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Front cover photo

Aspida is an experienced private maritime security company (PMSC) offering a range of risk mitigation solutions, fullfilling all recent IMO guidelines for the use of armed security guards. It carries public liability and professional indemnity insurance up to $5 mill, as well as personal accident and employers liability insurance. Aspida is also a signatory of the International Code of Conduct for Private Security Companies and was one of the first companies to join the Security Association for the Maritime Industry (SAMI).

What is happening to the crude markets?

Trying to forecast the shipping markets is fraught with danger, but every so often, we all try to pontificate.

The results are roughly split between the bulls and the bears – on the one hand, the so called experts say that everything will be okay in a little while, while others take the view that we are all doomed.

This year has probably seen the most unprecedented upheavals in peace time, ie outside of the two World Wars. We have witnessed the Japanese earthquake and tsunami tragedy; the Arab Spring uprisings, which closed most of Libya's oil exports, the release of the US strategic petroleum reserves and the unnerving global economic situation.

One leading tanker broker and consultancy, McQuilling Services is not afraid to stick its neck out. The US-based commentator produces five-year forecasts, the last of which was the *2011-2015 Tanker Market Outlook.*

During the middle of August, McQuilling examined the first six months of this year and tried to make sense of the rest of this year. The consultancy said that its January 2011 estimates generally reflected market activity, despite unpredictable events described above.

Thus far, spot freight for a combination of clean and dirty rates performed within 6% of the forecast, the company claimed. The expectations for tanker demand fundamentals were also in line with market activity with the exception of lower VLCC tonne/mile demand growth.

However, given the precedence of these unexpected events, McQuilling lowered its VLCC forecast to a more or less flat growth rate for this year. Overall, tonne/mile demand contracted by roughly 1% in the first half of 2011 versus the same time period a year ago.

In the various tanker sectors, all sizes, bar one, chalked up a fall in demand.

Going east

As has been noted since 2009, there is an increasing volume of tonnage moving west to east. This development is spurred by the rapid growth occurring in Asia/Pacific region and its resulting appetite for raw materials. This is taking place as crude transported on the traditional benchmark TD1 contracts. The share of west to east trades has expanded from 19.5% in 2009 to 23% last year, according to McQuilling's proprietary data.

Through the first half of 2011, the share of trade west to east already made up 22% of the total cargoes shipped. The strong volumes recorded thus far can be partially attributed to shifting supply sources, and highlights the growing importance of the west to east trade route.

Average projected TCE revenues 2011-2015 in $000s

VLCC (TD1/TD3)	=	25	LR2 (TC1)	=	18
Suezmax (TD5)	=	26	LR1 (TC5)	=	15
Aframax (TD9)	=	16	MR2 (TC2/TC3)	=	11
Panamax (TD10)	=	15	MR1 (TC4)	=	10

Source: McQuilling Services.

Clean tanker markets performed somewhat below the expectation of a 4% growth in tonne/mile demand over the first half of the year. This performance however, was in line with the expectations that demand centres would shift from traditional sources within OECD to countries in emerging markets.

The weak economic situation in the European Union and the US has pressured demand in these regions, resulting in exports from non-OECD refineries to customers in non-OECD countries rising.

Turning to the physical side of the market, asset prices continued their downward trajectory in the first half of the year. Activity on the newbuilding side has decreased strongly and owners have and will refrain from pressuring shipyards for deliveries.

Demand for vessels such as containerships and FPSOs have kept shipyard operations at near capacity, helping limit the volume of deliveries and the future orderbook. As a result, secondhand ship sales have been a key force in driving the market. Net trading fleet growth through July was just over 45% compared to McQuilling's January estimate. Deliveries and deletions came in at around 40% of the forecast.

The International Energy Agency (IEA) forecasts that oil demand will rise by 1.5 mill barrels per day to 91 mill barrels per day in 2012. However, this growth will be solely based on rises in non-OECD countries.

Looking ahead, McQuilling Services said that it had opted to not make any significant revisions to its five-year forecast as the dust needs to settle on recent events.

The front years of the forecast period will remain under pressure from an uncertain demand outlook and an oversupplied tanker market. Eventually, market forces will result in a consolidation among industry players, tightening up tonnage and helping lift rates from their trough.

It is still assumed that the global economy will recover and growth, albeit relatively low, will return to OECD countries while economic expansion will be supported by demand in other parts of the world. TO

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MRs and Suezmaxes – what next?

Through the eyes of Gibson Research, we take a look at the MR and Suezmax sectors, which are going through somewhat contrasting fortunes at present.

Taking MRs first, the disappointing performance in this sector in 2009 and 2010 resulted in a dramatic reduction in new tanker ordering activity.

Only 48 new MRs (between 25,000 dwt and 55,000 dwt) were ordered in 2009 and just 36 in the following year, compared to 109 and 295 MRs ordered annually between 2005 and 2008, according to Gibson Research.

A further decline in ordering was seen this year, with just 17 MRs ordered thus far to date (end of July).

This marked slowdown in ordering activity has meant that at present the MR segment has the lowest percentage of new tanker orders relative to the existing fleet, just 12% of the trading fleet.

This compares to VLCC orders at 29% of the existing fleet and Suezmax orders at 32% of the fleet. In addition, 9% of the existing MR size group are still of single hull design, thus there could be room for further scrapping.

On this basis, if we put together future scrapping and new deliveries (which incorporate some delays to delivery schedules), we would expect to see a very modest growth in the MR fleet over the next couple of years of around 2% per annum, well below the growth rates of 7-11% seen over the 2004-2010 period, Gibson said.

If cancellations to existing orders are seen, the MR fleet's expansion could be even lower. At the same time, demand for MRs will increase in line with an expected growth in oil demand, which will notably improve the MRs' supply/demand fundamentals.

However, this scenario could change again very rapidly if we see another strong round of new MR ordering!

So far this year, TCE earnings for larger crude and product tanker categories on the benchmark trades have averaged below the levels seen both in 2009 and in 2002, which were also extremely difficult years for those involved in tanker ownership.

Earnings for crude Aframaxes and MRs both in the East and in the West have fared better this year relative to other size groups. However, this is in part due to the fact that these markets suffered the most back in 2009.

The MR market in the West was particularly hard hit, with TCE returns dropping close to zero in autumn 2009. Although earnings improved the following year, they still remained fairly low.

Indeed, the MR market in the East was relatively better than in the West both in 2009 and 2010. However, overall the last two years have been a difficult ride, Gibson said.

Suezmaxes - mixed signals

As for Suezmaxes, last month, Euronav announced an agreement with Samsung to delay the delivery of two Suezmaxes citing a 'difficult market' as the reason for this decision.

Euronav summarised daily timecharter Suezmax rates for vessels in the TI pool during 2Q11 at $29,444, against $31,000 for 2Q10. Even more frightening was the company's average reported daily spot rate of $12,200 in 2Q11 against $26,400 for the same period last year.

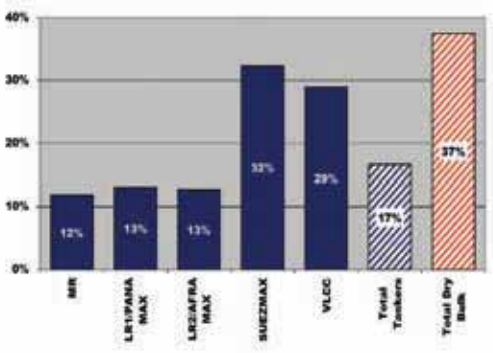
Ten days later, Nordic American Tanker (NAT) released a statement that the company was to take early delivery of two Suezmaxes, also from Samsung.

Between 2006 & 2008 Suezmax new orders averaged 60 per year primarily driven by the high freight rates seen at the time and the belief that this demand would be sustained.

New investors bought into the tanker market, often placing multiple orders for newbuilds. However, in 2009 orders had dropped by more than 50%, as the financial crisis began to bite more deeply, resulting in many new investors cancelling their orders.

Last year, 74 Suezmax orders were placed including 10 contracted by Diamond S Shipping, which in early August said it was buying 30 MRs from Cido Shipping for a reported $1.2 bill.

Gibson said that perhaps this could be viewed as longer term confidence in a rebound in the tanker market by a company currently having no trading tankers on its books.



Tanker Orderbook as % of the Current Fleet. Source: Gibson Research.

The illustration above clearly shows the development of the Suezmax fleet since 2006, which will grow by nearly 200 units by 2014, assuming no further orders are placed and no further cancellations are reported.

Thus far this year, just eight orders have been placed, seven of which are to be built as shuttle tankers, as many Suezmax orders were placed with the offshore oil market in mind. Indeed, more shuttle tonnage will be required for the developing offshore fields particularly in Angola and Brazil where the state run petroleum companies have their own requirements, Gibson said.

Owners who have invested in higher specification shuttle tankers, particularly fitted with dynamic positioning, can expect to benefit from this extra investment in terms of long term employment and higher rates.

However, the predicted growth in trade and the increase in offshore activity is relatively slow in arriving. Certainly high oil prices will accelerate offshore exploration and with it the demand for shuttle tankers. But the current uncertainty about both the Eurozone debt crisis and the weak US economy, continued to heap pressure on the stock markets.

Tanker stock quoted companies have been under considerable pressure for many months and any meaningful recovery in earnings could still be some time away.

Since the Autumn of 2008, there have been 45 Suezmaxes cancelled from the orderbook, Gibson calculated. Could another wave of cancellations be on the horizon? TO

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IMO gets industry backing

The shipping industry remains firmly behind the IMO as the architect of change when it comes to regulating shipping's CO2 emissions, according to Peter Hinchliffe, International Chamber of Shipping (ICS) secretary general.

While it is clearly in the interest of shipping to minimise its CO2 output by reducing fuel consumption, recently agreed amendments to Annex VI of MARPOL, which-– on a global basis - will make the Energy Efficiency Design Index (EEDI) mandatory for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) mandatory for existing vessels, were what had been hoped for by ICS.

Addressing delegates attending a special lecture at the International Tribunal for the Law of the Sea (ITLOS) in Hamburg, Hinchliffe said: "The EEDI is a non-prescriptive requirement, as the decision over which technologies to use within a specific ship design are left to the industry.

"So long as the required energy-efficiency level is achieved, naval architects and shipbuilders may employ whichever solutions they deem fit. The new regulations are also being presented as a vehicle for technical co-operation and the transfer of technology where improvements in energy efficiency are concerned, particularly as administrations must co-operate with international bodies such as the IMO to offer support to states requesting technical assistance.

"The regulations were 'absolutely' what this organisation had hoped for and the IMO's decision is an important one, not just for the shipping industry, but I think it shows that a consensus can be achieved on climate change within an international debate.

"It's a global first and because the IMO has done this for operational and technical measures, this means it can generate the will to do something about market-based measures as well," he stressed.

He also said that the shipping industry will fully support measures which are 'parented in the IMO' and he was confident that the impact on world trade and on the business of shipping will be taken into account.

"I am not confident that these factors would be taken into account if the debate occurs at the United Nations Framework Convention on Climate Change (UNFCC), or as a result of the outcome of the high level advisory group which the UN Secretary General convened. We want the IMO to continue to work on this process and we believe it has demonstrated that it can do just that," he said.

He added: "The European Commission or perhaps more correctly the European Parliament, makes a habit of trying to force IMO's hand; we saw it done over recent fuel sulphur content legislation and we are seeing it again over CO2 emissions.

"The EC has told the IMO on several occasions that if it does not have legislation in place by a certain date then Brussels will impose unilateral legislation within Europe.

"Although people imagine that this could mean the inclusion of shipping in the European Emission Trading Scheme like international aviation, in practice it is clear that Europe does not really know how to deal with the complexity of shipping.

"With aviation recently having been given leave to go to the European Court of Justice, this seems to question the confidence with which Europe felt it could regulate the airlines of non-European States. But the problem that Europe is creating is a rush to conclusion in IMO that may very well be at the cost of good legislation. If the rush is too fast then legislation may merely increase costs across the industry without actually reducing CO2 emissions at all – a rather pointless exercise in bureaucracy.

"CO2 emissions from international shipping cannot be reduced effectively and meaningfully through the incorporation of shipping into any regional financial instrument. Therefore ICS is strongly opposed to the application of any regional Green House Gas scheme to international shipping.

"In fact ICS is strongly opposed to the application of the European ETS to shipping. We believe that if and when governments are ready to apply a global market-based mechanism to shipping then a compensation fund-based approach is more likely to offer a bankable solution that will have the least negative impact on the carriage of goods by sea.

"There is no doubt that the IMO's success at delivering technical and operational legislation was an astonishing success – perhaps this will put a spotlight on UNFCCC at its Durban meeting in December," he argued. TO

Bunker issues from a legal perspective

Book Review

***Legal Issues in Bunkering* by barrister, legal consultant and recently appointed interim CEO of IBIA Trevor Harrison offers a highly accessible overview of the key legal aspects of bunkering.**

This book is not intended as a substitute for professional help, or casebooks on shipping law, but it is aimed at educating the reader about the key legal topics and, importantly, guide him, or her in the right direction should a contract go wrong.

