcenery said.

Surrounding countries could not solve the escalating problem unilaterally, but will have



to join together and create a unified naval coastguard unit to tackle it, Mcenery said.

OPS is currently operating out of Lome, Togo and Tema, Ghana and other countries are being approached, but at present it is difficult to get countries to allow PMSC operations on their soil.

He said that future IMO initiatives should include the helping of PMSCS open dialogue with Indian Ocean bordering countries to allow the free passage of armed guards through their ports and harbours, which in turn would make it cheaper for the owners using their services.

Another factor working against the owners is the cost of insurance. He said that OPS is working with the insurance industry to persuade insurers to offer a financial incentive to those owners and operators using PMSCs. "I can see this coming into effect soon," he said.

Finally, Mcenery thought that regulation was needed to put maritime security companies firmly on the map. He said that he fully supported SAMI's efforts to enable the industry to be properly regulated, as he thought that there were around 200 companies operating unlawfully.

Call for action

Nautilus International has voiced concern about an increase in violent attacks on shipping off West Africa – and said that is to urge shipowners to declare the area an official high-risk zone.

The Union says it is disturbed by such incidents as the recent hijacking of a reefer vessel said to be the first case in which Nigerian pirates have taken crew members off the ship to be held hostage.

In another recent incident off Nigeria, heavily armed pirates attacked an anchored chemical tanker in Lagos roads and assaulted the master before stealing his personal effects. They forced the crew members to sail the ship to a location around 80 to 100 miles south of Lagos, where the pirates stole cargo from the ship in a lightering operation.

Nautilus general secretary Mark Dickinson said that the Union is calling for an urgent meeting of the UK's national warlike operations area committee (WOAC) and is also urging the International Transport Workers' Federation (ITF) to do likewise for the International Bargaining Forum (IBF) WOAC.

Following this, the IBF has declared a HRA for the territorial waters of Benin and Nigeria. The designation came into effect on 1st April 2012 in order to allow ship operators to make any necessary preparations.

It affords the same benefits and protections to seafarers in those areas as the HRA in the Gulf of Aden and around Somalia, including: the need for enhanced security measures; advance notice of intent to enter the area; the right to refuse to enter it; and a doubling of the daily basic wage and of death and disability compensation while within the area of risk.

The HRA provisions apply to all ships operated under an IBF agreement. The ITF's Fair Practices Committee steering group will decide on whether to also apply them to all ships under non-IBF ITF agreements. IBF agreements on high risk areas also provide an indicator of good practice to national flag registers. TO

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Intertanko members set to invade the Lion City

Intertanko is holding this year's annual event in Singapore between 9th-11th May.

It takes much the same successful format as in previous years with a mixture of meetings, seminars and dinners, but not forgetting the social element.

Intertanko said that registrations for this year's event were still open.

"We sincerely hope that as many of you as possible will join us in Singapore for this year's main tanker industry gathering – a place to see old friends and make useful new contacts, and to catch up on what makes our industry tick," the organisation said.

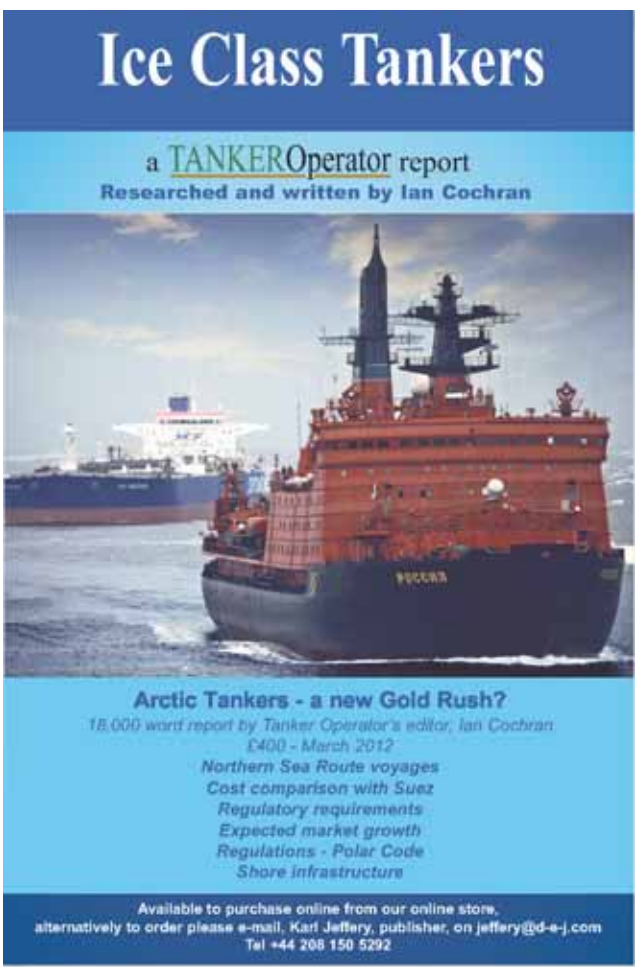
Despite rising costs for the hosting of such events year on year, Intertanko claimed to have been able to control costs with the result that the cost to members will remain the same as last year, with special discounts for those booking early.

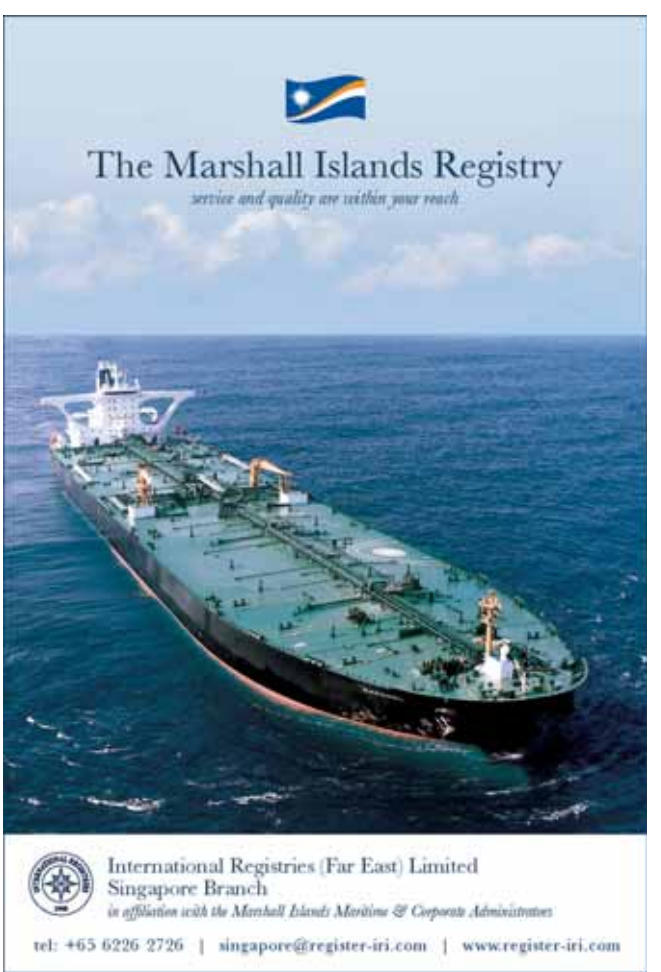
Although the exact scheduling will be updated regularly on both the weekly news bulletins and on the association's website, the initial itinerary says that the executive committee meeting and council dinner, for council members only, will be held on Wednesday 9th May.

On Thursday 10th May the council meeting will be held, followed by the annual general meeting, which will be open to all members and associate members. This is followed by what for some is the highlight of the event, the gala dinner, which is open for all registered delegates.

On Friday 11th May, the event concludes with a tanker seminar and a tanker chartering seminar, complete with a tanker event table top exhibition.

Invited to open the seminar is Singapore's Minister of Transport, Lui Tuck Yew and among the latest confirmed speakers at the tanker market session are chairman Jack Hsu of Oak Maritime; Steve Christy, E A Gibson Shipbrokers talking about the crude oil tanker





market; Geir Olafsen of Inge Steensland taking on the subject of the chemical and clean products tanker market and Petter Haugen, DnB NOR Bank, who will tackle the subject of slow steaming.

The session will also include a presentation on the oil markets. The Piracy session will include a speech by Commodore Bruce Belliveau, deputy Chief of Staff Operations, NATO.

As for the technical session, this will include presentations and panel discussions on innovations in technology to address the needs of the tanker owner and operator in meeting requirements on the following areas:

- Ballast water management.
- Air emissions.
- Greenhouse gases.

Confirmed panel members include: Henrik von Platen, Saudi Shipholding and chairman of Intertanko ISTEC Committee; Hiroshi Iwamoto, senior shipyard representative and Sigurd Jensen, managing director, Hamworthy Krystallon.

Further speakers/panel members will be announced shortly, the organisation said.

Interactive session

An all day tanker chartering seminar will also be offered in conjunction with the association's tanker event. This will focus on current issues relevant to tanker chartering law and practice, including the use of mock arbitrations. These popular interactive sessions illustrate key issues in a lively and thought-provoking way, Intertanko claimed.

The venue for the event is the Conrad Centennial Singapore, where a number of rooms have been blocked booked for delegates and their partners.

Meanwhile, the 29th session of Intertanko's North American Panel took place at Stamford, Connecticut coinciding with Shipping 2012, organised by the Connecticut Maritime Association (CMA). Intertanko's panel event proved highly successful with 50 attendees made up of members, associate members and guests.

Intertanko chairman, Teekay's Graham Westgarth, provided the panel with an overview of the major issues that the association is addressing to assist members, the most important being the financial sustainability of the tanker industry.

Jeff Lantz of the US Coast Guard (USCG) also gave the panel a presentation on the latest USCG issues affecting the tanker industry.

David Cotterell, OCIMF director, informed the panel about the organisation's most recent activities, while Kathi Stanzel, Intertanko's deputy managing director, provided the panel with a comprehensive update of environmental issues on the association's agenda.

Intertanko's managing director, Joe Angelo, reported on the most recent developments at the association's Executive Committee and Council meetings and facilitated a lively discussion on piracy.

Finally, the panel said goodbye to Richard du Moulin, who had served as panel chairman for the past 13 years. The panel thanked him for his dedicated service and excellent leadership and then unanimously elected OSG's Robert Johnston as the new panel chairman. TO

Two MAN L27/38 engines to power 7,000 dwt tanker

Spanish concern Empresa Naviera Elcano has placed an order for two medium-speed engines.

The main engines form part of a propulsion package for a newbuild tanker. The MAN L27/38 engines will be constructed at the MAN Diesel & Turbo facility in Frederikshavn, Denmark and will power a 7,000 dwt asphalt and products tanker to be built at Sedef Shipyard in Turkey.

The 6-cylinder main engines will each deliver 2,040 kW at 800 rev/min.

Elcano has chosen the engines as part of a MAN Diesel & Turbo propulsion package that also comprises an Alphatronic 2000 propulsion control system, an MAN Alpha VBS Mk 5 CP propeller, and a double-reduction gearbox with multiple PTO clutches operating at 1,200 kW at 1,200 rev/min.

Characterised by its heavy-duty propulsion and manoeuvring power performance, the robust L27/38 engine series is claimed to perform well over the entire load range, offering an immediate load response and quick acceleration.

The L27/38 is smokeless at idling, part-load and full-load, is optimised for high-torque layout and emits low levels of NOx while minimising fuel-oil consumption, MAN said.

The Sedef Shipyard is located in Tuzla Bay, near Istanbul and is part of the Turkon Holding Group, a large international enterprise with interests in shipping, tourism and shipbuilding, among others.

Based in Madrid, Elcano was founded in 1942 and is involved in the shipping of bulk products. These include both solids, such as coal, ores and grain, and liquids such as LNG, LPG, oil, oil products and chemical products.

Including its global subsidiaries, Elcano is the parent company of an international shipping group that manages its own fleet of 27 vessels totalling over 2.2 mill dwt and include LNGCs, oil and chemical/product tankers, LPG carriers and bulk carriers. TO

Principal Particulars- 7,000 dwt tanker

Type	Asphalt and products
Shipyard	Sedef
Length, oa	110 m
Length, bp	105.7 m
Breadth	10.6 m
Draft, design	6.9 m
Deadweight at operating draft	7,150 t
Deadweight at scantling draft	8,450 t
Trials speed	14 kn at 80% MCR
Main engine	2 x MAN 6L27/38
Rating	2 x 2,040 kW & 800 rev/min

A schematic of MAN's L27/38 medium speed engine.

A model of the asphalt/products tanker to be built at Sedef for Elcano.

Nynas opts for Alfa Laval BWT systems

Swedish oil products supplier Nynas has commissioned four Alfa Laval PureBallast ballast water treatment (BWT) systems ahead of the BWT's convention's ratification.

Two were fitted on board a pair of newbuilding bitumen tankers while two type 2.0 EX were retrofitted on board another two bitumen tankers that Nynas operates under bareboat charter.

Explaining the company's decision to install the equipment now, Nynas project manager for newbuilding Björn Karlsson said; "I think the convention will be ratified quite soon, which means that the international regulations will most likely take effect within the next two years. We at Nynas began preparing for ratification about five years ago when we started investigating options for ballast water treatment on board the bitumen tankers we charter."

He said that to be prepared was the main reason why Nynas decided in 2008 to purchase and install Alfa Laval PureBallast BWT systems on board two newbuild tankers. However, he said that the decision to invest in the system will end up saving the company money in the long run.

"Our vessels typically sail in waters too shallow for ballast water exchange," he explained. "That's why we decided to buy ballast water treatment systems on board two newbuild tankers. The vessels we charter have a ballast water capacity of less than 5,000 cu m, so we didn't have to comply immediately. But by doing so, we avoid the costs associated with retrofitting the vessels later."

Selecting a ballast water treatment system that meets Nynas' criteria for health, safety, security and the environment was also important. The company has a comprehensive policy in place and employs certified management systems to ensure minimal impact of its products and operations on the people's health and the environment, Karlsson explained.

"We assessed the other IMO-approved ballast water treatment systems available at that time," he said. "Nynas chose PureBallast because we believe that it was the best system available. Treating ballast water with a chemical-free system is better for the environment than the other systems. Plus, PureBallast came with Alfa Laval engineering support, equipment quality, and spare parts and service availability in our trading area."

As one of the first companies to install ballast water treatment systems on board tankers, Nynas claimed to have blazed the trail for other tanker owners and operators. Trail blazing is never easy, but Karlsson noted it has been made much easier with the support and service of a reliable partner.

"Nynas has a solid long-term business relationship with Alfa Laval that spans more than three decades," Karlsson said. "We appreciate the engineering expertise and support that Alfa Laval brings to the table. The two PureBallast 500 systems we ordered in 2008 for the (newbuildings) *Ardea* and *Mergus*, for instance, were not Ex-approved because such systems did not exist at that time. But together with Alfa Laval, we developed a solution for our vessels."

Alfa Laval adapted PureBallast to Nynas' requirements for operation in a hazardous tanker environment with cargo at temperatures ranging from 160 deg C up to 250 deg C. Rather than installing the PureBallast system below deck as on vessels carrying cargo that is not potentially explosive, Nynas and Alfa Laval decided to build a pressurised structure on the vessels' decks. A double-door construction serves as an airlock and an over-pressurised ventilation system creates a gas-free zone to ensure safe operation. This enabled system certification by Bureau Veritas.

***The Alcedo* was retrofitted at Falkvarv**

Support beyond design

Alfa Laval support and service, however, didn't stop after the design and certification of the system but continued strong throughout installation. In fact, said Karlsson, Alfa Laval was instrumental in allaying shipyard concerns about installation.

"The Wuhan Nanhua Huanggang Jiangbei Shipyard, which built the *Ardea* and *Mergus*, is a relatively small yard with no prior experience in working with PureBallast," said Karlsson.

"Alfa Laval arranged a trip to the Mawei shipyard where PureBallast was being installed on another vessel so our shipyard workers could see first hand just how compact and easy to install PureBallast is.

The old adage, "Seeing is believing,' held true in our case. The interaction between the shipyard crews was priceless. It provided our Wuhan Nanhua workers with full transparency of the installation requirements for the PureBallast system. Alfa Laval went the extra

mile for us, which really helped us a lot", he said.

Another advantage was that Alfa Laval Shanghai provided a natural link to PureBallast experts in Sweden in addition to quick access to local support in China. This gives Nynas, as well as other western-based shipowners, close contact with experts at the Alfa Laval head office in Tumba, Sweden, while the shipyard in China has the same direct contact with Alfa Laval Shanghai.

According to Karlsson, Alfa Laval's global presence and broad competence gives it a competitive advantage over other BWT manufacturers who only have local agents nearby.

Alfa Laval Shanghai commissioned the systems on board the two newbuilding bitumen carriers at the end of February 2012.

Turnkey retrofits

Following the order for the newbuildings, in July 2011, upon recommendations from Nynas, Swedish shipowner Frederiet placed an order for two PureBallast 500 EX, generation 2.0 - the second generation of the chemical-free PureBallast systems - to be retrofitted on board the bitumen tankers *Alcedo* and *Pandion.*

Rather take on the challenge of managing these projects, Nynas placed the job of retrofitting the vessels in the hands of Alfa Laval sub-contractor Marine Environmental Solutions (MESAB) for design, class approval, project management, integration to on board systems, installation and commissioning services.

"The advantages of having a turnkey partner are obvious," said Karlsson. "It was only natural that we place our trust in Alfa Laval and MESAB, the people who know the system best."

Karlsson said that he appreciated having a turnkey ballast water treatment retrofit partner. MESAB dealt directly with the shipyard Falkvarv, where the ships docked for routine service. The entire retrofit process, from pre-survey and engineering survey to installation and commissioning services, took about three weeks from start to finish.

To determine the placement of equipment, MESAB conducted a pre-survey, which resulted in a detailed written report and 3D drawing of the system layout. In contrast, the engineering survey produced a set of drawings that enabled pre-manufacturing of all major piping in order to minimise vessel downtime. Installation, startup and commissioning services ensured proper function of the system.