The book covers the following issues:

- The law of contract.
- Sellers' terms and conditions.
- Charterparty relationships.
- Timecharters and bunker clauses.
- Quantity and quality disputes.
- Claims in tort.
- Defaults.
- Ship arrest.
- Dispute resolution.
- Important case reviews.
- International conventions.
- National legislation on environmental issues relevant to bunkering.
- Oil pollution and limitations of liability.
- Extensive appendices offering further detail on contracts, arrest, anti-corruption and other key issues.

Harrison, was the former legal head at Tramp Oil & Marine, and today practises as a maritime arbitrator, mediator and consultant, with particular expertise in bunkering.

Jonathan Lux, Partner, Ince & Co and co-author of *Bunkers – An Analysis of the Practical, Technical and Legal Aspects* (Petrospot, 2004) said; " I am delighted to recommend *Legal Issues in Bunkering* to anyone with an interest in the law relating to bunkers and bunkering and to those who have an interest in steering clear of the many legal pitfalls that can beset the global bunker industry.'

Publisher Llewellyn Bankes-Hughes said; "Trevor Harrison is a highly-respected maritime lawyer with over 30 years' experience. He knows his subject thoroughly, and, importantly, he knows how to put it across in a way that entertains and educates and leaves the reader eager to learn more.' TO

Legal Issues in Bunkering: An Introduction to the Law Relating to the Sale and Use of Marine Fuels, by Trevor Harrison, First Edition, July 2011, published by Petrospot Limited. PP 201 + 36 prelims. £75/€90/$125 + P&P www.petrospot.com/books

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Salvage response: speed/flexibility remain paramount

Emergency response to marine casualties remains the very core of SMIT Salvage's activities and capabilities.

In a modern context, emergency response has a wider sweep. Beyond the obvious need for a swift reaction to vessel fires and collisions, the scope of work also includes environmental protection and the recovery of marine pollutants. Whatever the task, however, speed and flexibility remain the cornerstones of effective intervention.

Today, tanker fires are rare events, yet the potential for a catastrophic accident is ever-present. Over the past two decades, SMIT Salvage has responded to a series of severe tanker fires. They include the *Mega Borg*, which suffered a pumproom explosion off Galveston in the early 1990s, and the tragic collision involving the BP tanker *British Trent,* laden with gasoline when crippled in the entrance to the Western Scheldt during the mid-1990s.

There was also the extremely challenging case involving the crude carrier *Nassia*, in the Bosporus, following a collision resulting in heavy loss of life. These operations were carried out by SMIT Salvage teams who had gained a wealth of experience during the so-called 'Tanker War', between Iran and Iraq, during the 1980s.

The modern approach to marine emergency response includes regulatory requirements concerned with preparedness. Owners are expected to enter into pre-event contracts with recognised contractors. This system is most developed in the US. The US Coast Guard's Salvage Regulations require salvors to satisfy a set of 15 criteria in order to be recognised contractors under a new preparedness regime.

The Donjon-SMIT alliance is recognised under these regulations. The Alliance stands ready to respond to emergencies involving all ship types, as the US regulations in this area regard all vessels carrying bunkers as "tankers" for the purposes of compliance.

The aftermath of the *Nassia* collision in the Bosporus.

Naturally, advanced technology also plays an important part in 21st Century emergency response. During 2009, SMIT Salvage acquired the NAPA ship design program - software used extensively by the emergency response services of leading classification societies, such as Lloyd's Register, DNV and GL. A large population of vessels is modelled in this system. From the salvage perspective, NAPA's benefits include faster transfer of data between owner, classification society and salvor.

Responding to emergencies

SMIT Salvage responded in March 2009 when the crude carrier *SKS Satilla* reported problems while approaching Galveston. The tanker was preparing to lighter when she suddenly developed an 8 deg list. A SMIT Salvage team, working from the DP2 ROV support vessel *Northern Canyon*, carried out a detailed ROV survey. They found that the Suezmax had incurred significant damage to her water ballast tanks.

The salvage team then prepared to undertake a full ship-to-ship (STS) transfer of the 150,000 dwt tanker's cargo. Performed under emergency conditions, the STS was completed over a four-day period by a project team mobilised from Houston, reinforced by specialists from SMIT's Rotterdam headquarters.

There was an unusual follow-up to this case. Efforts were made to discover the cause of the damage to *SKS Satilla's* water ballast tanks. SMIT analysed the tanker's track and this led to the discovery of the wreck of the drill rig *ENSCO 74*, lost during Hurricane Ike in 2008. Subsequently, SMIT removed pollutants from the wreck - located in 30 m of water - and then completed a second contract for the wreck removal.

Groundings are the most common form of casualty event. During August 2009, SMIT Salvage responded in Albanian waters, when the 6,000 dwt chemical tanker *Fetekoz* grounded in the approaches to the port of Porto Romano. SMIT Salvage received a Lloyd's Form and went on to demonstrate the value of fast, decisive intervention. This vessel was refloated the day after the grounding and redelivered to her owners within 48 hours.

A few weeks earlier a SMIT team responded when the gasoil-laden 40,057 dwt chemical/products tanker *Maria M* grounded off Gothenburg. This was a Lloyd's Form operation, with the salvage team flying in from Rotterdam. A salvage inspection revealed that tanker would only be refloated following an STS.

A lightering tanker was chartered in and two tugs, sourced from SMIT's local partners, supported the successful STS. *Maria M* was refloated a week after the grounding, following the transfer of 7,700 tonnes of gasoil. When the casualty was brought safely to a lay-by berth at Gothenburg, the balance of the cargo was discharged to the lightering tanker. The vessel was then redelivered to her owners.

Flexibility is an essential quality for successful emergency response. During July 2008, SMIT Salvage attended the 28,978 dwt chemical/oil tanker *Peonia*. This vessel had grounded north-east of Isla de Maio, Cape Verde.

Peonia was on a voyage from San Lorenzo, Argentina, to the Algerian port of Bejaia when the grounding occurred. SMIT received a Lloyd's Form and flew in a salvage team from Rotterdam. Tugs were mobilised from West Africa and lightering tonnage mobilised from the Mediterranean. A salvage inspection led to the initial conclusion that

The OBO *Aegean Sea* was completely wrecked off La Corunna.

the *Peonia* would have to be lightered in order to refloat her.

Things changed, however, when the casualty's condition began to deteriorate in heavy weather. The main threat to *Peonia* was the incremental damage caused by the vessel's excessive movement in heavy swell conditions. A new plan was devised and implemented, based on an early refloating attempt, with the casualty remaining in the laden condition.

In the event, the salvage team succeeded in freeing the *Peonia* within eight days of her grounding. The casualty was towed to Isla de Santiago by the tug *Malika*. The operation ended with an STS transfer to the lightering tanker *Alice*. The STS was performed in Porto Grande Bay. The change of plan, flexible thinking and a swift resolution saved vessel, cargo and the environment.

Earlier in the year SMIT Salvage had responded when the 45,000 dwt Shell operated tanker *Ficus* grounded at Nassau, in the Bahamas. This vessel had a cargo of jet fuel and white oils. A refloating at this sensitive location was achieved by the tug *SMIT Oneida* and local tugs.

Recovering pollutants

The recovery of pollutants, involving divers or remote-operated systems, is an important operational capability in a world increasingly sensitive to environmental threats. Projects of this type may arise in the aftermath of a recent accident or, alternatively, may be funded to remove a persistent threat from a vessel lost many years ago.

One example of the latter was the SMIT Salvage operation in 2008 to remove oil residues from the accommodation and engineroom of the wreck of the VLCC *Haven*, lost off the Italian coast in the 1980s following a catastrophic explosion. The wreck's cargo tanks were known to be empty – most of the oil having been consumed in a fire of huge proportions. Over 20 years later, however, the Municipality of Genoa was concerned about the persistent seepage from this wreck.

SMIT Salvage was commissioned to remove the threat to oyster and mussel fisheries and tourist beaches. A project team was mobilised, working from a barge with a four-point mooring system. The project spread included a MINI SAT saturation diving system - the diving team worked in depths down to 75 m. A total of 115 spaces within the wreck were checked and certified oil-free. Oil residues were removed by vacuum tools; tank residues were recovered by pumping from 'hot-tap' stations established on the wreck's hull.

Currently, SMIT Salvage is undertaking a pollution recovery under contract with KOEM (Korean Marine Environment Management Corp). Mobilisation work began in June. The task is to recover around 500 tonnes of HFO from the wreck of the tanker *Kyung-Shin*, off the south-eastern coast of South Korea. During 2010, SMIT Salvage completed a preliminary contract to assess the quantity and specification of oil and other pollutants within the wreck of this vessel, which went down some years ago in 80 m of water.

The oil recovery is now under way. The project team, including saturation divers, is working from the vessel *Smit Borneo,* which is equipped with a hot-tap system, boilers, heat exchangers, special pumps and hoses and

the SAT3 system. Oil within the wreck is being recovered by a hot-tap/steam heat system. The HFO is being heated to around 50 deg C, to facilitate pumping.

Collisions: more dangerous than groundings

In conclusion, SMIT's extensive tanker salvage experience suggests that most severe events result from collisions. A collision involving a tanker carrying a volatile cargo - such as crude oil, white products, or chemicals – may well result in a spill. Damaged steel plates and frames cause sparks, creating conditions likely to result in a sudden conflagration or explosion.

Double hulls and skins are no guarantee of surviving a collision event. The impact forces are enormous and may easily penetrate the double skin and the next longitudinal bulkhead, resulting in loss of cargo and spillage into the side ballast tanks (immediately creating an explosive atmosphere).

The fundamental lesson is clear: collisions are generally more dangerous than groundings (although, of course, a grounding may also have serious, potentially fatal consequences). In the case of the OBO *Aegean Sea*, some 20 years ago, this fully laden vessel grounded on rocky pinnacles in the final approaches to the port of La Corunna. The sharp pinnacles penetrated the double bottom and sides, and also the tanktop and longitudinal bulkheads. Due to the friction of damaged steel plates, there was a massive explosion and fire - which completely destroyed the tanker.

When it comes to collisions, safe navigation and reliable machinery offer more protection than double hulls/skins. Proper manning is the key. There must be a sufficient number of qualified officers on board to stand double bridge watches when in congested waters, such as the Dover Strait and Malacca Strait, together with all approaches to ports (where crossing traffic may be encountered).

One prominent example of a catastrophic collision involved the 280,000 dwt VLCC *Maersk Navigator.* This tanker collided with a laden bulk carrier in the approaches to the Malacca Strait. The impact penetrated an empty side ballast tank all the way to the longitudinal bulkhead, which was cracked. The impact in the next loaded side tank squeezed out crude oil (and from the cracked longitudinal bulkhead along the laden centre tank). The crude was ignited by sparks and then rolled over the deck, engulfing the VLCC in flames from stem to stern. It was a major challenge to extinguish this fire, as it was constantly fed by fresh crude oil spilling from the damaged centre tank.

There were also fatalities following the *British Trent* collision. Eleven men died when gasoline flooded onto the deck. When faced with a huge fireball, rolling towards the accommodation, others survived only by immediately jumping overboard.

Empty ballast tanks offered no immunity from spill and fire when the tanker *Nassia* collided head-on with a bulk carrier in the Bosporus. The impact destroyed the forepeak and collision bulkhead, producing a huge spill from No 1 centre tank, ignition and a wave of burning crude oil along the full length of the main deck, completely destroying the accommodation. This catastrophe cost 19 lives, including eight of *Nassia's* crew.

Of course, circumstances occasionally allow catastrophe to be averted, as when the double skin Suezmax *Genmar Kestrel* collided with another Suezmax off Port Said. Although the double skin was penetrated to the laden centre tank, the contents spilled into the heavily damaged, empty double skin side tank. The two vessels quickly separated but, fortunately, without ignition. *Genmar Kestrel* required very careful handling to avoid ignition risks. Initially, she was allowed to drift, to avoid the vibration of the main engine. Subsequently, she was towed. She was redelivered following a successful STS transfer.

Clearly, a double skin is no guarantee of avoiding spills, fires, explosions and loss of life. Double skins can be effective in light grounding situations. Otherwise, they tend to give a false sense of security.

Appropriate investment in qualified and sufficient officers and crew is the best option for avoiding emergency situations. TO

BP's *British Trent* suffered a catastrophic collision in the Scheldt estuary.

IRI ramps up flag state administration

New International Registries Inc (IRI) CEO John Ramage outlined his plans for the future of the Marshall Islands flag state.

The flag state is still dominated by tankers and bulk carriers, although the number of gas carriers and containerships entering the registry is rising, Ramage said.

At the beginning of August, the flag state had 2,472 vessels of almost 74 mill gt, of which around 42% are tankers, on its books. By the end of this year, this total could hit 80 mill gt, as the registry gains both newbuilding deliveries and other vessels, as a result of sale & purchase deals.