NEWBUILDING	ARDEA	MERGUS
Owner	Frederiet AB	Frederiet AB
Bareboat charterer and operator	Nynas AB	Nynas AB
Flag	Cyprus	Cyprus
Ship type	Bitumen tanker	Bitumen tanker
Sailing routes	Northwestern Europe including the Baltic and North Seas as well as the Mediterranean Sea	Northwestern Europe including the Baltic and North Seas as well as the Mediterranean Sea
Capacity (m^3)	4,300	4,300
Length (m)	99.9	99.9
Beam (m)	15.86	15.86
Draft (m)	6.1	6.1
Deadweight (m/t)	4,700	4,700
Max. continuous rating (kW)	4,000	4,000
Service speed (knots)	14	14
Delivery	2012	2012
Builder	Wuhan Nanhua Huanggang Jiangbei Shipyard	Wuhan Nanhua Huanggang Jiangbei Shipyard
PureBallast system		
Ordered	2008	2008
Ballast tank capacity (m^3)	2,150	2,150
Type of system	PureBallast 500	PureBallast 500
Installation	Deckhouse on deck	Deckhouse on deck

BALLAST WATER RETROFIT	PANDION	ALCEDO
Owner	Frederiet AB	Frederiet AB
Bare boat charterer and operator	Nynas AB	Nynas AB
Flag	Sweden	Sweden
Ship type	Bitumen tanker	Bitumen tanker
Capacity (m^3)	6,400	7,100
Sailing route	Northwestern Europe including the Baltic and North Seas as well as the Mediterranean Sea	Northwestern Europe including the Baltic and North Seas as well as the Mediterranean Sea
Length (m)	116.9	116.9
Beam (m)	18	18
Draft (m)	7.5	7.5
Deadweight (m/t)	7,130	6,996
Max. continuous rating (kW)	4,250	4,250
Delivered	2003	2003
Builder	Shanghai Edward Shipbuilding Co Ltd	Shanghai Edward Shipbuilding Co Ltd
Shipyard for ballast water retrofit	Falkvarv	Falkvarv
Management company for ballast water retrofit	Marine Environment Solutions AB	Marine Environment Solutions AB
PureBallast 2.0 EX system		
Ordered	2011	
Ballast tank capacity (m^3)	2,550	
Type of system	PureBallast 500 EX	
Installation	Below deck in the pump room	

Source: Alfa Laval/Nyas.

Commenting on the co-operation with turnkey retrofit partner MESAB, Karlsson said, "Accountability speaks volumes."

Back in 2008 when the PureBallast systems were ordered for the newbuildings, Nynas asked Alfa Laval to develop an Ex version. As a result, PureBallast 2.0 EX comes with additional safety modifications for Zone I, group IIC and temperature class T4, making it suitable for installation on board most vessels that carry ignition-sensitive cargo. It also features the 40% power savings and operating advantages, such as automatic flow control.

"The reduced power consumption of the PureBallast 2.0 makes it easier for shipyards to work with the designed power on board," said Karlsson. "This is especially true for our bitumen tankers where available power is at a premium."

The PureBallast 2.0 EX's modular design enabled the re-use of existing ship ballast water equipment and pipe work, which is another big advantage for shipowners.

When talking about the best way to handle

on board systems, Karlsson had three words - reliability, compatibility and convenience.

"That is the way we like to work with our on board systems. At Nynas, we strive to have as few suppliers as possible. It is better to have a larger scope of supply from one partner and then let them take complete responsibility for the reliable operation of the equipment or system," explained Karlsson. "Reputation and reliability matter a great deal to us. We're not just buying equipment, we're investing in a partnership and the knowhow, expertise, resources and support that comes with it."

Other Alfa Laval equipment fitted on board Nynas' operated vessels include purifiers, fuel oil booster unit and fresh water generators.

For the time being, Karlsson did not anticipate the placement of new orders for PureBallast 2.0 EX system, or other Alfa Laval equipment. He said that he planned to keep a watchful eye on the four systems currently in operation. He concluded that the lessons learned from installing and operating these systems put Nynas that critical step ahead and ultimately make them better prepared for 2016.

More than 250 PureBallast systems have been sold thus far, including retrofits on more than a dozen vessels. The system was type approved in 2008. Selected owners choosing Alfa Laval's system include AP Moller-Maersk, MOL, NYK, CMA CGM, Bernhard Schulte and Hamburg Sud, plus various shipyards in 15 countries.

Alfa Laval said that the system is available to meet different vessel types capacity requirements and that the installation was backed by a global network of support and services.

Alfa Laval's PureBallast system.

BWT state of play

At the last MEPC meeting, a lack of a sampling standard delayed the convention's ratification, as the meeting was not able to make a decision, which in turn held back some of the major flag states from ratifying it, explained Per Warg, business manager, PureBallast.

Thus far, the number of flag states needed to ratify the BWT conventions has exceeded the minimum, but the amount of tonnage had still not met the 35% target. The IMO's BLG committee will need to ratify the convention at its next meeting and then present it the following MEPC meeting at the end of this year, or beginning of next.

As for the US, the first USCG rules are expected to be put in place very shortly roughly in line with the IMO's convention, however, the second phase due to enter force in 2016 is described as very strict.

Today, Warg said that Alfa Laval's intelligence thought that around 1,200 systems had been sold worldwide, as last year saw a massive intake of orders. He said that around 15% of all newbuilding orders had a BWT system specified in the design.

Although shipyards were responsible for installing and integrating the systems, shipowners were specifying which system to use and were increasingly querying the type approvals, as it has been found that systems had been tested in brackish and salt waters but not in fresh water, where different reactions could occur.

As for Alfa Laval, he estimated that the company had a market share of around 22% with more than 250 systems sold and around 60 already commissioned. Of the UV type market, Alfa Laval claimed 70% of the systems operating at below 2,000 cu m per hour capacity.

At present, the company has a capacity to manufacture some 500 systems per year at its base in Denmark, but was looking to expand into Asia. The company was also looking at the EX market for tankers.

The company said that there were filter problems with UV systems and that supplier's were finding it difficult to support shipyards when installing the systems. Once the rush to fit systems starts, there will be a bottleneck due to lack of drydock availability, together with a lack of welders, fitters etc, while the class societies will be weighed down with the burden of approving all of the installations needed.

Warg said that most owners were ordering two systems and that it was not a problem for redundancy purposes. He claimed that there was little maintenance needed once a system is installed.

TO

The retrofit took aound three weeks to accomplish.

Alfa Laval leads the way in bilge water treatment

Shipowners seeking DNV's Clean Design class notation can now specify a bilge water treatment system that is certified according to the class society's new 5 ppm type approval process.

DNV Clean Design class notation is a voluntary newbuilding specification which covers most aspects of ship design and operation. For bilge water, Clean Design stipulates a maximum 5 ppm of oil remaining in the water after treatment, prior to pumping overboard. MARPOL regulations stipulate 15 ppm.

In 2011, DNV introduced a 5 ppm type approval process for marine bilge water separators. Alfa Laval's PureBilge was the first system to obtain the new 5 ppm DNV type approval certificate, which has also been granted the US Coast Guard Certificate of Approval.

According to Alfa Laval's Pauli Kujala, previously, shipowners specifying 5 ppm have had to take the word of the equipment suppliers that the system really does meet the limit. Unfortunately, this has not always been enough. Some systems actually have problems reaching even 15 ppm under real life conditions, claimed Alfa Laval.

While claiming that their equipment can meet the limit, it is not unknown for suppliers to simply adjust the oil-in-water monitor down from 15 ppm to 5 ppm, so that it functions as an oily water alarm with automatic stop.

In such cases, the equipment is not removing the oil down to 5 ppm, as it simply prevents it from being discharged overboard. The bilge water then goes into recirculation and fills up the bilge water tank. When this is full, it is pumped to the waste oil tank and when that has filled, then the ship has a problem. It is in situations like these that environmental infringements may occur, the company explained.

In May 2011, the DNV 5 ppm Type Approval Programme No. 771.60 became available for certification for Oily Water Separators (OWS) for the first time.

Alfa Laval's PureBilge system was tested according to this procedure and in December 2011 Alfa Laval obained Type Approval Certificate No. P-13965 for PureBilge 2005 and 5005 (2.5 cu m per hour and 5.0 cu m per hour).

Since its release on the market in June 2009, PureBilge had been tested on board ships under real life conditions and consistently achieved results below 5 ppm, the company claimed. The system gained type approval on 12th December last year.

Two notations

DNV Environmental Class notation reduces a ship's environmental impact due to air emissions, sea discharges and accidental damage to the ship's hull. The notations award owners and operators who choose to design and operate their ships in an evironmentally sustainable manner. The aim is to reduce the emissions from each ship so that the overall environmental burden from shipping is reduced.

DNV Clean notation stipulates that the vessel must be designed and operated in accordance with current and future regulations for protection of the environment. Technical and management processes and procedures for collection, transfer and storage of waste must also be adopted.

This notation is based on the same clean goals but is stricter. It stipulates that the constructional design and operation of vessels should be such that it minimises their impact on the environment.

Clean and Clean Design class notations are both voluntary environmental newbuilding specifications. Important drivers of these policies, especially for tankers, are the oil majors' environmental policies, which are becoming increasingly stringent following number of environmental disasters.

As cargo owners and charterers, the oil companies typically demand higher than normal environmental compliance from the shipowners transporting their cargoes, such as tanker owners and owners of offshore supply vessels. The same applies to owners building LNGCs and other ship types.

DNV pointed out that the image of the individual shipowner and operator will clearly improve with customers and authorities, "…since the notation demonstrates that the company's policy is to be environmentally proactive in order to prevent accidental pollution as well".

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Clean Design aspects

Clean Design notation stipulates requirements for controlling and limiting operational emissions and discharges. These requirements cover the most important environmental aspects: Fuel tanks' protection from grounding damage; handling of sewage and garbage; environmentally friendly antifouling; combustion machinery emissions (NOx and SOx); use of refrigerants; Green Passport Inventory for recycling the ship; handling of ballast water; handling of fuel oil; handling of bilge water.

As stated in DNV's 'Guidance for the Environmental Class Notations Clean and Clean Design', "….for Clean Design the vessel must have bilge water holding tanks as required for the Class Notation OPP-F, which means that they must have required capacities dependent on the engine rating. The machinery space bilges must not be discharged to sea, but be discharged to shore. Clean

Design requires oil content of bilge water to be less than 5 ppm."

However, meeting DNV's Clean Design requirements for bilge water takes more than setting the oil-in-water monitor to 5 ppm. The treatment system must actually achieve 5 ppm, Alfa Laval said.

Current MARPOL legislation stipulates that separated bilge water containing 15 ppm, or below oil in water can be discharged into international waters. In reaction to increasing environmental awareness in the shipping and other industries, future legislation is expected to be more stringent, requiring the limit to be reduced to 5 ppm. For vessels trading in the Great Lakes area it is already 5 ppm.

Since a growing number of shipowners are specifying it and DNV now has a 5 ppm type approval process for bilge water separators, a MARPOL 5 ppm limit may not be far away.

IMO's resolution MEPC 107(49), effective from 1st January, 2005, for type approval of bilge water separators for 15 ppm, specifies that, in addition to the removal of oil from bilge water, bilge water separators must be tested with a stable emulsion (including fine particles and a surfactant chemical).

What differentiates DNV 5 ppm type approval testing from type approval testing for 15 ppm according to MEPC 107(49)?

Actually, very little. It is the same basic process with one very important difference. As stated by DNV, "…the 5 ppm bilge water separator must be designed to operate in each plane that forms an angle of 22.5 deg with the plane of its normal operating position." This simulates a ship listing 22.5 deg.

This testing process has gone some way towards simulating real life operating conditions at sea. Although Alfa Laval believes that it could have gone even further and simulated sea heave. The company saw this as confirmation of its assertion that centrifugal separation was the only effective technology for bilge water treatment on board ships.

"The gyroscopic effect of the liquid circulating at high speed inside the separator bowl offsets pitching and rolling," said Kujala, senior business manager, oily waste treatment systems, Alfa Laval Marine & Diesel Equipment. "The result is sustained high separation efficiency. If traditional static systems were to be tested with a realistic bilge water 'cocktail' under conditions simulating a rough sea state 24/7 for 20 days, they would immediately be eliminated."

Many suppliers claim to provide the DNV Clean Design performance standard, but only Alfa Laval with PureBilge currently holds the certificate.

PureBilge is the only system on the market that provides a cleaning performance in real life conditions of 0-5 ppm oil content in the water without chemicals, adsorption filter or membranes. This cleaning performance is unaffected by sea heave, oil shocks or high solids loading and no backflushing is required, the company said.

Similar to Alfa Laval's fuel oil and lube oil separators, it offers the full automation and remote control that will be required by the unmanned engine rooms of the future. No manual engagement is required.

The system is supplied with the fully integrated tamper-proof BlueBox Bilge Data Recorder, which locks in critical data and encapsulates the whole sampling line. In combination with PureBilge's certified performance, the result is assured compliance – not only with IMO MEPC 107(49), but with the wishes of all who demand a greener profile, the company claimed.

Alfa Laval's PureBilge system claims to go down to 5ppm.

Bunker concerns highlighted

What are the major concerns in the bunker industry?

Despite many years of trying to overcome problematic bunker issues worldwide, problems persist and with current changes in legislation, they still could have far reaching effects on bunker quality if not handled correctly.

Speaking at the recent Navigate/IPTA Chemical and Products Tanker conference, bunker testing and fuel management concern LR FOBAS' principal specialist Timothy Wilson said that another year has passed with increasing uncertainty as to the favoured directions the shipping industry will take in order to meet the upcoming environmental legislations.

The revised MARPOL Annex VI gives the road map of the step-wise reduction in the sulphur content of the fuel; for both inside and outside the special areas called ECA–SOx. Time will tell to what extent, the changing environmental legislation will impact, apart from other things, the quality of fuels that will be available to the marine industry. Keeping a close look at the quality trends and statistics will help provide a better understanding of the effects of these changes.

Based on the samples analysed by FOBAS last year, just under 4% of the bunkers exceeded the 95% confidence limit (>95R) of at least one or more of the parameters specified in table 1 or table 2 of ISO 8217:2010. This figure is based on the comparison of all the analysis results against ISO 8217:2010 regardless of the fact whether the fuel was purchased in accordance with the latest or earlier ISO 8217 revisions.

Off-spec fuels

When it comes to off specification fuels (>95R), the FOBAS experience is very clear that most of the off-spec fuels can still be managed safely on board the vessel minimising potential adverse effects on the machinery plant. The suitability of the fuel is dependent on a number of factors - the extent to which the specific fuel parameter is off-spec, the type and condition of machinery and above all the effectiveness of the fuel management systems on board to prepare the fuel for use.

Due to these multiple factors FOBAS continued to stress the importance of correct procedures and best practices being adopted and applied at all times from the bunker order, delivery station through to the exhaust stack.

Comparing the results against the latest ISO 8217:2010 specs, gave FOBAS the advantage to see a) how many bunkers did not meet the specs for ISO 8217:2010 in 2011 and b) which were the main parameters failing to meet the required specification and particularly, for looking ahead, determine which are the quality concerns, that may be hindering the supply of ISO 8217:2010 of compliant fuels.

The biggest contributor to the 4% off-spec cases is the viscosity for residual and distillates fuels at 33.5%, of which 0.5% related to distillate viscosity. A surge in the slight off-spec viscosity in the last two months of 2011 was seen, which may be as a result of new blending practices to meet the new MARPOL Annex VI 3.5% limit, effective from 1st Jan 2012. Higher viscosity fuels, however, may be countered by the vessel's fuel pre-heat capacity to achieve the required injection viscosity therefore the same may be critical for some vessels but for others, the higher viscosity might not be an issue.

Failure rate

Some 15% of these off-spec samples failed to meet the required maximum sulphur content limit of 1% m/m for use within ECA-SOx, as per revised MARPOL Annex VI regulation 14.4.2. The samples which could not meet the maximum sulphur content of 0.1% for use at berth in EU ports equates to about 7%.

In total, the off-spec sulphur content, which failed to meet the ECA-SOx and the EU at berth requirements for residual and gas oils respectively, counted to around 22 % of the 4%, which is high. However, no cases of off-spec fuels - in excess of 4.50 % m/m - were noted. With the increasing restriction of sulphur content of the fuel, such high percentage of off-spec samples emphasises the importance and necessity of strictly adhering to sampling procedures adopted.

Another concern for these off-spec fuels is the presence of water in the fuel. Water in most of the cases was not at excessive levels, however, FOBAS identified just under 18% of samples where the water content did exceed the required limits, of which just under 2% had high sodium content, suggesting the induction of saline water in the fuel.

About 7% of the off-spec cases were due to the presence of the abrasive catalyst fines of Aluminium and Silicon (Al+Si) exceeding the requirements of the ordered grade. Although the Al+Si contribution of the off-specs is less, the severity of their consequence if they are not reduced to the recommended levels for engine entry can be serious in terms of engine fuel system and cylinder component damage.

Abrasive reduction

FOBAS data showed the average purifier efficiency is around 60%, which suggests that at any levels above 40 mg/kg, the ships need to put special efforts in making sure that the abrasives are being reduced by the amount required to meet the recommended maximum at the engine inlet of below 10-15 mg/kg.

Just above 1% of the 4% off-spec fuels were as a result of the fuel failing the Total Sediment test parameter. It must be understood that potential problems associated with sediments are based on the nature of sediments present in the fuel and the stability of the fuel, therefore it is generally difficult to predict the extent and frequency of problems that might occur, if at all, during the use of such fuels.

This year we have seen a slight rise of just above 1% of the 4% off specification cases caused by the presence of used lubricating oils (ULO) which may be attributed to the stricter criteria to determine the presence of ULO in the 2010 standard. This will need to be monitored for a longer period in order to determine whether this is the case.

Managing the unexpected by recognising that marine fuel quality will remain a challenge over this next one to two decades as current statistics show some variants in trends. The bottom line is that it does not change the variants in fuel quality that can be expected.

Finally, invest in an effective bunker management programme and integrate it into the Ship Energy Efficiency Management Plan (SEEMP), Wilson advised. TO

Prevention is better than cure

P&I clubs are often left to pick up the pieces in terms of claims when a bunker stem goes wrong for whatever reason.

Highlighting the problems that still exist over bunkers, North P&I Club's risk management executive Alvin Forster gave a P&I clubs take on the subject at the Navigate/IPTA Tanker conference.

The main problems seem to have been around for years, such as a quantity shortage at the point of loading, incorrect specification fuel ordered by the charterers, fuel remaining on board (ROB) incorrectly calculated at the time of onhire/offhire, fuel quality and the physical loading of the bunkers.

What is happening? Some vessels' crew are agreeing to an amount of bunkered fuel less than what was loaded and signing the bunker delivery note (BDN) accordingly. There are also reports of a 'capuccino' effect in bunkers loaded at Singapore.

How is this happening? These incidents are still occurring due to bunker suppliers' alleged tricks of the trade, including allegations of internally redirecting fuel, false sounding tables, split tanks and aerating the fuel to increase its volume.

Prevention - a receiving ship's crew should have company issued procedures in place (ISM) and these should be followed each time, for example through bunker checklists.

Codes of practice should be followed and the crew should exercise caution when signing a BDN. In addition, letters of protest should be used in commercial and MARPOL Annex VI related disputes.

A company's proper procedures should include the taking of full sets of sounding/ullages and temperatures of all fuel tanks (whether nominated or not) on both receiving vessel and bunker barge. This applies to both before and after the bunker operation.

On board quantities should be calculated accurately using volume correction factors, correct densities and allowing for trim, bunker barges should be checked for suspicious, or improper piping and air blowing arrangements.

And if time allows, give the loaded fuel tanks time to settle before taking final soundings.