The registry has recently entered its seventh year in the US Coast Guard's Qualship 21 scheme and is the only large registry to appear on all three major Port State Control regime's White Lists - Paris and Tokyo MOUs, plus the US Coast Guard. Nearly 18% of the vessels on the USCG's Qualship 21's list are Marshall Islands flagged vessels.

While the eligibility criteria for Qualship 21 are stringent, one new factor will become mandatory for flag administrations to qualify in 2012. Similar to the qualification of the Paris MOU's low risk ship (LRS) list, the USCG will in future also consider whether or not a flag administration has participated in the IMO's Voluntary Member State Audit Scheme (VMSAS).

Source: IRI.

Since taking over the reins at IRI, Ramage has been reviewing the registry's structure, which today consists of 23 offices worldwide with the recent addition of Taipei. The registry's presence in Turkey has also been expanded, he explained.

"I am looking at what we have with the goal of putting more meat on the bones," he said. This expansion will probably come in the form of more technical personnel, surveyors etc, as the registry expands.

IRI administers the flag state by way of de-centralised offices, which are semi-autonomous organisations. The three main hub areas are Asia, Europe and the US. Asia is controlled from Hong Kong, Europe from Roosendaal on the Dutch/Belgian border and the US from its headquarters in Reston, Virginia. There is also a major presence in Dubai and in India.

By having offices worldwide, an inquiry can be received in one area and then automatically passed onto another, depending on the time zones involved and where the vessel is and its destination. By using this method a 24/7 service can be guaranteed with an extremely fast response, Ramage claimed.

Tankers make up a significant percentage of the flag state's tonnage.

In general, IRI delegates statutory matters, such as certification, to class, but handles the ISM and ISPS certificates itself. Each vessel is inspected every year by an IRI surveyor, which in the case of 2,472 vessels, is no mean task.

Annual inspections are carried out by IRI's own people partly to keep an eye on the class surveyors by looking at the condition of each vessel. The administration also employs many contract inspectors, who are controlled by the regional offices, Ramage explained.

With the current rock bottom freight rates, Ramage urged all owners to keep their vessels' critical equipment up to standard. He explained that by going offhire in today's market due to a detention, this would result in future employment being very difficult to secure.

Anti-piracy policy

Turning to the question of anti-piracy measures, Ramage said that the flag state would not prohibit owners from using private security personnel on the proviso that a thorough risk analysis was undertaken in consultation with the vessel's insurers and the company's legal advisers.

IRI was a sponsor of the Security Association for the Maritime Industry (SAMI), a recently formed association of security personnel providers. Ramage explained that the shipping industry now needed some form of control.

He said that he would like to see security personnel training, standard contracts and rules introduced on the use of force, which he hoped SAMI could provide. Potential members of the organisation would also be vetted before being allowed to join the organisation, thus enabling the owner/operator to have a good idea of who he or she is dealing with.

The Marshall Islands, supported by the Bahamas, was instrumental in drawing up the recently introduced IMO guidelines on the use of security firms in pirate infested waters, which Ramage thought was "moving in the right direction."

In another move to combat piracy, the administration insists on its owners incorporating the relevant parts of the industry's Best Management Practice (BMP) in their vessels' ship security plans and in addition, dialogue is regularly held between the flag state and UKMTO and MSCHOA. BMP4 is currently in draft form, he explained.

The Marshall Islands has also embraced seafarers' rights and signed the declaration on Rights of Seafarers in Washington (DC) at the beginning of August. The MI was joined by both the Liberian and Panamanian flag states at the signing.

Before, the anti-piracy focus had been on the vessels themselves and the disruption to trade, but now the plight of the seafarers' has been added to that list. Ramage said that the flag state administrations should look after both the vessels and crew once a vessel has been attacked, or even hijacked. He said that all information about an attack should be passed onto to the International Maritime Bureau (IMB), which would co-ordinate the information received.

"To have one entity in control of the information is much better for all concerned," he said. "It is hard to quantify the level of brutality, etc," he added.

In addition, when a vessel is hijacked, the owner/operator obviously loses income, but there is also the problem of extra expenditure necessary to make a vessel seaworthy once it is released, especially if it has been held for some time.

Another problem facing flag states is the Maritime Labour Convention (MLC 2006). With a small crew, hours of rest become paramount, especially for vessels on coastal voyages with multiple port loadings and discharge. TO

German owners strive to remain competitive

The Verband Deutsche Reeder (VDR - German Shipowners' Association) is currently at loggerheads with the Federal Government over the size of the budget awarded to promote German seafarer employment.

On 6th July, the German Bundestag granted an additional €32.5 mill budget to support German seafarer employment on vessels flying the domestic flag. However, this amount was granted simply to fulfil the repeated promises of support for the year 2010, a VDR spokesman said.

For this year there is only €28.7 mill in the pot - the so called 'Maritime Aid', even though triple the amount would be necessary just to keep the support on a status quo level.

As a result, the VDR said that the competitiveness of German flag vessels would continue to suffer and that owners would continue to flag out, if no changes for the years 2011 onward would materialise.

The association pointed out that the future of education and employment on German vessels is the goal of the Maritime Alliance – an initiative set up about a decade ago by the Federal Government and is an alliance between the VDR, trade unions and federal coastal states.

The VDR said that it remained in negotiations with the Federal Government together with the Northern German states and their social partners to gain the promised support for the continuation of the Maritime Alliance.

Only then can training and secure employment be gained and a massive loss of confidence in the German maritime industry be averted, the VDR argued.

A leading German shipowner said that some owners are complaining to the government that their investments in education and training is wasted with the new move.

He said that his company had installed an extra cadet deck on two containerships. However, this $200,000 investment might remain unused. The same could happen at the shore-based trainings facilities, etc, he said.

Tonnage tax

At the 7th National Maritime Conference held in Wilhelmshaven on 27th and 28th May, the VDR's president - Hapag-Lloyd's Michael Behrendt - said; "Without the (German) tonnage tax, there would be no navigation in Germany, resulting in no jobs, or investment in the maritime industry."

At the meeting, Federal Transport Minister Dr Ramsauer said; "The tonnage tax is not a subsidy, it is existential for Germany." At the same time, Germany's Chancellor Andrea Merkel described the Maritime Alliance as a "success story."

However, VDR CEO Ralf Nagel said; "We wanted a clear commitment to the Maritime Alliance. We have not received it - the balance is destroyed." He also commented that a lack of support would lead to further flagging out, as a vessel flying the German flag would cost on average up to €500,000 more to operate than vessels from neighbouring EU countries.

Behrendt outlined the Maritime Alliance's success by saying that 30% more jobs on land and at sea had been created, while 25% more training places had been made available.

He noted: "Wilhelmshaven impressively demonstrated that the country, trade unions and the shipowners all pull together to ensure that the alliance for maritime training and employment continues.

"The federal government should respond to this unity and this conference was an urgent reminder to the government to reconsider its course," he said.

Some 3,700 vessels sail under the management of German-based shipping companies, but only 446 fly the German flag, according to figures published by the VDR.

The German flag is ranked 14th in the world in terms of gross tonnage, which at the end of last year amounted to 15 mill gt, or 1.7% of the world's total.

As for tankers, at the end of last year, German-domiciled companies controlled 448 vessels in this sector, totalling 13.2 mill gt, or 22.3 mill dwt, amounting to 4.2% of the world's total tanker fleet of all types.

Of the 448 vessels, only 44 flew the national flag, broken down into 22 crude oil tankers, seven bunker barges, seven gas tankers, plus eight chemical and other liquid carriers.

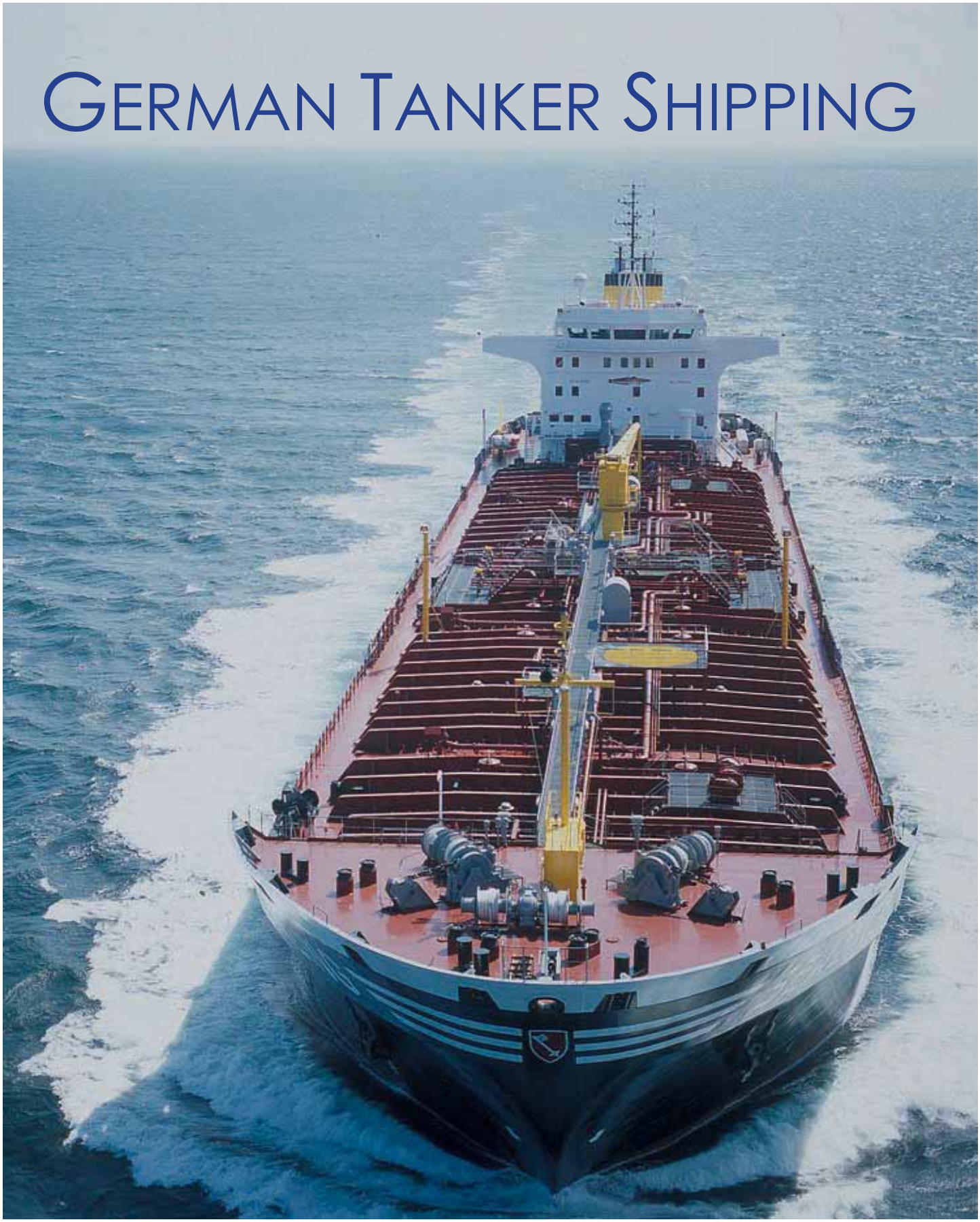
According to the VDR, some 647 new cadets were taken on board German vessels of all types last year, while another 324 were employed on land during 2010. The latter figure only included shipping & chartering manager apprentices.

The shipboard cadet figure recorded last year was a significant drop from the 894 recruited in 2005 and much lower than the 829 cadets admitted in 2009.

In another move, German shipowners are pushing the flag administration to adopt the use of armed guards while vessels transit the Gulf of Aden/Indian Ocean pirate infested waters. For its part, the VDR has said that it is a state matter, which needs to be resolved urgently.

One tanker owner told *TANKEROperator* that since one of its vessels was attacked recently , the company has since used armed guards when transiting the Gulf of Aden/Indian Ocean areas. TO

GERMAN TANKER SHIPPING



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Owners find innovative ways of raising finance

A leading German financial expert told *TANKEROperator* that the KG system is more or less dead for shipping related investments, as recent surveys have shown.

In addition, the banks have in principle stopped lending to new projects with the exception of perhaps DVB and the one, or other very selective engagement by the major banks.

In all cases, there is no more availability of equity bridge and pre-delivery financing, which requires the owners to have a substantial amount of funding already lined up.

Due to the financial meltdown, the only market likely to get funding, it at all, is the containership sector, he said.

One investment concern involved in containerships, bulkers and tankers is Marenave Schiffahrts – a joint stock corporation set up under German law.

At the company's annual general meeting held on 15th June, it was decided to to carry forward the net retained profits of €9.8 mill as of 31st December, 2010 to new account.

Moreover, the executive board was authorised to issue participation certificates ('Genussrechte') with a total par value of up to €300 mill within the next five years.

These participation certificates may have a term of up to 30 years and can be issued in cash, as well as in kind.