Incorrect specification - what is happening? Depending on the charterparty, either the owner or the charterer will be responsible for ordering and supplying bunkers. There are instances where the incorrect grade, sulphur content, or specification of fuel has been ordered

How is this happening? Fuel bunkers may be being ordered and arranged by non-technical personnel and/or the charterparty lacks sufficient information as to what bunkers should be supplied, such as only stating the viscosity.

Include a well drafted clause that provides that bunkers supplied must meet a particular specification and be suitable and fit for the ship in question.

For example;

- BIMCO fuel quality and liability clauses.
- BIMCO sulphur content clause.
- Specify ISO 8217:2010.
- Ship's crew to thoroughly check nomination and spec before bunkering commences.

Incorrect ROB declaration - what is happening? Disputes relating to the amount of fuel ROB arise between the owner and charterer when finalising on-hire charges upon completion of a charter period. Other disputes can include the determining of ownership of on board bunkers.

How is this happening? By the incorrect calculation and/or declaration of ROB bunkers at the start and/or end of a charter period, or the incorrect calculation of loaded bunkers, Wilson explained.

To prevent this, an independent bunker survey should be taken when going on-hire and off-hire and also consider independent bunker surveys for bunkering operations.

However, during surveys the ship's Chief Engineer should not absolve all responsibility to the attending surveyor and should carry out his or her own calculations, while the ship's crew should maintain a clear daily record of tank contents and fuel consumption.

Fuel quality

What is happening? The fuel can be received out of specification, or contaminated, leading to potential damage to the main and auxiliary engines, resulting in periods of off-hire and/or deviation while repairs are carried out, resulting in a hull & machinery claim.

This could also affect a vessel's speed and performance, leading to breach in the terms of a charterparty.

How is this happening? This can be caused by the incorrect, or contaminated bunkers received from the suppliers, coupled with the vessel's crew not identifying potential fuel problems in a timely manner, or poor on board treatment of fuel before use.

To prevent this occurring use on board fuel test kits to carry out basic tests at start and during bunkering, send fuel samples to an approved laboratory and refrain from using until the test results are known.

There should be a charterparty clause inserted to allow laboratory testing but beware of supplier evidence clauses. The vessel's crew should follow the correct on board treatments, such as effective set up and operation of purifiers, clarifiers and filtration, while clear and concise on board records should be kept in event of a performance claim.

"The success of any bunker quality or quantity dispute will depend upon the quality of evidence collected in support of the claim," Forster said, before adding; "be proactive with evidence." TO

> "The success of any bunker quality or quantity dispute will depend upon the quality of evidence collected in support of the claim..."
>
> **- Alvin Forster, Risk Management Executive, North P&I Club**

IBIA to engage in LNG issues

With the surge of interest in LNG as fuel, the International Bunker Industry Association's (IBIA) board took a formal decision last year to "become more closely engaged in LNG matters."

This move was announced at IBIA's Annual Convention, held in Barcelona last November, by its acting chief executive Trevor Harrison who told delegates that the association would become more involved in the ongoing discussions on LNG as a fuel at the IMO.

The potential of LNG as a fuel for commercial vessels has received considerable attention of late. Several speakers at the convention referred to the issue while addressing industry concerns about the 2015 implementation of the 0.1% sulphur content cap in bunkers used within Emission Control Areas (ECAs).

In addition, one session was entirely devoted to the prospects for widespread use of LNG.

While there were some cautionary voices, the focus on LNG reflected IBIA's considered view that now is the time for the bunker industry to become involved in the development of gas powered ships.

IBIA board member Nigel Draffin is to work closely with the Society of International Gas Tanker and Terminal Operators (SIGTTO) to provide input into the development of IMO's Code for Gas as Ship Fuel (IGF-Code).

The annual convention did, however, cover many other topics of concern to both bunker suppliers and buyers. A record breaking 170 delegates registered for this event, which was spread over three days.

IBIA chairman Bob Lintott remarked: "This has been a highly successful convention. I am especially pleased that there has been lively debate from the first to the last sessions."

While the debates were good natured, several of the issues covered were controversial, right from the keynote speeches which put forward opposing views on the impact of the 2015 ECA regime.

ECA views

Manuel Carlier, director general of the Spanish Shipowners' Association (ANAVE) and a director of the European Community Shipowners' Association (ECSA), expressed owners' concerns. Arnaud Leroy, senior project officer, European Maritime Safety Agency (EMSA), who was also working with the European Commission (EC) on the Marine Fuels, countered with the case for continuing with its proposals, which in some respects

Nigel Draffin addresses the conference.

exceed IMO ECA requirements.

Carlier said that it was likely that bunker costs for ship operators would increase by between 70% and 100% while operating in ECAs and that there would be a total increase in operating costs by between 25% to 40%. He asked: "Can this cost be passed to customers in the freight market?"

Leroy emphasised the need to enforce regulations and also pointed to claimed environmental and health benefits of imposing stricter sulphur limits. He also noted uncertainties surrounding the impact of the 0.1% sulphur cap. He was particularly doubtful about predictions of a modal shift away from shipping.

He said: "Overall, the various studies offer differing conclusions as to whether a modal shift is imminent, which may in part, but not entirely, be explained by the difference in routes selected for their analyses. While the Swedish, German and ECSA studies in their high price scenario mainly foresee a substantial shift from short sea shipping to land-based modes, the COMPASS study acknowledges that there will be a cost increase and a change in transport volumes, but concludes that 'it is not expected that changes in entry/exit points, or shifts in modal balance (SSS to land) will take place'."

This sanguine view was certainly not shared by Interferry's executive director of EU and IMO Affairs, Johan Roos, who in a later presentation strongly challenged the suggestion that there might not be a modal shift to land-based transport once the 0.1% cap was in force.

He said that ferry operators were "baffled" by the EC's stance. He asked: "Who cannot see that a 30% ticket price increase will not cause a modal back-shift?"

This year's IBIA Annual Convention will held in Dubai, with a provisional start date of 7th November.

Later, following an election, IBIA appointed Robin Meech (Marine and Energy Consulting) and Ciric Cheung (Fratelli Cosulich Bunkers HK) to its board from 1st April 2012.

They replaced previous IBIA chairman Mike Ball (Gearbulk UK) and Mustafa Muhtaroglu (Energy Petrol) who have served seven and nine year terms of office,

Draffin took over as IBIA chariman 1st April

respectively. Trevor Harrison was re-elected to serve another term as acting CEO. The announcement was made at the IBIA Annual Dinner in London on 20th February this year by vice chairman Nigel Draffin who became chairman on 1st April. TO

OW Bunker continues to expand

OW Bunker has created a regional management structure for its trading division within Northern Europe.

The model, which has proven successful in OW Bunker's Asian operation, is designed to ensure that as the company continues to experience exponential growth and that the trading division is fully optimised to continue to deliver bunkering solutions for customers in a dynamic and fast-paced way.

Commenting on the move, Götz Lehsten, executive vice president, OW Bunker, said: "OW Bunker has prided itself on its ability to make fast decisions and provide customers with a total bunkering solution that meets the needs of their businesses. It means responding quickly on quotes, and putting in place an end-to-end service that gets fuel oil to the customer on time, when and where they need it, and at the right price.

"Northern Europe is a key region for OW Bunker. And as we continue to grow at such a rapid pace, it is vital that we invest in more resource to ensure that we maintain the levels of dynamism that we are known for and consistently delivering the high levels of service for our customers that our business is founded upon.

"The new regional structure within Northern Europe will ensure that this happens by creating an additional layer of experienced management within each Northern European region, who have the experience and responsibility to ensure fast decision making at a local level," he concluded.

The regions that come under the Northern European regional management structure include Aalborg, Copenhagen, Hamburg, the UK and the Russian desk.

Kristian Nielsen, the current manager within the worldwide trading division will become regional manager for Northern Europe, reporting to Lehsten. Jesper Schmidt will be manager for Copenhagen, Rune Pejtersen for Aalborg, Boris Gronenberg for Hamburg, Andrew Ananiev for the Russian desk and Robert Preston for the UK and India. All the managers will report to Nielsen.

Fujairah expansion

In addition, OW Bunker has strengthened its position in Fujairah and the Middle East with the appointment of Sahar Zarghamian as a bunker trader.

Zarghamian rejoins OW Bunker Middle East, where she started her career as a bunker trader before moving on to work as a trader for a derivatives company in the region.

Jesper Jervild, OW Bunker's regional manager for the Middle East and South Africa, said: "Strategically, Fujairah is a very important area of operation, as one of the world's top three bunkering hubs and a rapidly expanding port. Having highly trained staff with a forensic knowledge of local operations, and important local business relationships is critically important to our continued success.

"With a global presence, influential local business partnerships and a strong financial backing, our team is able to provide customers with competitive prices and tailored bunkering and risk management solutions that meet the precise needs of their businesses and operations. We have experienced significant growth in the Middle East in the past year and I am confident that Sahar Zarghamian will play an important role in contributing to our continued development."

Last year, OW Bunker Middle East moved to larger premises in Dubai due to its positive rate of growth.

■ Another bunker concern to open up in Dubai is Cockett Marine Oil, a member of the Grindrod Group.

The South African owned supplier and trader opened of a new office in the Emirate on 26th March 2012.

It is being managed by Chris Fletcher, who previously working as a senior bunker trader in the UK. He is assisted by fellow bunker trader, Arron Rayner. TO

Checking bearings for degradation and lubrication

Kittiwake Holroyd has launched MHC Bearing Checker, a small handheld device designed to provide an instant indication of machinery condition.

The acoustic emission-based instrument is a cost-effective solution to monitoring an unlimited number of machines on a periodic basis, the company claimed.

Based on the detection of high frequency activity that is naturally generated by deterioration in rotating machinery, the MHC Bearing Checker is simple to use as its Distress® parameter removes the need for machine specific interpretations.