This enables Marenave to finance the acquisition of companies, company segments, shareholdings and other assets, particularly deepsea vessels, in suitable individual cases by paying with participation certificates without depleting the company's liquidity, the company explained.

Flexible financing

In addition to the existing authorised capital of €75 mill and the authorisation of the executive board to issue convertible and warrant bonds with a total nominal value of up to €200 mill, participation certificates now provide the company with another method of realising potential acquisitions with the help of flexible financing options.

CEO Tobias König said: "The shipping markets today still offer attractive investment opportunities similar to those last seen in 2003. For this reason we are very pleased that the conditions for additional growth have been created by the resolution to issue participation certificates, which was adopted with 99% of the vote.

"Those able to purchase ships at good prices now will generate above average returns with them. With its diversified and high yield fleet, Marenave Schiffahrts offers a solid foundation for future expansion in the shipping business. Stock corporations will remain the investment vehicle of choice in Germany.

"Marenave Schiffahrts started with a positive result in the year 2011. After the delivery of the last bulker of the vessel newbuilding series in May 2011, the conditions for further growth are ideal," he claimed.

Marenave claims to be the first publicly traded shipping fund company in Germany organised as a joint stock corporation under German law (AG, Aktiengesellschaft). It was developed to enable institutional and private investors to obtain longterm exposure to the shipping market and diversify their portfolios further.

The company said that its goal was to set up a diversified portfolio of containerships, tankers and bulk carriers and to generate income from buying, selling and chartering ships.

The fleet currently totals 13 units: six Panamax and Handymax product/chemical tankers, two 1,200 TEU containerships, one car carrier and four Supramax bulk carriers.

Longterm charter agreements for the car carrier and the bulkers have secured charter revenues of around $260 mill. The average return on capital employed for the vessels engaged under a longterm charter is close to 15%, which represents the benchmark for future investments, the company said.

Raise capital

The resolutions regarding the capital markets at the AGM put Marenave in a position to raise new capital as needed and given the appropriate market conditions, in order to finance the acquisition of additional vessels.

This will allow the current favourable market phase to be used for the targeted fleet expansion and thus an extension of operations in Hamburg.

Marenave claimed to be one of the few German shipmanagers with the 'corporate structure' that is required by leading banks to finance future projects.

The company's shares are presently traded on the Regulated Market of Hamburg Stock Exchange. TO

One of Marenave's product/chemical tankers managed by Columbia Ship Management.

Rudder monitoring taken to a new level

A few months ago, leading German manoeuvring specialist Becker Marine Systems introduced the Becker Intelligent Monitoring System (BIMS).

BIMS is aimed at the improvement in autopilot (AP) and dynamic positioning (DP) manoeuvring performance by rudder force measurement.

Modern DP/AP systems utilise a variety of input signals to maintain course, or position, eg from positioning reference sensors, combined with wind sensors, motion sensors, gyro compasses, GPS data, etc.

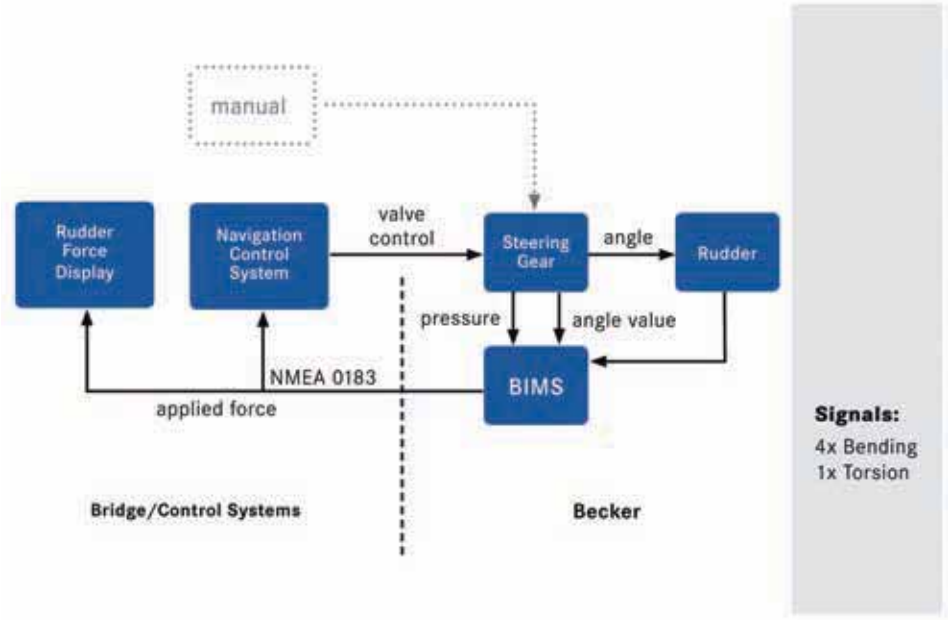
This data is processed by an IT system to allow the course, or drift to be predicted and to calculate counter measures controlling the actuators in the vessel's propulsion system.

Input data and processing is of high quality, but only reflects the vessel's motion response. Inertia causes a massive decrease in the strength of these control signals, which do not meet, or provide sufficient quality for manoeuvring.

For rudder/propeller arrangements, relatively high corrections were applied to the rudder angle, resulting in the generation of high rudder forces. As a result, the vessel turns more than necessary for the predicted course correction, plus in a similar counteraction in the opposite direction.

This effect results in hysteresis, or rudder flipping, causing the steering gear to work continuously and more or less strong fluctuations around a set course or position.

Modern computerised navigation and positioning systems use rather general output signals to operate the rudder controls for manoeuvring. This is why the rudder force generated for specific rudder angles is not available to the system. Predictions of the reaction forces from specific rudder angles fall short, due to various disruptive factors such as wind, speed, drift, in a vast number of possible combinations that cannot be determined in advance.

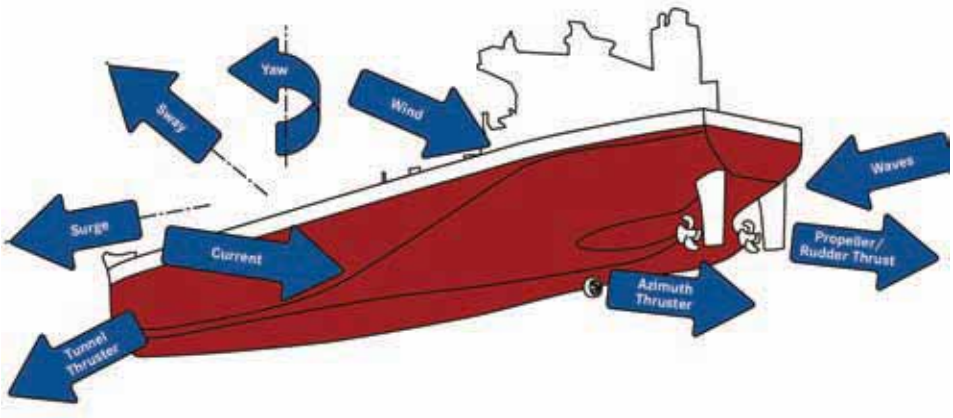


A schematic of the BIMS system.

This means, for example, that the rudder of a 100,000 dwt tanker travelling at a speed of 14 knots under AP navigation moves continuously in a +/- 5 deg range, resulting in a significant increase in fuel consumption. A similar situation occurs with operation in DP mode, but at much greater rudder angles, resulting in even greater fuel consumption and intensive unsteady operation of the prime mover and steering gears. The operation mode on twin screw vessels shows a great potential for savings. In this case, one propeller continuously pulls astern.

The problems described above were urgently addressed to provide a solution to Becker's customers. To improve manoeuvrability under computerised DP + AP support systems, there is a need for timely direct, or indirect measurement of rudder forces, which currently allows the generated lift and resistance to be determined.

For this purpose, a force measuring arrangement, or a method for measuring the rudder force should be developed, which is



Various disruptive factors can effect a vessel's performance.

A single screw vessel fitted with a Becker Schilling rudder.

able to determine rudder force vectors by direction and amount.

By using current rudder force as input parameters for a DP or AP system, manoeuvring hysteresis can be eliminated, or significantly reduced. In a first approach rudder force measurement arrangement will be applied on full spade rudders, as these rudders provide - in contrast to semi-spade rudders - a mechanically explicit statically determined system. An installation on the rudder trunk and the rudder shaft is possible for the force measurement arrangement by sensors, or strain gauges.

In deference to a state-of-the-art manoeuvring arrangement, an interface has to be developed to calculate the appropriate rudder angle for a demanded manoeuvring force as an input for the steering gear. It also will process the measured forces, adjust the rudder angle and provide feedback to the DP system about the actual forces.

To meet these requirements, Becker developed a force measurement arrangement for full spade rudders, capable of determining rudder lift, drag and an interface for processing the sensor signal and transferring force data to the DP system.

The interface provides standard protocol (NMEA 0183), as well as analogue signal output. The receiving system requires the capability of processing real time force signals, predicting force development on corresponding actuation from the current thrust-rudder force condition.

BIMS system advantages

- Reliable and safe dynamic positioning/ manoeuvring operations.
- Less rudder motion in DP and AP mode.
- Energy savings through improved efficiency.
- Elimination of aft tunnel thrusters on a case-by-case basis.
- Emission reduction.
- "Quieter" rudder system.
- Reduced manoeuvring response times.
- Significantly less rudder motion.
- Reduced waste and maintenance costs.

Fuel savings

The improved performance in manoeuvrability will lead to more reliable and safer operation in DP, fewer manoeuvring motions giving lower fuel consumption and reduced emission of CO2, NOX, SOX, etc. In addition, fuel consumption will be significantly reduced when one main engine on a twin screw vessel is being operated in standby mode.

Using shaft generators as a PTI device might be conceivable as a back-up solution where full main engine power is not required for DP operation. Several prime mover manufacturers are thinking about using shaft generators for propulsion powered by auxiliary diesels.

However, this arrangement capable of providing sufficient performance for DP manoeuvring with auxiliary power and all main engines on standby requires further study.

Signal processing

In deference to a state-of-the-art manoeuvring arrangement, an additional interface unit is required in BIMS to calculate the forces generated. The signal provided by a single sensor represents a value for the rudderstock bending on only one co-ordinate axis. This axis is dedicated to the rudder co-ordinate system, which is unfortunately turning with the rudder.

The control unit will calculate each force component from four sensors signals and transform these into rudder co-ordinates for the appropriate components that can be used by the vessel's co-ordinate system. Rudder force information is sent via the network and can be received by any navigation control system connected to it.

To maintain the integrity of these systems, the received data is used to refine the results from the standard operation mode. Data validation is performed by defined allowable deviation from navigation system results, as well as BIMS internally by considering all input values and checking for plausibility.

BIMS is able to display rudder forces at any place with network access. Three display modes are available:

1) Display totals for lateral force and drag values (eg for adjustment, load determination, etc). This mode can also be used to indicate that rudder force is low and only little response is expected under current conditions.
2) Display a graph showing force application over time in chronological sequence. This mode makes it possible to visualise force maxima and to adjust the optimal rudder angle and rev/min (propeller thrust). This ensures optimal rudder performance, especially in emergency situations.
3) Indicate the optimal rudder angle for a specific speed and rudder force actually applied in relation to maximum force.

Decreasing control operation of the amplitude and frequency of all components in the propulsion system along with increased manoeuvrability in AP mode results in fuel savings of around 2-3 % with a corresponding reduction in emissions. For the DP mode, the expected savings will be significantly higher,

due the operation characteristic, but this can't be accurately quantified, because of unsteady disturbances.

In standby operation of one of two main engines, savings of about 50% in fuel and emissions can be expected in DP mode. A subsequent reduction in wear on the bearings will also result in an extension of maintenance intervals.

At Nor-Shipping, Becker announced a joint project with Kongsberg Maritime.

Called KBIMS, it is essentially a new support tool designed to enable the more efficient use of propellers and rudders during DP operations.

Once KBIMS is integrated with Kongsberg Maritime's K-Pos DP system, it can the characteristics of the rudder so the correct combination of rudder angle and propeller pitch - rev/min is used.

Exact measurements of the actual rudder force secures improved station keeping performance and more precise rudder control will reduce wear and tear of the steering gear, rudder stock and bearings, so less downtime and maintenance costs is possible.

In addition, the two companies signed a co-operation agreement to continue to use their respective strengths within the sector of high performance rudder and DP systems to enhance DP capabilities.

KBIMS is to be piloted on an offshore construction vessel building for Volstad at Fosen. However, with the interest in DP shuttle tankers resurfacing, both companies see an emerging market for their system.

Duct success

As for Becker's Mewis Duct system, Odfjell Management is to retrofit its fleet of 37,500 dwt and 40,000 dwt parcel tankers in pilot projects. Marintek was contracted to carry out comprehensive tank testing on both sizes of vessels.

The tests were carried out at different draughts and vessel speeds to analyse the overall performance of the duct. Once the tests had been completed, Marintek said that potential power savings of 6%-7% were determined at the design condition.