If Distress® is greater than 10, the user knows there is a problem and can instigate further checks. A dB Level is also provided, giving an indication of the overall noise of the bearing - it increases with speed of rotation, but also with degradation of the bearing, or inadequate lubrication.

As the mechanical condition of machinery deteriorates, energy loss processes such as impacts, friction and crushing generate sound wave activity that spans a broad range of frequencies.

By detecting only the high frequency part of this signal with special acoustic emission (AE) sensors, it is possible to detect miniscule amounts of activity, for example a slight rub, a brief impact or the crushing of a single particle in the lubricant.

Each measurement takes in the region of 10 seconds, requires no set-up, previous history or knowledge of machine design details, such as bearing type, number of balls or race diameters for example.

The same Distress® interpretation is applied across all machine types so by 'deskilling' technology, all maintenance professionals are empowered to take a proactive approach to predictive maintenance, making informed decisions quickly and with confidence.

Martin Lucas, managing director, Kittiwake group explained: "The MHC Bearing Checker provides entry level condition monitoring at a price that makes it a feasible addition to every engineer's back pocket. This is a simple, cost effective means of spotting problems in bearings, gearboxes, motors and pumps at an early stage, ultimately saving the company money by avoiding downtime.

"If maintenance personnel are empowered to monitor condition themselves, identify where action is needed and then check that the action taken has solved the problem, then AE has significant advantages of cost, speed, flexibility and ease of field application in comparison to other condition monitoring techniques. The Checker's real value stems from collating historical data and trending," he concluded. TO

Answers sought on 'one fits all' cylinder oils boast

Leading Chinese shipowners are seeking further guidance on claims from certain lubricants suppliers that a mid-range Base Number cylinder oil product can meet critical challenges set by tightening environmental legislation on the sulphur content in fuel oils.

As regulations on emissions tighten over the sulphur permissible in marine fuels, certain lubricants suppliers have responded by launching single solution cylinder oils that they claim will perform consistently well with a wide range of marine fuels.

While seemingly attractive, shipowners operating in the key Chinese growth market are already questioning whether the 'one fits all' cylinder proposition will stand up to the full range of operating conditions, particularly in the context of the slower steaming that has become commonplace across the industry as owners pursue cost savings.

The reservations were voiced by leading lubricants supplier Castrol Marine, which adopted what it termed a 'distinct position' in recommending that a range of cylinder oils is required in order to enable a ship to operate most efficiently, taking into account its fuel sulphur content, engine power and cylinder oil feed rate. Customers need a cylinder lubricant that can allow its ships to operate safely, without compromising engine performance, or risking engine damage and achieve the large fuel cost savings and emissions reductions enabled by slow steaming.

The development of slow steaming practices is a new variable that has made the equation to calculate which cylinder lubricants offer the most efficient cylinder lubrication solution more complex, according to Castrol.

From January 2012, the maximum sulphur content permitted by the IMO dropped from 4.5% to 3.5%. The allowed sulphur content of fuel has already been cut in predefined Emission Control Areas (ECAs) - the Baltic Sea, the North Sea and the English Channel, with North American coastal waters due to follow - from 1.5% to 1% in 2010 and is due to be cut further to 0.1% from 1st January 2015. The use of heavy fuel oil will still be permitted inside ECAs, but only if ships are fitted with sulphur scrubbers.

The potential attraction of a 'one fits all' lubricant that works with all bunker fuel types is therefore easy to understand. However, Castrol said that if the appropriate cylinder oil lubricant is not selected under prevailing slow steaming conditions, engines operating on sub-optimal loads may face corrosion on piston rings and cylinder liners. Using an appropriate cylinder oil lubricant is therefore very important to ensure the vessel gets the optimum balance between sulphur content, Base Number (BN) and feed rate, which will enable to vessel to operate most efficiently and avoid the risk of engine damage.

Recent engine inspections suggest that the desire for simplicity, which is driving consideration of the 'one mid-range BN fits all' lube, may compromise reliability and lead to engine damage, particularly under slow steaming conditions, the supplier said. It cites a recent service letter from a leading engine maker advising that, when ships are slow steaming, operators should increase lubricant feed rates due to incidences of corrosive wear.

Castrol argued that increasing the BN in cylinder oil is a better alternative to having to increase federates for mid-range BN cylinder oils when using higher sulphur fuels. Only by having a comprehensive range of cylinder oils to choose from can owners hope to maximise machinery performance over time across the board, Castrol said.

Chinese disquiet

One of China's largest tanker owners, China Shipping Development Co, indicated its intent to continue requiring a full range of cylinder lubricants from its suppliers. The company, which owns 79 tankers ranging between 40,000 dwt and 110,000 dwt in size, as part of a larger CSDC operation, estimated that 20% of the lubricants it uses are supplied by Castrol Marine.

Liu Xun Wei of China Shipping Development Co's Tanker Company marketing department, shipping division, said that the owner considered a range of criteria

Castrol's Paul Harrold.

when selecting lubricants. He added that the company also set much store by developing long-term relationships with its lubricant suppliers, with Castrol having established itself as a supply partner supplier over a period of two decades.

"When we choose the lubricants we use, we consider three main points," he said. "Of course, we consider the competitiveness of pricing, but we also need to be convinced that technical support and port coverage are available. The third, no less critical, consideration is that we can rely on a product that is fit and right for purpose. We take guidance from our trusted lubricants suppliers on key performance indicators."

Tommy Li, of SWS Ship Management Maritime Consultant Co, was more explicit in his concerns about how effective a 'one fits all' approach could be in satisfying the needs of ship operators under the new regulatory regime. The company, which owns 10 handysize bulk carriers, has been specifying Castrol oils for over 15 years and has built up its usage of the supplier's products to meet 100% of its greases, hydraulic oils and cylinder oils needs.

"Clearly, as sulphur content levels are restricted, the concept of a single solution cylinder oil is quite appealing, but we are sceptical," said Li. "It promises an effective and convenient resolution to a difficult problem. But when it comes to a knowledge-based answer, we are of the view that different sulphur content fuels will demand cylinder oils featuring different BNs. We feel more comfortable with the different types of products that Castrol supplies."

Paul Harrold, Castrol's technology manager marine & energy lubricants, explained: "Under certain high load conditions, a mismatch between low fuel sulphur levels and cylinder oil BN may lead to excessive deposits on piston crowns, top lands and rings. These are disruptive to effective lubrication of the liner and may ultimately lead to damage of the cylinder liners, bore polishing and scuffing. This can, however, be avoided by using an appropriate cylinder oil designed to counter these problems.

"Castrol's position is that the selection of mid-range (50-60BN) cylinder oils as a 'single' solution for all fuel types will not achieve optimal engine operations under all load conditions. Opting for a mid-range lubricant to cover all fuel types, could lead to increased corrosive and/or mechanical wear with consequent unscheduled and costly maintenance costs.

"If a mismatch occurred between low sulphur content fuels (1.0%) and BN, then OEM guidelines suggest this would not be apparent in performance terms until after 10-14 days. However, if the mismatch were to occur in the case of fuels featuring 0.1% sulphur content, then operational problems would emerge more quickly," he concluded.

CSDC's Liu was in no doubt of how critical it was for shipowners to be kept fully aware of the consequences for their fleets in selecting cylinder oils. "We develop partnerships with suppliers like Castrol who believe in the future. When it comes to our newbuilds, we can specify the type of new equipment that will operate efficiently in line with new legislation. When it comes to our existing vessels we are particularly dependent on lubricants suppliers to help us to ensure that our equipment is operating to its maximum potential in the current regulatory environment." TO

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Crew competency not a tick box exercise

Videotel has launched a new continuing competency manager tool (CCM).

In a hard hitting message, Nigel Cleave, Videotel Marine International CEO said "Continuing competency in the maritime industry should be at the very top of every ship operator's agenda. The education and training of seafarers is key and the more competent and well-trained the crew, the less likelihood there is of costly accidents or incidents."

CEO Nigel Cleave makes a presentation to USCG.

CCM is designed to identify and develop the skills essential to safe and efficient shipboard operations. It provides a one-stop solution for training, assessment and record keeping that will allow companies to develop crew competence at every level, from junior ratings to Master, or Chief Engineer.

Seafarer competence impacts on every shipping company and the implementation of a competency management system is crucial to both running a safe ship and maintaining a competitive advantage.

"Our training is both top-quality and highly authoritative," said Cleave. "All our material is developed in conjunction with experts in the field to make the learning process as effective as possible. We include interesting and informative video, dynamic animated content and a substantial range of randomised questions to really challenge seafarers to learn and remember.

"Our training is not easy – we don't want it to be just a 'tick-box' exercise; we have designed it to increase skill, ability and onward development. That is certainly the reason why our training is endorsed by many professional maritime organisations," he said.

Forming what is essentially a circle of continuing competency, the CCM system provides a CPD life cycle, which moves and progresses with individuals and forms detailed crew training schedules and reports as companies plan, train, assess, record and report all their training activity.

Developed and perfected over five years, it uses cloud-based technology to provide continuous training and assessment directly through Videotel's web Fleet Training Administrator (webFTA) portal. This empowers companies to take control of their own competency solutions by giving them access to a range of blended training tools which are instantly available online, on board and onshore.

Cleave concluded; "The challenge to the maritime industry is clear. The Manila Amendments coming into force are intended to make sure that the highest standards of seafarer competence are maintained globally.

"The old days of prescriptive learning are gone, replaced by competency based programs, using continuous assessment against benchmarked standards. Videotel's wide range of top quality training material delivered through Videotel on Demand (VOD) and our newly launched secure web-based VOD Online, delivers against that objective, ensuring safe, efficient and cost-effective operation on ships the world over," he claimed.