Becker's design team ensured that the ducts could be installed without impacting on the aft steel construction and without dismantling the propeller in a short period of time.

The first unit was fitted on board the 37,500 dwt *Bow Flora* in March 2011 during her regular drydocking period. The second duct was fitted on board the 40,000 dwt *Bow Sea*.

Since the Mewis Duct's unveiling in 2009, around 120 orders had been received for the ducts by the middle of this year.

Excluding the Odfjell trials, in the tanker sector, firm orders included one for a 3,700 dwt tanker for Wilson Ship Management, one each to be fitted on two Panamax tankers for OSG, a system on each of five VLCCs for BW Fleetmanagement, on four new 320,000 dwt VLCCs building at Hyundai Samho for Samco Shipholding and another one for a 37,500 dwt chemical tanker managed by Stolt-Nielsen.

On the Samco VLCCs, Becker will deliver four energy-saving Becker Mewis Duct® systems with a diameter of 8.10 m each. With vessel dimensions of a length of 319 m, a breadth of 60 m and a draught of 21 m, the VLCCs will require 6% less power to reach their service speed of 16 knots.

The first of the Samco VLCCs will be delivered in the third quarter of this year, while the last of the four is stemmed for delivery in the third quarter of 2012. TO

Hellespont reshuffles pack

In a bid to improve efficiency, last April Hamburg-based Hellespont Group closed its chemical tanker pool and also relocated key staff. As a result, Seatramp Intermediate Tanker Pool was closed and all of the six vessels, including two newbuildings, have been redeployed in Navig8's chemical tanker pool.

Phrixos Papachristidis, CEO, Hellespont, said at the time, "We are in tough markets now and we have decided to go back to our long established way of working with industrial partners and rely on our core group staff. To strengthen the group in this process, Mike Kennedy and Spyros Vlassopoulos are joining Hellespont Ship Management as technical and marine managing directors (respectively).

"They were both instrumental in setting up Hellespont in Hamburg in 2004 and have served with the Hellespont group for more than 30 years. We continue to be strongly committed to our Hamburg base, which is why we are bringing staff here. These moves will improve efficiency across the group, allowing us to focus on long term expansion when the markets settle," he explained.

Hellespont has also appointed Joachim Brack as CFO. His responsibilities include accounting, finance, bank and investor relations, fund management, human resources and administration.

Prior to joining Hellespont, Brack was the head of finance and treasury at the Hamburg-based public listed Lloyd Fonds.

In Hamburg, Vlassopoulos has assumed responsibility for operations, HSSEP, manning, insurance and also oil company relations, while Dr Kennedy is responsible for the technical management of the group's fleet and for overseeing the group's newbuilding supervision contracts. His mandate will also embrace purchasing and IT.

Several staff members have left Hellespont's Hamburg office, including previous managing director Matthias Imrecke.

As for the six chemical tankers, Irish concern Ardmore Shipping purchased the two 17,000 dwt newbuildings and chartered in another two already in operation.

The two IMO II newbuildings were originally ordered by Hellespont in January 2009 from troubled South Korean shipbuilder Sekwang.

The four Hellespont vessels will join Cork-based Ardmore's existing fleet of four tankers.

The remaining chemical tankers in Hellespont's Seatramp Pool have entered Navig8 Chemical's 16-ship Brizo8 pool, as have the two chartered in by Ardmore. It is expected that the newbuildings will also join the pool once they have been delivered during the middle of next year.

Both the *Hellespont Commander* and *Hellespont Crusader* were fixed to Ardmore for a period of 12 months, with an option for a further two periods of 12 months each.

Today the Hellespont group operates a fleet of 26 vessels including crude, product and chemical tankers, platform supply vessels and one bulk carrier.

These consist of five Suezmaxes, one Aframax, six LR1s, six chemical tankers, four platform support vessels (PSV), three smaller chemical tankers and a drybulk carrier.

The Suezmaxes, Aframax, LR1s and PSVs are all on long term charter to Sanko. TO

GL revamps its maritime services offering

Germanischer Lloyd (GL) has made a number of changes to the management structure of its maritime services organisation. The new operational structure is designed to further enhance GL's focus on customer demand and reinforce its service orientation, the class society said.

From 1st July, 2011 the make up of the maritime services management board is Erik van der Noordaa (CEO), Tjerk de Vries (CTO), Torsten Schramm (COO) and Albrecht Grell.

Dr de Vries became chief technical officer (CTO), responsible for fleet service, ship newbuilding, maritime systems and components, strategic research and development and process improvement.

Schramm is now globally responsible as COO for GL's business activities in Europe/Middle East/Africa, Asia/Pacific & the Americas, as well as for sales & business development.

Grell remains in charge of the maritime solutions business unit, including consultancy, certification, software and training.

Matthias Ritters has succeeded Schramm as head of region Europe/Middle East/Africa (EMEA). He was previously area manager Middle East/Africa based in Dubai. His new position covers Germany; Southern, Northern, Western, and Eastern Europe; as well as the Middle East/Africa areas.

In another move, GL has upgraded its Environmental Passport (EP).

GL explained that regulations do not stand still and forward thinking shipowners and managers are increasingly looking for concrete ways to demonstrate their commitment to reducing environmental impacts.

EP is a voluntary class-notation and certification for vessels. All mandatory and voluntary environmental features of a vessel are compiled in a single, easy to use document, which includes flag state certificates, compliance certificates, NOx emission diagrams and the EP certificate itself. Nearly 10% of GL's fleet in service had opted for this class notation by the end of July.

Following the IMO announcement that EEDI will soon be introduced as a mandatory standard for newbuildings and anticipating these changes GL made significant additions to its EP requirements.

The following new requirements have been introduced for the 2011 of edition of the EP, which came into effect on 1st August 2011:

1) Discharge of bilge water permitted only if the oil content is below 5 ppm. Vessels are also required to have a monitoring and stopping device installed.
2) An approved ballast water treatment system must be installed.
3) The attained Energy Efficiency Design Index (EEDI) value to be certified* by GL.
4) An inventory of hazardous material (IHM) to be certified* by GL.

Also from 1 August 2011 the order date of the EP determines which edition of the passport will apply, not, as in previous editions, the date of the newbuilding contract. TO

* *Statement of Compliance.*

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InterManager's KPI project launched

News that InterManager has completed the six-year development phase to produce an industry-wide performance measurement tool, begs the question – what next?

Now the shipping KPI project is set to be rolled-out worldwide and a critical mass of vessel data built up.

In essence, the project proposes a global shipping industry standard for defining, measuring and reporting information on operational performance in order to boost performance improvements internally in companies engaged in ship operation activities and provide an efficient communication platform about vessels' operational performance information to internal and external stakeholders through increased transparency, including regulators.

Working with The Norwegian Research Council, Marintek, Wilhelmsen and a wide range of industry stakeholders, InterManager has developed a global shipping industry standard for defining, measuring and reporting information on operational performance.

InterManager president Alastair Evitt, managing director of Meridian Marine Management, explained that at present about 1,000 vessels had been benchmarked. In order to gain critical mass, he said that figure needed to grow to at least 3,000.

Evitt said the project allows each individual owner/manager to benchmark a vessel's operation against others. It also allows the legislators to benchmark where the industry is in terms of vessel operations. They will be able to see trends developing one way, or another, before introducing regulations, once the scheme has been running for say 12 months. "Now all the questions can be asked the same way," he told *TANKEROperator*.

He stressed that the KPI project was purely aimed at vessel operations and not those of the shipmanager, either in-house, or third party.

A charitable trust has been set up on the Isle of Man – KPI Ltd - to manage the project. Evitt explained that InterManager had funded the project for two years and was now looking for other stakeholders/industry organisations to help.

Going forward, he thought that the costs could be covered by a "pay per use" type operation, as Evitt explained that it was never intended to be a commercial venture. The software to control the KPIs was developed by Limassol-based SOFTimpact.

InterManager vice president and chairman of the KPI project, George Hoyt, said at its IMO launch recently: "The KPI project is the greatest example of 'team work in shipping' that I have ever been involved in.

"Every member of the InterManager KPI working group, and the stakeholders who participated in the project, have made valuable contributions. The position we are at today could have only happened with their extraordinary level of co-operation and their common goal of self-improvement by creating solutions through collaboration.

"This tool can help us achieve higher levels of effective communication that will lead to greater levels of safety for our seafarers and efficiency for all operators. Given the proper support, this voluntary initiative will be a giant step forward in the industry's journey towards continuous self-improvement and higher levels of safety.

"Increased levels of transparency will also help us overcome many of the challenges that currently exist in boosting the image of the shipping industry," he concluded.

Turning to shipmanagement as a profession, Evitt said that shipmanagers were sometimes there own worst enemies in that to gain critical mass, some would undercut their fees and thus would not be able to give good value to their clients.

He thought that every single vessel was specialised in that it has its own risks and the attendant costs, especially seafarer recruiting and training. He said that a few years ago, there were people starting up shipmanagement concerns thinking that this sector was the 'golden goose'. "They soon found out otherwise," he said.

He agreed that in the last 10 years, or so, the standard of seafaring had fallen. He thought that this was due in part to the principle of ISM and the way in which it was implemented.

In some cases most of the shipboard management functions had been taken ashore and every operation on board ship must be reported to the shore management team. "The more that on board officers become involved in reporting, the less they are managing their own vessels," he said.

He thought that training on board should be revitalised in line with the recommendations contained in STCW 10. The enhancement of shipboard communications should help the seafarer, but the current trend of monitoring equipment from ashore diagnostically was taking away the opportunity for seafarers to gain experience with the equipment on board their vessels, if not properly managed.

"Technology should be used more constructively, not just as a spy in the camp," Evitt explained.

As for the various methods of training on offer, Evitt thought it should be balanced between the various methods available. He also said that seafarers should be consulted on training and that team management was vital both on board and ashore.

His policy on anti-piracy initiatives was that the owner/operator must risk assess every vessel passing through the area on a case-by-case basis. This includes the probability of whether to put armed guards on board, or not.

He said that InterManager sits on several committees, including the Save our Seafarers (SOS) initiative and receives feedback from EUNAVFOR. TO

The Shipping KPI Standard - Key Facts

- A voluntary industry initiative.
- Proactive relative to regulators.
- Meeting future transparency requirements.
- Informing public opinion.
- Provide consistent external performance communication.
- Indicating policy and regulatory implementation effects.
- Internal improvement.
- Fleet/industry benchmarking.
- Performance based contracting.

Ship supplier caters for crew nutrition

Longer voyages are fraught with potential pitfalls: from the ever-present threat of piracy on the high seas to today's increasingly extreme weather conditions, the modern day seafarers have a lot on their plate*.

But filling their plates with the right food at mealtimes is also proving to be a challenge for owners and operators looking to reconcile tight budgets with providing a balanced diet that holds its nutritional value, even after weeks at sea.

Living in typically confined environments on board vessels for prolonged periods of time leaves seafarers exposed to various ongoing health problems, including obesity and vitamin deficiency, as they choose convenience foods heavy in sugar and salt and low in protein to sate their appetites.

Poor diet hinders seafarers' ability to concentrate and perform practical tasks, which can have a devastating impact not only on the individual but also on the smooth running of daily operations.

These are tough times for shipping and the focus on streamlining operations is affecting all operational budgets, but the temptation to squeeze ship supply and in particular, food budgets, is a false economy.

Downgrading products too much can impact on quality and shelf life, leading to greater wastage. Instead, planning meals in advance and for longer voyages in particular, is crucial to get the best out of your products and deliver the best possible catering for your crew to keep them productive throughout long weeks at sea.

Much of today's fresh or chilled products have a shelf life of four to six weeks and frozen and dry food present little problem, if kept correctly. The real challenge during longer routes is keeping a steady supply of fresh fruit and vegetables. All good suppliers ensure that fresh fruits and vegetables are as new as possible and that the cold chain process has been maintained.

Correct cold storage is key – if kept at room temperature, many fruit and vegetables will lose the last four to seven days of their normal shelf life. Substituting products is also good practice and ensures that seafarers still get a nutritionally balanced diet with vitamins and minerals. Green salad and fresh herbs last around two weeks, but the chef can substitute these with dry herbs and Chinese cabbage for another two weeks, for example.

Ultimately, applying the first in – first out principle, keeping products fresh through the correct cold chain, covering products with a damp tea towel in the chiller and ensuring that products are purchased as fresh as possible will all help to ensure that seafarers can enjoy a healthy diet on board long voyages.

Raising standards

Despite volatile food prices, individual nations and organisations including the International Maritime Health Association (IMHA) are looking to raise diet health and safety standards. For tanker owners and operators, supplying a cost effective diet high in nutritional values for crew that takes in specific dietary requirements, such as allergies, or religion and meets with best practice standards has therefore never been more challenging.

Wrist's Robert Steen Kledal.

The practical steps to providing a nutritionally balanced diet are clear-cut, but the dietary requirements of the modern seafarer are complex. Recommendations from the International Committee on Seafarers Welfare are part of the Seafarers Health (ICSW) Information Project (SHIP), which has been promoted throughout the industry.

These include eating three servings of fruit and vegetables per day, drinking plenty of water and milk products and reducing the amount of meat (+/- 100 g), fat (<35%), sugar and salt you eat. ICSW also recommends that caffeine products such as tea and coffee should not be drunk more than three times per shift (eight hours) and not five hours before sleeping.

Aside from meeting these guidelines, owners and operators also need to consider that many crews include a proportion of seafarers that suffer from food intolerances or allergies. The global nature of shipping means that seafarers are diverse in their religious backgrounds, which also has an impact on specific dietary

"These are tough times for shipping and the focus on streamlining operations is affecting all operational budgets, but the temptation to squeeze ship supply and in particular, food budgets, is a false economy."

requirements for groups of individuals.

For example, seafarers from Eastern Europe tend to prefer bread, or potato-based meals, whereas Asian nationals expect rice. Vegetarians, food intolerances and allergies all add to the complexity of catering for today's diverse crews.

Although the reality of ensuring a healthy diet for crew can seem daunting, it is essential for the day-to-day running of the vessel. Napoleon said, "An Army fights on its stomach," and this holds true today, as maintaining a competitive advantage in the current tough economic conditions by over-delivering for customers is now vital to survival.

Fundamental to this is the performance of the crew. Keeping a happy, healthy and motivated workforce is tough in most industries, but for shipping, seafarers are put through rigorous daily tasks that test their physical and emotional wellbeing to the limit. Tanker owners and operators have to ensure that seafarers' time on board is as positive and productive as possible.

So, instead of cutting costs, the key is to introduce a solid business model for ship supply that will enable owners and operators to tick all of the legislative boxes while realising value for money and streamlining operations.

eProcurement

In response, ship supply is becoming more sophisticated and ensuring that product quality and specific dietary requirements do not need to be compromised. Alongside the emerging trend for outsourcing as a successful and proven business model for the ship supply sector, many providers are upgrading their software to integrate eProcurement into their services and for good reason.

Partnering with a ship supplier that has the capabilities to not only source and secure high quality products at a lower cost than smaller, independent ship chandlers, but also introduce integrated software solutions that can seamlessly manage menus and nutrition on a ship-by-ship basis is the future of ship supply where crew nutrition is concerned.

New programmes that can reconcile specific needs with a balanced diet, while generating menus that come in under budget, are on the horizon and will enable shipowners and operators to concentrate on the smooth running of daily operations.

Tanker owners, operators and seafarers themselves are under significant pressure to deliver, but by partnering with an expert when it comes to ship supply, some of this pressure can be alleviated.

The key realisation must be that ship supply is a critical component of day-to-day operations and as nutritional standards, seafarer dietary needs and the demand for cost savings are only set to increase, adopting a new approach to managing crew menus by making use of new IT capabilities and sophisticated purchasing capabilities that are coming on line makes basic business sense.

The International Committee on Seafarers Welfare Guidelines for healthy food on board merchant ships is part of the Seafarers Health Information Project (SHIP), which has been promoted throughout the industry.

For more information, including the guidelines, go to www.seafarershealth.org/ TO

**** This article was written by Robert Steen Kledal, managing director, Wrist Ship Supply.***

Fleet management information software success

Marseille-based software provider DocSea has supplied its fleet information management system (FIMS) to Algerian-based shipowner Nolis, which has three vessels on its books including a chemical carrier.

Other shipowners/operators recently signing up to the software include Marfret and Veolia Transport.

FIMS is an integrated system covering technical operations, such as maintenance, stock and documentation); purchasing and quality-safety, including crew, audits, certificates, events, drills etc.

The system has been certified by BV and is a web-based, user friendly solution, which is purchased by subscription only. The fleet management system is analytical with data access per ship, ship type, partial fleet, or the entire fleet. The three main modules can be designed to suit the customer, as the system has been designed to evolve.

No software is installed on the user's PC. On land and/or vessels having an internet access (Wireless, or 3G keys), the software is available directly via the web. The operator connects to a centralised database hosted on a server.

For vessels using a satellite connection, DocSea implements a server on board, which hosts the vessel's database. The crew can access it without requiring any connection. Then, when a satellite connection is undertaken, an automatic synchronisation updates both databases – on board and ashore.

Monthly subscription

Payment is via a monthly subscription, which includes the FIMS, updates and assistance. There is no license fee involved.

The technical module covers two main vessel activities – maintenance/documentation and parts management. For maintenance management, the system will set up a complete PMS per vessel category and per equipment, plus a single task preparation for each operation.

Planned maintenance tasks are listed based on multi-criteria search complete with short information flashes in small windows. Records are kept of each operation with the option of including comments, documents and the ability to be accessed by different management teams. Records are also kept of any unplanned maintenance.

History files are filed in a summary form and a library is available involving many aspects, including manufacturers' manuals, yard job cards, plans and administrative sheets, etc.

Inventory management includes all the items and spare parts listed relevant to the specific fleet, individual items on a detailed sheet per vessel, registering inventory IN or OUT with quick access, history file of system movements (IN and OUT) and the creation of purchasing lists in a 'purchase basket' format.

As for documentation management, this includes a corporate style library for all vessels, or on an individual vessel basis. Also available is a list of all the documents accessible via a multi-criteria research, plus to ability to add, validate, confirm and send to those who need the information. In addition, the system can register a new form via a multi-criteria research function.

DocSea's FIMS also offers other optional modules, such as the management of the entire supply chain, crew information management and embarking/disembarking management, documentation library management, register events on board a vessel, training sessions by way of drills management and log, plus feedbacks, audits, planning and other functions.

Server available

For those using a shipboard server with access to the shore, DocSea recommends the use of its own server- Boxer, which costs around €1,100 depending on the US dollar exchange rate.

The company said that it strongly recommended its own web hosting service, giving the company overall charge of data outsourcing. This will increase the efficiency of the updates and assistance when needed.

DocSea's exportation manager, Thomas Blanes claimed that the advantages of the system are –

- It is web-based, which enables clients to access it worldwide and benefit from a user-friendly interface.
- User-friendly interface: Because of DocSea's maritime related experience, the company kept in mind shipowners and shipmanagers problems, such as avoiding difficulties related to PMS implementation and crew acceptance. Consequently, DocSea developed a user-friendly solution, which can be used by anyone having some basic internet knowledge.
- Unlike some other systems, the client retains the ownership of the database and can extract it, or modify it, at anytime. There's no extra cost attached.
- The monthly fee can be integrated to vessels' operating cost, which limits the investment.
- It is dedicated to the maritime field and has been developed in collaboration with marine engineers who have many years sailing experience.
- Clients are offered help in creating a standard database, which they can modify and evolve depending on their needs and activities, which isn't possible with other systems.

Another plus point is that the business model is based on subscription, which includes system maintenance, updates and users' assistance. TO

Records should reflect reality

Human behaviour – what the shipping industry now terms as human element – is the common factor in most shipping accidents.*

Human element has become a focus point for the industry and has resulted in new requirements to assist in managing our behaviour and reducing accidents.

How many hours spent working or resting is one of the issues being addressed by shipping authorities with the ILO Work/Rest hour registration. The goal of the registration is to measure the actual human workload on board ships. STCW has defined and developed these rules over time.

To easily and efficiently record the hours of work and rest on board Wallem vessels, software specific to the job - ISF Watchkeeper 3 - is installed and must be used on all Wallem-managed vessels. It indicates if and when there is an exception based upon an individual's daily input of hours.

This software is also recognised by important marine industry institutions, including major oil companies.

Flag states, oil companies and class societies are now paying close attention to the records of work and rest in response to the increased focus on effectively managing the human element in shipping.

Violation of the rules is serious and could lead to fines, trade restrictions and other penalties. Port State Control representatives, in particular, are now focusing on correct work and rest hour registration. For example, the Australian Maritime Safety Authority (AMSA) has on some occasions been looking very closely at how the registration is being done and ensuring ships' staff are complying with the rules.

In the past, the work/rest hour registration has been approached as a paper exercise. This has resulted in the registration not reflecting the on board workload. Treating the process as just another administration task is dangerous, resulting in fatigue and the risk of accidents.

In Wallem Shipmanagement, procedures are 100% clear. The registration of work/rest hours must always reflect reality. If necessary, recording the information correctly will justify to the customers the need for extra personnel. It also means the master can manage the crew resources correctly and safely.

If a vessel's crew is overloaded with work, for instance caused by a hectic trading pattern, Wallem can respond by adding resources to eliminate any violations of work/rest hour rules and support safe working practices.

Used the right way and with an accurate reflection of reality, the work/rest hour registration is a very strong and supportive tool for Wallem sea staff to meet the many challenges in today's demanding shipping industry. TO

**This article was written by Simon Frank, fleet personnel director Wallem Shipmanagement and first appeared in the Wallem Group magazine – True North.*

Omers buys V Ships

OMERS Private Equity has purchased V Group, parent company of the world's largest shipmanagement company - V Ships - and its associated service subsidiaries.

OMERS said that it will support the further growth of the shipmanagement and related marine services group replacing Exponent Private Equity as V Group's financial partner in co-operation with the group's senior management.

Commenting on the transaction, Clive Richardson, V Group CEO, who will continue to lead the management team said: "I look forward to partnering with OMERS Private Equity in continuing to build a market-leading company delivering outstanding service and value to our customers.

"V Group has a tremendous future and the management team is excited in working with our new partners in the next chapter of growth in our business," he added.

Mark Redman, senior managing director of OMERS Private Equity in Europe commented: "V Group has an attractive and differentiated outsourcing-based business model and is led by an exceptional management team. We believe that V Group's extensive global network, track record of profitable growth, compelling customer value proposition and breadth of services provides significant long-term potential. As a global leader operating in robust and growing segments of the market, we believe the future opportunities for V Group are extremely attractive."

Financing for the transaction with an enterprise value of $520 mill was provided by RBC Capital Markets. V Group was advised by Lazard, with further transaction support provided by Allen & Overy, PricewaterhouseCoopers, Deloitte and BCG. Kinmont and Travers Smith advised V Group's management.

According to agency reports, Omers had entered exclusive negotiations with Exponent after talks over a sale to Charterhouse Capital Partners, a UK-based private equity group, had collapsed at the last minute.

It was reported that Charterhouse had revised its offer after a disagreement with the management of V Ships' Norwegian business over the terms of a buy-out.

Exponent, which targets UK mid-market companies with a value of up to £350 mill, bought the group in 2007 for $338 mill. Following the purchase, Exponent brought in a new management team and expanded the group through acquisitions in Norway, Dubai and Singapore. TO

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Real value of VSAT yet to be unlocked

For many years the development of communications at sea has focused on one thing - the safety of ships and their crews.

The necessary investments in major satellite infrastructure by organisations such as Inmarsat, and the complex nature of the technology translated into costly terminals and airtime for shipowners and operators.

Until recently, traditional L-band services dominated and there was little choice when it came to the type of communications system fitted, but the advent of Time Division Multiple Access (TDMA) VSAT networks has ushered in a whole new era of opportunity.

Offering flat-rate, always-on IP connectivity these TDMA VSAT networks have increased from less than 20% to more than 50% in the maritime market in the past five years making VSAT one of the hottest topics in maritime communications. With them comes the opportunity for ships to become highly functional remote offices, integrated with corporate networks and other applications including those to improve vessel management, extending the communications infrastructure to personnel on board and allowing crews to train and remain in contact with home.

But for a technology with the potential to transform the way shipping companies operate there has been a surprising lack of real data about how ship operators are actually using and benefiting from their VSAT systems, what applications are making a difference and what the real costs and savings are likely to be. With a flood of new entrants into the maritime VSAT market, keen to take advantage of the projected increase in VSAT fittings, ship operators are now faced with a range of competing requirements and suppliers and little hard data to help them evaluate whether VSAT could be the right choice for them.

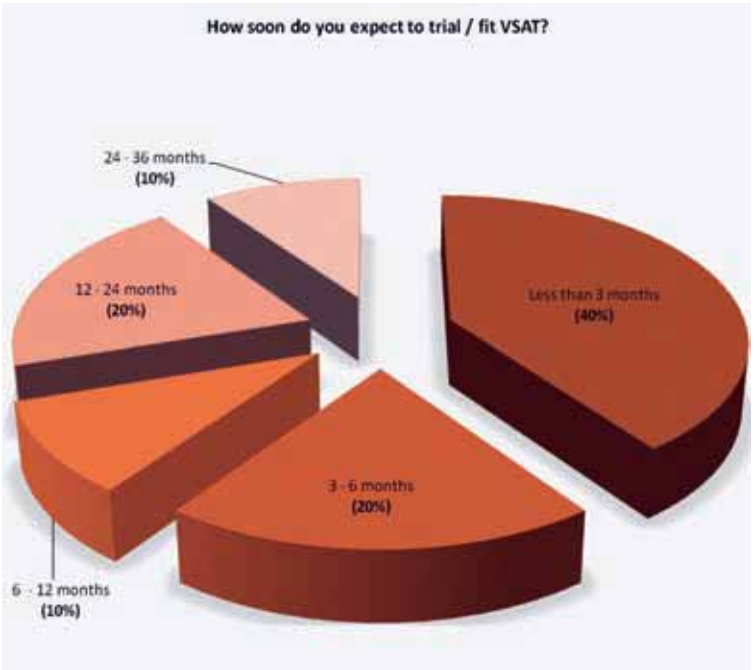
Claiming to occupy a unique position in the VSAT market, Herndon, VA based iDirect set about providing reliable data in the form of a survey. With 47% of all VSAT enabled vessels carrying an iDirect router on board and with 12 of the top 15 maritime communications providers using iDirect technology as part of their solution, the company claimed to be well positioned to carry out such a survey.