Videotel's crew competency model.

USCG signs up

One of the latest concerns to select VOD is the US Coast Guard (USCG).

Videotel announced the deal at the recent CMA Shipping 2012 event.

USCG based in Yorktown, Virginia, trains Port State Control Officers (PSCO) and has taken delivery of three VOD units.

The units are pre-loaded with marine safety and operational training videos, computer-based training materials (CBT) and instructional courses.

Comprehensive and interactive, the training material will be used by the USCG to augment existing PSCO training.

"We are delighted to be supporting the USCG's efforts," said Cleave. "Towards the end of last year we worked with the US Department of Homeland Security's Customs and Border Protection agency to develop a training programme, which offered a new and updated approach to US Port State Control. We welcome the opportunity to once again contribute to the training needs within this complex and important environment." TO

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German ECDIS trainers expand networks

In the rush to get approved ECDIS training certificates, a couple of German training concerns have signed up with training centres and equipment manufacturers.

ETC, the MSG MarineServe operated 'ECDIS Training Consortium', has reached agreement with the Sir Derek Bibby Maritime Training Center in Mumbai to act as its local partner.

MSG will provide its ECDIS training courseware, ECDIS training systems and approved train-the-trainer courses. In addition, MSG will provide 24/7 certificate authentication and trainee database services for reference by its partners, customers, Port State Control and other concerned authorities.

The Sir Derek Bibby Maritime Training Center will deliver the training, which is configured on a single, comprehensive, training structure and methodology in order to guarantee the quality and consistency of the training.

This training centre is part of Bibby Ship Management Group and was opened in April 2006 in Mumbai to provide a cost effective solution to the global offshore and marine industry's increasing need for competently trained officers.

As a member of the International Maritime Contractors Association (IMCA), the Mumbai training centre is dedicated to delivering and developing the industry's best practice standards with international infrastructure and faculties experienced in their respective fields.

Commenting on the agreement, Prakash Agarwal, managing director of Bibby Ship Management, India said: "Building on our 200 years of heritage and maritime legacy, we are proud to provide a high class shipmanagement, crew management and training solutions to the global maritime and offshore industries. We have been constantly working to extend the best training facilities to the international seafaring community.

"We are glad ETC has chosen us, Sir Derek Bibby Maritime Training Centre, as their training partner in India for their worldwide consortium," he said.

MSG MarineServe, as the driving force behind ETC, is an established maritime training company providing training solutions covering ISPS Code requirements, German and UK Flag State shipping law, loading stability, English competence, radar and ECDIS training.

MSG has been appointed to act as an approved training agent and preferred equipment-specific training provider for Danelec Marine, ChartWorld, 7Cs, Transas Marine, JRC, Raytheon Anschuetz, Sperry Marine and Imtech.

ETC is a consortium of leading training institutes again located in the main shipping centres offering ECDIS courses based on the MSG-courseware, standardised instructor training and the MSG certification and database facility.

One of the latest ECDIS manufacturers to join MSG and ETC was Danelec Marine, which signed up to be able to provide ECDIS training services locally and worldwide.

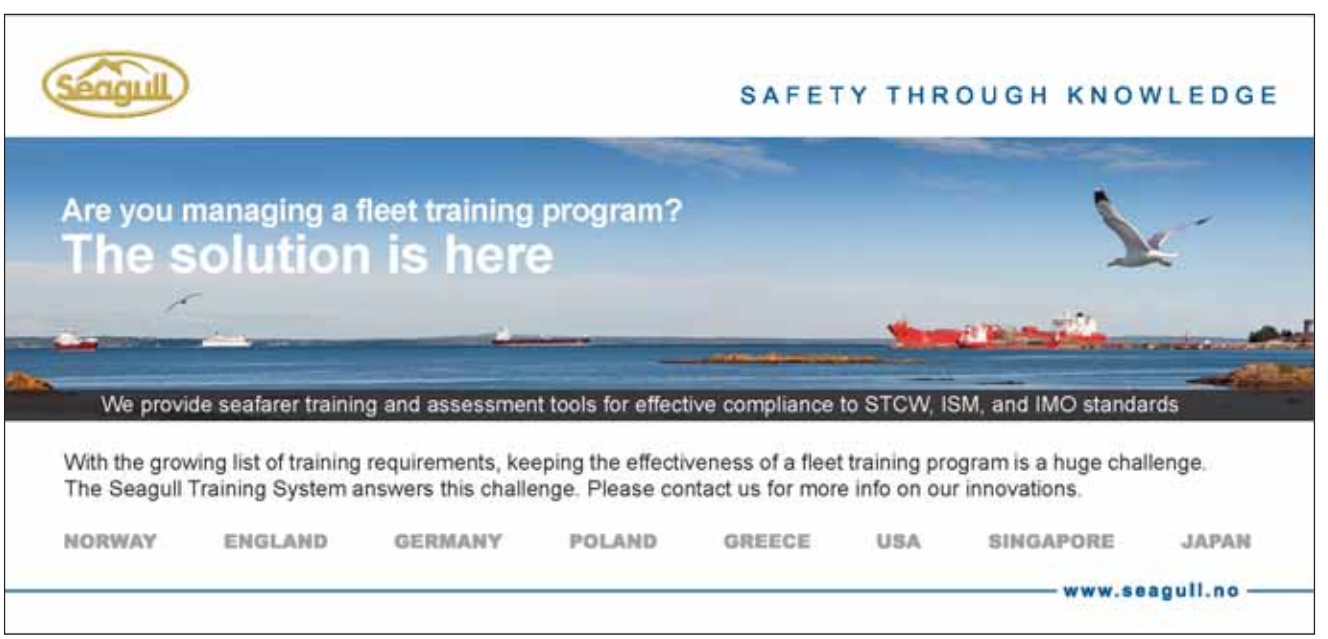
The agreement with MSG includes ETC to ensure that Danelec is able to offer a complete equipment training service in support of its global customer base.

Danelec's CEO Hans Ottosen.

The training provided by MSG and its ETC partners is configured on a single, comprehensive, training structure and methodology in order to guarantee the quality and consistency of the training while allowing Danelec to monitor content, quality standards and record keeping through a single point of contact.

Commenting on the new collaboration, Hans Ottosen, Danelec CEO, said: "We are very pleased with the partnership with MSG and ETC. We see a growing demand among our customers globally for type-specific training for our ECDIS solutions.

"The partnership with MSG and ETC



ensures that our ECDIS offering is fully supported by high quality and approved type-specific training. With MSG's training facilities in nine countries around the world offering ECDIS training combined with the Danelec sales and service network in more than 50 countries to support our user-friendly ECDIS, we feel very confident in meeting the total need for ECDIS for our customers globally," he said.

Web-based training

Meanwhile, Safebridge, a specialist in web-based type-specific ECDIS training, has teamed up with Japan Radio Co (JRC) to develop type-specific ECDIS training for the JRC ECDIS. J

JRC joins a number of other ECDIS manufacturers in believing that online training is the key to meeting the huge numerical challenge set by STCW 2010, as Safebridge already holds agreements with SAM Electronics, Northrop Grumman Sperry Marine, Imtech Marine, 7Cs, ChartWorld, Raytheon Anschütz and Transas Marine.

With the implementation of ECDIS as the primary means of navigation, and the now mandatory training requirements, Safebridge and JRC will provide seafarers worldwide with an effective and easy solution to train online and prepare themselves for their next assignment.

Safebridge will develop the courseware for use in its learning platform, which integrates the central, server-based, learning content with JRC's own ECDIS software running in real time for delivery via the Internet.

This process results in a standardised product that guarantees the quality and consistency of the training while providing JRC with the transparency required on the content, which will, of course, be approved in accordance with STCW and Flag State requirements.

Updates are simplified, as these are implemented only on the central server.

Safebridge will also provide course certification on behalf of JRC and trainee database services for reference by Port State Control and other authorities involved.

The courseware will be released in the late summer of 2012.

Bas Eerden, product manager at JRC Europe, added, "It is expected that tens of thousands of vessels will be required to install ECDIS over the next six years and we are more than pleased with the partnership with Safebridge. Effectively, with nowadays the importance of the total cost of ownership, JRC is content with this new and innovative way of offering cost-effective JRC ECDIS type specific training solutions to shipowners and seafarers." TO

Kongsberg expands in China- wins approval for cargo handling simulators

Kongsberg Maritime's China division, Kongsberg Maritime China, has opened its new premises in Shanghai.

Staff and equipment were moved to the new six-story, 5,060 sq m building during the first quarter of this year while the official opening ceremony took place on 15th March.

The facility features a state-of-the-art new training centre, which incorporates a training room, simulator room and instructor room. This new facility is accredited as a DP operator training centre in accordance with Nautical Institute standards.

The existing premises, two kilometres away from the new building, will be maintained for Kongsberg Maritime product testing and factory assembly.

Cargo handling

Kongsberg has also won an approval for cargo handling simulation. It has been approved to the latest DNV standards.

The Class A approval, received early March 2012, covers the ship models available within the system and joins recent DNV certification for Konsgberg's engine room and navigation simulators.

In addition to approval for its VLCC load calculator system, Kongsberg has received DNV certification for six ship models available in the cargo handling simulator. These are: LPG carrier, LNG-M (membrane), LNG-S (spherical), chemical carrier, product carrier and VLCC.

"It is important to ensure all of our simulators have approvals to the highest standards. It supports us in meeting customer and industry demand for the highest quality training tools while demonstrating that our systems are designed to operate under the most up to date legislation," said Terje

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Heierstad, product & technology manager, Kongsberg Maritime.