As a result, iDirect commissioned specialist maritime marketing consultancy Stark Moore Macmillan to undertake what is believed to be the first comprehensive independent survey of maritime VSAT. Stark Moore Macmillan canvassed both existing VSAT users and potential VSAT users, conducting in-depth telephone interviews with CIOs, CTOs, fleet and technical managers and IT managers across 60 shipowners/operators having 10 or more vessels on their books. This sample represented 5,500 vessels, or 13% of the world's commercial trading fleet of 1,000 gt or over.

In both potential and existing user groups, tanker operators were well represented with more than 50% of the existing VSAT user sample being in the tanker market. "The predominance of tanker operators in the existing VSAT user sample highlights the use of VSAT in specialist sectors," explained Stark Moore Macmillan CEO Roger Adamson. "The benefits VSAT can provide in terms of vessel operations and safety management means Tanker operators have been strong adopters of the technology. This, combined with a falling price point, means that we are now seeing more Tier 2 operators entering the market."

And according to the findings, made

iDirect's Christian Bergan.



available by iDirect in a free whitepaper, VSAT: Present & Future. A comprehensive survey of maritime VSAT, the adoption of the technology shows no sign of slowing. With nearly 30% of the market considering, or ready to implement VSAT within 24 months, iDirect said that it was essential that the data was shared with shipowners to help them make better decisions about their communications investment.

More data needed

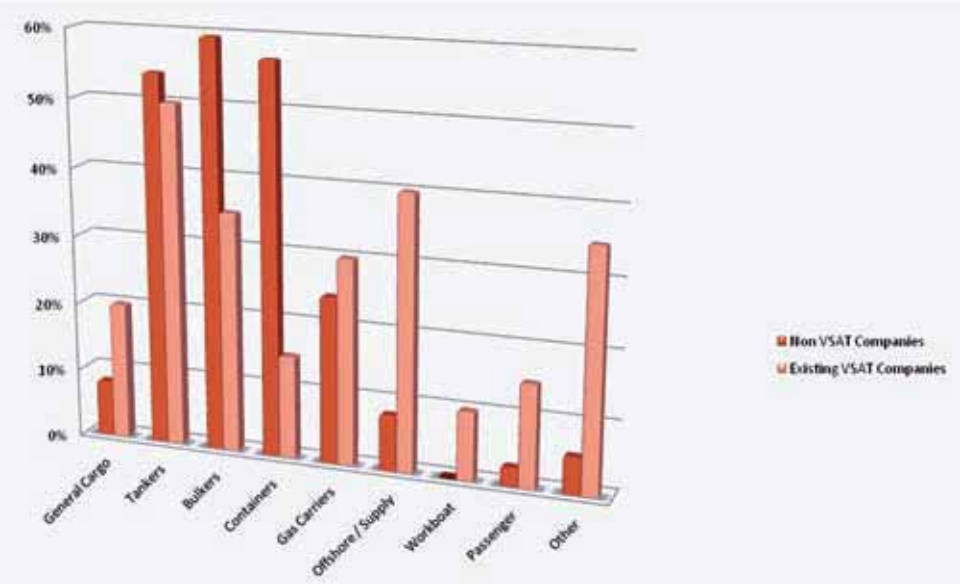
"The survey confirms what we've heard anecdotally for some time, but ship operators require more comprehensive data on which to base their investment decisions," said iDirect's Christian Bergan, director of maritime market development. "We concluded that sharing the findings would be of benefit to the maritime community as a whole by encouraging shipowners, operators and suppliers to focus on how they go about quantifying the value of VSAT and its potential to improve maritime businesses."

It is a fundamental weakness in this ability to quantify the value and cross-business benefits of VSAT that the survey has exposed. While knowledge and understanding of VSAT systems was higher than anticipated with only 7% of respondents indicating that complexity was a reason not to fit, when questioned about the comparative costs of their VSAT systems versus L-band, the survey produced apparently conflicting results. With the average monthly VSAT spend at $3,500 per month it is considerably higher than L-band services. However, when asked whether the VSAT system had saved money, 20% of respondents claimed they had saved money, while 60% claimed they had seen their costs double.

According to Adamson, this finding goes to the heart of the VSAT issue. "Those ship operators who have attempted to quantify the costs of VSAT have done so simply by comparing the basic cost of fitting and running a VSAT system as opposed to their L-band system.

"No vessel operator had included the cost savings realised elsewhere in the business resulting from the introduction of VSAT and the applications they now had access to. The result is that even those who believed they had made savings had no way to demonstrate them," he said.

That inability has major implications for the adoption of VSAT systems in the maritime market. "The 30% of ship operators considering fitting VSAT within the next 24 months must try and evaluate the benefits of the system, but currently lack the necessary methodology to do so," warned Bergan. "These findings confirm that ship operators need to migrate communications away from the operational IT remit and towards its new position as a core strategic cross-business function, which needs to be driven at senior management level."



Over 50% of tanker companies use non-VSAT communications.

Senior level

It is at that senior level that the decision to implement applications, such as enterprise resource planning (ERP), weather routing, video conferencing, ECDIS updates and regulatory data are being taken in response to challenges, including environmental compliance, bunkers, safety and competitiveness.

But when it comes to the communications backbone necessary to successfully deploy these applications across the fleet, namely the always-on, flat rate IP broadband provided by VSAT, evaluation is predominantly still an IT remit. Adamson pointed out that shipping company senior management are preparing to spend large sums on ERP solutions to drive efficiencies in their business, but are in danger of jeopardising these by not having an adequate communications infrastructure in place.

"The survey confirms that in the vast majority of cases senior management are not involved in VSAT purchase until the final purchase decision is being made," he said. "By failing to equip their staff with a methodology to quantify efficiency savings they are taking decisions based on the IT cost to the organisation rather than on cross-business value and that could be damaging in the long term."

Another interesting finding is that improving crew welfare, for so long a major benefit of VSAT, is no longer the driver it once was. Stark Moore Macmillan pointed to the fact that supply and demand are now broadly in balance in the seafarer market as an explanation for this change in emphasis. However, the overall picture confirms the widespread belief that VSAT is set to increase its penetration of the maritime market.

As major adopters of the technology and representing such a major part of the survey sample, it's clear that tanker operators are struggling to understand their communications in the context of a strategic business investment. And while with 30% of the maritime market looking to fit VSAT within 24 months, the headline finding of this survey might appear rosy for iDirect and its partners, Bergan would still like to see a greater understanding by the shipping industry of the benefits of VSAT to their business.

"To have the market opportunity confirmed is welcome, but the findings have much broader and more profound implications for shipowners and maritime communications providers.

"Education of the market by VSAT operators is key to setting realistic expectations within shipping companies, as is guiding them to the methodologies, which enable the holistic benefits of a VSAT investment to their business to be quantified. This will allow ship operators to harness the potential of VSAT while enabling providers to demonstrate the true value of their VSAT proposition," Bergan said. TO

The full results whitepaper can be downloaded free from the iDirect website at http://www.idirect.net/Applications/Maritime-Connectivity/VSAT-Present-and-Future-Research-Report.aspx

Virtual Arrival lauded by EC

Although not new as several tanker operators have been trialling the system, members of the European Commission, industry professionals, as well as stakeholders in the shipping industry attended the European launch of Intertanko/OCIMF's Virtual Arrival project in Brussels last June.

Virtual Arrival is a voyage management optimisation and vessel emission reduction tool, being an agreed and managed optimisation of a vessel's passage speed. Trials implementing the project have reduced a vessel's fuel consumption and consequent CO_2 emissions in some cases by up to 22%.

David Cotterell, OCIMF director, said: "The Virtual Arrival scheme is a long term, sustainable and practical process that rationalises the transportation chain and provides real benefits, such as cutting vessel emissions through fuel reduction, improved safety, and potentially reducing unnecessary port congestion".

Both organisations have collaborated to ensure that the Virtual Arrival project uses similar technical and operational measures to reduce greenhouse gas emissions in support of the aspirations of the IMO and the United Nations Framework Convention on Climate Change (UNFCCC).

Joe Angelo, Intertanko director, said: "This project has been initiated by the industry and is a testament to shipowners' commitment to reduce CO_2 emissions from maritime transport. Virtual Arrival ensures a chain of responsibility and involves key stakeholders leading to increased co-operation and the removal of potential commercial obstacles".

How does it work?

Virtual Arrival is a process that involves making an agreement to reduce a vessel's speed on voyage to meet a revised arrival time when there is a known delay at the discharge port.

Reducing the vessel's speed will have a direct impact on fuel consumption, reduce emissions from the ship, improve safety and environmental concerns connected to congestion in ports and get the right amount of cargo to the right port at the right time. This results in a reduction in emissions but not in the delivered cargo capacity.

Before a vessel's departure from the load port, or while en route to the discharge port when a delay is identified at the discharge port, for example due to lack of receiving space, there is a mutual agreement made between two (or more) parties to adapt the ship's arrival time to take advantage of the delay.

Consequently, an agreed charterparty clause that establishes the terms for reducing the speed to adapt to the new arrival time is identified. An agreement on how to calculate and report the performance of the vessel is then made, and may sometimes involve a trusted weather analysis service provider (WASP).

On completion of the voyage, the WASP produces a final report providing analysis and data to confirm the vessel's 'virtual arrival' time, together with calculations of fuel saved and emissions reduction, including the impact of weather, sea and current conditions on the voyage.

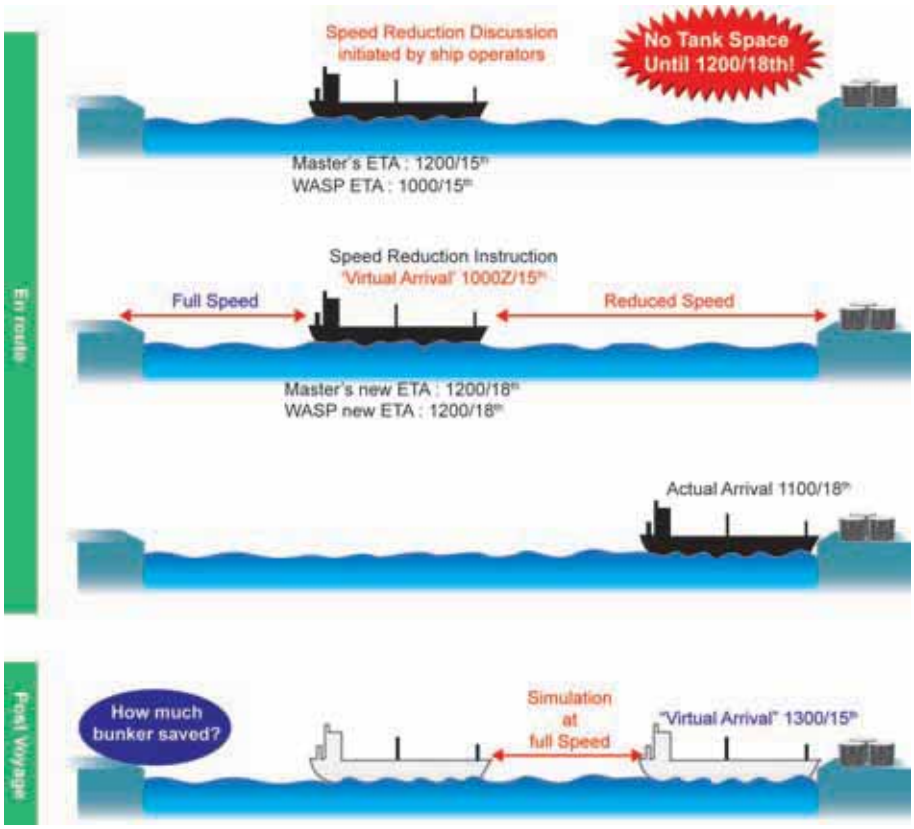
The agreed time of 'virtual arrival' – the deemed arrival time – is used to calculate the fuel and emissions savings and is also used as the laytime starts when considering demurrage exposure.

It is intended to be a dynamic and flexible process and, if conditions change on voyage, the orders can be revised to enable the vessel to achieve a different required time of arrival (RTA).