The Kongsberg Neptune cargo handling simulator also meets the requirements of STCW section A-II/1, A-II/2, A-II/3, A-III/1, A-III/2 and A-V/1 that states the requirements for planning and ensuring safe loading, care during the voyage and unloading of cargoes, as well as maintaining seaworthiness of the ship regarding trim, stability and stress.

All models within the cargo handling simulator are based on real ships. Several different simulator configurations are available where the cargo control room may be represented by any combination of interactive mimic panels, operational panels, consoles and/or desk-top stations.

"Because Neptune is based on the same core software, it is extremely flexible. It enables our customers to specify the exact configuration they need and can be easily upgraded, or expanded according to changing needs," explained Steffen Jensen, product advisor, cargo handling simulators, Kongsberg Maritime.

TO

Admiralty launches global ECDIS training sponsorship initiative

Admiralty has taken a different approach to ECDIS training by offering sponsorship to 100 bridge officers to undertake comprehensive ECDIS training in maritime colleges worldwide.

This promotion offers bridge officers from anywhere in the world the chance to win a place on a generic ECDIS training course based on the IMO Model Course 1.27 (operational use of ECDIS).

The courses, which will be available from participating training institutions, will provide bridge officers the opportunity to develop a comprehensive understanding of ECDIS-based navigation, Admiralty said.

It is open to qualified bridge officers of international trading ships, who can register online for their chance to win ECDIS training.

Admiralty said that it is launching the promotion to highlight the need for comprehensive ECDIS training. UK Hydrographic Office CEO, Ian Moncrieff CBE, explained, "We believe the maritime community needs to focus on mariner training and especially providing practical guidance on using ENCs to make the transition to digital navigation successful.

"As an industry, we need to equip thousands of mariners with the right skills to be confident and competent in the use of ECDIS. We have a duty to support the mariner and comprehensive training is the only way to overcome that challenge," he said.

Admiralty said that the requirement for ECDIS training is acute. Recent research by SIRC demonstrated that bridge officers were least confident about the use of ECDIS, compared against four other key bridge technology systems.

The research also showed that more than half of respondents had used ECDIS before completing any training ashore. In addition, the number of mariners who require training is significant; estimates range between 140,000 and 200,000 mariners to be trained in the next six years.

Moncrieff continued, "The first deadline for the mandatory carriage of ECDIS comes into force in July 2012. We need to support bridge watchkeepers to ensure they are prepared for a new era of navigation. Clear and properly accredited training will ensure they have the skills to make digital navigation a success; improving both the safety of life at sea and bridge efficiency. We hope our promotion will contribute by starting that process for 100 mariners."

The training promotion is part of a series of initiatives from Admiralty this year to help deliver 'Digital Navigation Insights', as the shipping industry is making preparations for the mandatory carriage of ECDIS.

The initiatives are aimed to help the maritime community confidently, safely and successfully, integrate digital navigation into both ship and shoreside operations as the mandate comes into force on a rolling timetable that begins in July 2012.

These initiatives also include the development of a training module to promote ENC knowledge, which will be offered to maritime colleges around the world and a series of free digital integration workshops.

The workshops were launched at Marintec in November 2011 and have already featured at Asia/Pacific Maritime in 2012 and at last month's CMA's Shipping 2012.

TO

IPTA addresses several chemical carrier issues

At the recent Navigate/IPTA conference, Janet Strode, IPTA general manager, reported that the concerns expressed by the industry in relation to the proposed review of the IBC Code were being addressed.

It had been recognised that if all the products in the IBC Code were evaluated according to the current criteria a large number of products would be affected, with a number of high volume products moving to Type 1, some also to require carriage in independent tanks.

This would lead to serious shortages of freight. Accordingly, the IMO has looked at the criteria which trigger these carriage requirements in order to examine whether a higher ship type and/or tank type is appropriate to the hazard in question.

It has been established that the prime triggers are acute inhalation and dermal toxicity, and the recent session of BLG accordingly agreed that saturated vapour concentration and behaviour in water should be taken into account – if the product has a low vapour pressure and is therefore unlikely to be inhaled and evaporates, or sinks when in contact with water, then it should be possible to apply less stringent requirements.

She reported that a small group of pilot materials is going to be used to test this approach, which may then lead to amendments of the criteria for assigning carriage requirements in chapter 21 of the IBC Code and subsequent amendments to chapters 17 and 18 of the Code.

The initial indications are that this approach would lead to a number of changes in carriage requirements, including some products moving from type 3 to type 2, but would eliminate the more drastic changes that had previously been indicated without compromising safety.

Turning to the agreement in principle of the application of inert gas systems (IGS) to new tankers of below 20,000 dwt and new chemical tankers, Strode explained that at IMO's FP 55 (July 2011), it was agreed that the lower size limit for this should be 8,000 dwt and where appropriate vessels of less than 20,000 dwt would be allowed to use shore supplied inert gas, rather than install an IGS.

In order to address the different operational requirements on chemical tankers, these vessels would be allowed to apply inert gas on completion of loading, but before the commencement of discharge, with application to continue until completion of the tank cleaning phase.

Amendments

Text is being developed for amendments to SOLAS and the IBC Code to reflect these new requirements and there will be a need for consequential amendments to various instruments, such as Fire Safety Systems Code.

Timeline

ESPH 18	BLG 17	ESPH 19	BLG 18	ESPH 20	BLG 19	MSC/ MEPC	MSC / MEPC
Oct 2012	Feb 2013	Oct 2013	Feb 2014	Oct 2014	Feb 2015	2015	2015/ 2016
Review of Chapter 21 of IBC Code							
				Review of chapters 17 and 18 of the IBC Code		Approval of amendments	Adoption of amendments
						Entry into force of amendments: 2018	

It will also be necessary to give consideration to cargoes that require oxygen-dependent inhibitors and the implications of the inert gas requirements on such cargoes. With all this still to be done, Strode estimated that that the earliest date for entry into force of any new requirements would be January 2016, but emphasised that this was purely an estimate.

Strode also reported that after a number of years discussing the implications of claims made by the UK and a number of other EU states that tankers were often operating in conditions of reduced or zero residual stability, the IMO has developed guidelines for the verification of damage stability at both design stage and on board.

At the IMO's SLF 54 (January 2012), it was agreed that there should be a mandatory requirement for on board stability instruments covering both intact and damage stability requirements for new and existing vessels, with associated performance standards. Text needs to be developed for amendments to MARPOL Annex I and the IBC Code to reflect this, meaning that the earliest date Strode estimated for entry into force is January 2015.

With regard to the carriage of biofuel blends, Strode reminded the conference that MEPC.1/Circ.7611 – Guidelines for the Carriage of Blends of Biofuels and Petroleum - is now effective and all such blends must be carried according the provisions of the guidelines.

Where the blend contains 75% or more petroleum the cargo should be carried according to the provisions of MARPOL Annex I. The Oil Discharge Monitoring Equipment (ODME) on the vessel must be approved for the carriage of the blend in question, although there is a waiver for this requirement until January 2016 providing all cargo residues are pumped ashore.

Where there is more than 1% but less than 75% of petroleum in the blend the product should be carried as an Annex II cargo according to a set of generic requirements found within the guidelines. These generic carriage requirements are also in the latest edition of the MEPC.2/Circular and will be included in chapter 17 of the next edition of the IBC Code. In cases where there are 1% or less petroleum oil, the product is to be treated as the Annex II product in the blend.
Strode reported that the prohibition of the blending of cargoes during the sea voyage, as set out in MSC-MEPC.2/Circ.8, is to be reflected in a new SOLAS regulation. The draft regulation makes it clear that physical blending refers to the 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 cargo with a new product designation.

Cargo transfers

However, it does not preclude the Master from undertaking cargo transfers for the safety of the ship, or protection of the marine environment and does not apply to the blending of products for use in the search and exploitation of seabed mineral resources on board ships used to facilitate such operations.

Strode advised that a clarification had been sought and confirmed that the prohibition does not apply where cargo is recirculated within its cargo tank, or through an external heat exchanger during the voyage for the purpose of maintaining cargo homogeneity or temperature control, including when two or more different products have previously been loaded into the same cargo tank within port limits. TO

IPTA turns 25

The International Parcel Tankers Association (IPTA) held a reception at the Naval Club in Mayfair on Wednesday 7th March to celebrate the 25th anniversary of its founding. As well as IPTA members, the event was attended by a wide variety of industry representatives and IMO delegates.

IPTA chairman, Hugo Finlay, managing director of Essberger Tankers, commented in his address on the importance of recognising the substantial investment that chemical tanker owners make in their sophisticated vessels. He also noted that the organisation's aim remained the provision of sound representation for the industry and a level regulatory playing field under which IPTA members could compete in a free and open market.

In responding, the director of the IMO's Marine Environment Division, Stefan Micallef, referred to the significant contribution IPTA had made to deliberations at the IMO on a variety of issues, particularly in the provision of data on this highly specialised sector of the industry.

The reception marked the close of the annual Chemical and Product Tanker Conference organised in London by IPTA and Navigate Events, which in its fourth year proved the most successful yet.

Some 180 delegates drawn from all sectors of the industry gathered to hear analysis of the chemical, product and biofuel markets, get information on forthcoming regulatory developments and discuss pressing issues, such as how to implement the Maritime Labour Convention (MLC) and deal with the continuing threat of piracy. ■

Hugo Finlay, Essberger Tanker's managing director and IPTA chairman; IPTA general manager Janet Strode; IMO's marine environment division director Stefan Micallief.

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