Clear commercial arrangements lie at the heart of Virtual Arrival, which requires the following pre-conditions –

1) A known delay at the discharge port.
2) A mutual agreement between the shipowner/operator and charterer. Other parties may be involved in the decision making process, such as terminals and cargo receivers.
3) An agreed charterparty clause that establishes the terms for implementing the system.
4) An agreement on how to calculate and report the performance of the vessel, including the methodology to be used to determine speed and fuel consumption, the estimated Virtual Arrival time based on normal service speed and anticipated weather, the RTA, the speed or rev/min to achieve the RTA and the bunkers on board at the Virtual Arrival decision point.
5) An agreement on how to assign benefits between the parties involved.

Janet Strode of the International Parcel Tankers' Association said; " This is something that many in our (chemical tanker) industry



Virtual Arrival is subject to clear commercial arrangements.

have been doing for years where possible.

"We don't call it virtual arrival, however – we just call it good strategic planning. The operative phrase, however, is 'where possible', since it is not unusual for a chemical tanker to have multi-port and multi-berth loading and discharging sequences on a single voyage, with a wide variety of cargoes for many different charterers.

"This is, of course, totally different from the crude oil trade loading one to one followed by a ballast leg back to the loading area.

"We (IPTA) commend the oil company/oil tanker initiative on 'virtual arrival' for that trade but the simple logistics involved are a million miles away from the complexities of chemical/parcel tanker operations," she explained.

TO

Changing role of the ship's agent

A vessel's agent comes in many forms from part of a large multi-disciplined organisation to a one-man operation armed with just a suitcase.

Down the years, the role of the ships' agent has changed dramatically. He or she now needs to become involved in many services that today's ship operator/owner demands.

According to Wilhelmsen Ship Services' (WSS) Frederic Fontarosa, the ships agency is the most advanced, most efficient link in the maritime chain.

Fontarosa explained that the biggest change in ships agency operation in the last 50 years has been communications and the way this has changed and developed.

Many vessel operators can be operating between four to 16 vessels worldwide at any one time.

Huge amounts of time are spent on communication, as emails and messages are sent across the world. Fontarosa explained that it is estimated that just one single, standard port operation taking place between and operator and an agent relating to the same vessel, cargo and port can take up to 60 days to agree and complete!

Ships operators have to spend much of their time communicating backwards and forwards with vessels' agents on cost and quality of service. With some agents, operators have to deal with a fragmented service resulting in cost control becoming a real issue.

"Agents are being squeezed by increasingly cost conscious owners/operators for the same amount of service," Fontarosa said.

He outlined what he thought were the major inefficiencies of a traditional ships agency.

- Unpredictable agency performance.
- Fragmented local suppliers.
- Time consuming administration.
- Limited cost control.

He said that WSS is looking at these issues and is working with its customers all over the world to address these problems.

Last year, WSS' introduced its Ships Agency Redefined offer (SARD), which is currently growing rapidly at a rate of one new contract every day.

The SARD concept is a 'one point of contact' global system for the efficient provision of ships services. The company is now operating 150 SARD contracts worldwide, of which more than one third are based in Asia.

Fontarosa explained: "Customers are taking advantage of the SARD scheme and benefiting from its' unique efficiencies as a result of a globally-co-ordinated approach, which streamlines and simplifies the way multiple port calls are managed by Wilhelmsen Ships Service."

"Having one point of contact worldwide means improved communication, with each team working in the same time zone and speaking the same language as its customers, wherever the worldwide port call may be. In addition, predictable pricing and a single bank account for all payments mean easy access to online job and tracking information," he added.

TO

EU's import control system

Inchcape Shipping Services (ISS) has continued to develop its offering for handling the EU Import Control System (EU ICS).

This is for the Advanced Cargo Declarations for each customs territory within the European Union, which became mandatory in January 2011.

The above regulation adopted throughout the EU, plus Norway and Switzerland, requires carriers to declare all cargo arriving in the region, including oil and chemicals, by providing an advance cargo declaration to the customs office at the first port of entry.

For the first six months of 2011, the EU agreed to a grace period allowing the new system to settle. This leniency period ended on 30th June 2011.

The ISS team claimed to have built up considerable experience in the varied scenarios, which can arise and now uses this experience to provide a quick and efficient service to its customers.

ISS found that not all carriers had applied for their Economic Operators Registration and Identification (EORI) - an item that ISS quickly attended to.

Another example was when the electronic customs link is temporarily unavailable and with a vessel due to arrive, the potential to miss the declaration deadline was imminent. However, through ISS' own network, the company was able to ensure the carrier was in full compliance and no delay was caused to the vessel's schedule.

The EU ICS is managed both operationally and financially by ISS UK. However, in order to provide a dedicated and cost effective resource 24/7, ISS operates the technical declaration from its own service centre. This centre provides data entry and hub management solutions and is manned 24/7 for the completion of all declarations within the shortest time possible. By using just one point of contact, ISS said that it is able to offer an EU-wide solution to complete declarations promptly in all countries within the territory.

Looking forward, ISS said that it will continue to develop the hub offering to its clients to ensure future needs are met. It will also be capable of handling the export declarations, which form part of the legislation and which are due to become compulsory later this year for all cargo being loaded from EU ports.

ISS' UK co-ordinator, David Wilson, confirmed to *TANKEROperator* that the new legislation definitely applies to the oil and chemical tanker markets, as it is applicable to all cargoes coming into the EU.

For example, oil concerns Finaval, Tata and Trafigura are just a few of the companies that have taken advantage of the ISS solution to ensure legal compliance.

TO

Reliability in any condition

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HATLAPA HAS BEEN MANUFACTURING marine equipment for the merchant shipping industry for over 90 years and is also well known in the offshore industry. As the offshore industry has shown extensive growth in the recent past, HATLAPA further developed its winch portfolio to meet specific offshore requirements, especially for anchor handling.

Over the years, continuous internal improvements and product developments have made HATLAPA the well established global organisation it is now, striving to meet different industry standards, including tough offshore regulations. HATLAPA's products are well known for their quality and reliability, which is particularly important in the offshore sector.

Founded in 1919 in Germany, HATLAPA Marine Equipment has continuously grown and presently employs over 400 staff worldwide. The company's main production facility remains in Germany, with some of its larger steering gear being manufactured in South Korea. Additional sales and service offices include China, Cyprus, Norway, Singapore, UK and USA.

HATLAPA's product portfolio includes a wide range of deck machinery (winches for AHTS and research vessels, anchor and mooring winches, capstans, etc.), air and water cooled compressors and steering gear (ram type, rotary vane and others).

In addition to its high quality products, the company is renowned for its comprehensive fleet support, ranging from troubleshooting to on-board repairs and supply of spare parts – for its own products as well as for other brands. HATLAPA's global service network allows the company to act fast to support enquiries all over the world.

• For further information see www.hatlapa.de or email us on info@hatlapa.de.

HATLAPA'S PRODUCT PORTFOLIO INCLUDES A WIDE RANGE OF DECK MACHINERY (WINCHES FOR AHTS AND RESEARCH VESSELS, ANCHOR AND MOORING WINCHES, CAPSTANS, ETC.), AIR AND WATER COOLED COMPRESSORS AND STEERING GEAR (RAM TYPE, ROTARY VANE AND OTHERS).

International Group clarifies position on piracy

The International Group of P&I Clubs (IG) has made it clear that no member clubs maintain lists, confidential, or otherwise, of maritime approved security providers, despite media reports to the contrary.

IG member clubs individually and the group collectively, are reviewing maritime security contracts in use to check that the terms of such contracts do not infringe, or potentially infringe cover or the entitlement to pool claims arising.

This allows the IG clubs' shipowner members to be aware of the extent, or otherwise of their insurance cover for liabilities arising as a consequence of the actions of maritime security providers.

The purpose of this exercise is not – nor is it intended to be – to create lists of approved or non-approved security providers and no such lists are maintained, either by IG member clubs individually, or by the IG collectively, Andrew Bardot, secretary and executive officer said in a statement.

Recently, the IG re-issued its guidelines to member P&I clubs' correspondents. The revision was published to include reference to the recently introduced UK Bribery Act 2010.

The Act, which came into force on 1st July, represents probably the most extensive anti-bribery legislation and compliance with its provisions represents best practice in combating bribery worldwide, the IG said.

It is essential that all P&I club correspondents and those instructed by the correspondents to assist, strictly comply with the standards set by the Act, the organisation warned.

Under the Act, the criminal offence of bribing is defined as offering, promising, or giving financial, or other advantage to another person – whether in a private, or public position – intending to induce, or reward that person for improperly performing a relevant function, or activity. What amounts to a relevant function, or activity is widely defined.

It is also an offence to offer, promise, or give financial, or other advantage to a person where it is known that acceptance would itself amount to improper performance of a relevant function, or activity, the IG said.

Criminal offence

If the above conditions are satisfied, the party being bribed is also guilty of a criminal offence and they will also be guilty where a relevant function, or activity is performed improperly in anticipation, or in consequence of them requesting, agreeing to receive, or accepting a financial, or other advantage.

The IG pointed out that even when an official outside the UK is offered, promised, or given any financial advantage with the intention of obtaining, or retaining business, or an advantage in the conduct of that business, an offence is committed even when there is no intention to induce improper performance of that official's business.

The offences mentioned above clearly criminalise the so called 'facilitation payments', which are normally small bribes paid to facilitate routine government action. No matter how small, or how well established the practice is in any jurisdiction, such activities must not be allowed to happen, the IG said.

P&I correspondents need to be aware that where bribery is committed by someone associated with and in order to obtain, or retain business, or an advantage in the UK, which may include many members and the clubs themselves, that organisation may be prosecuted for an offence of 'failing to prevent bribery', even if that party has no knowledge that an offence had taken place.

These associated persons could include correspondents, lawyers, surveyors and other service providers. Therefore it is very important that correspondents secure compliance with the necessary conduct standards from those whom they engage, the IG said.

Money laundering

In addition, correspondents should take care to ensure that they, their sub-contractors and third party service providers do not contravene any applicable anti-money laundering, or tax evasion legislation in the jurisdictions in which they operate. Carrying out financial transactions that are not in accordance with normal business practices may give rise to a criminal offence.

The UK-based P&I clubs operate under strict controls and are regulated by the UK's Financial Services Authority and as such, are required to comply with the general law on money laundering.

Another problem that could occur is the result of sanctions. Economic and regulatory sanctions imposed by the UK, EU, UN and/or US, whether directly or indirectly, will ultimately impact on the measure of assistance that clubs can offer members in countries, which are subject to any form of sanctions. The IG pointed out as an example - the ability of clubs to help members obtain a letter of undertaking, or bank guarantee, to secure a claim.

As the situation regarding sanctions is constantly changing, correspondents are advised to contact their clubs for further advice, where specific guidance is needed. TO

IG member tonnage*

Member	Mill gt
American	15
Britannia	103
Gard	135
Japan	89
London	38
North	108
SOP	13
Skuld	65
Standard	84
Steamship	58
Swedish	31
UK	104
West	48

**As at 20th April, 2011.*

Protecting liabilities in STS operations

Resolution IMO MEPC 186(59), ratified by flag administrations last year, adopted industry guidelines for an approved STS Plan to be placed on board tankers larger than 150 gt*.

Although the resolution was ratified within the MARPOL convention in order to address procedures for the protection of the marine environment against oil pollution, it made reference beyond statutory compliance by indirectly involving owner's liabilities against exercise of their due diligence.

According to statistical data, STS operations have proven to be safe providing that 'sound management' is performed. This is the industry view, which has already been pointed out in various references either by OCIMF, or at the IMO prior to the resolution's ratification.

Owners' liabilities in STS operations and their relation to the new MEPC resolution was discussed at a recent STS event organised by Thomas Miller UK P&I Club and ONLINESTS.NET together with the participation of FENDERCARE UK.

About 100 delegates, representing mainly Greek owners, attended the event. More than 50% of the delegates considered that the new resolution would increase shipowners' liability. In addition, more than 68% expressed the opinion that the new resolution will make STS operations safer while only 15% considered that it would make STS transfers more complicated.

The above shows that this resolution is on the right path, however, the maritime community anticipated further initiatives from a statutory point of view, or another industry initiative that would supplement the resolution and therefore legitimately cover the gap introduced from the industry guidelines used for the STS Plan development.

Tanker owners and operators' concerns are focused as their masters have to take the final decision and bear the liability for the safe fulfillment of the STS operation. This is clear and undisputed by national STS legislation, as well as in most STS clauses included in the charterparties.

In addition, a very important factor which should be taken in to account when organising an STS operation is the effect of commercial interests and the time constraints they introduce. Therefore, tanker operators should develop procedures that vet all the third parties involved in a timely fashion while keeping the associate logistics at a practical and effective level for all parties. These include the participating vessels, STS service providers, POAC's and local national administrations.

As part of the screening procedures and policies, confirmation should be attained from those third parties that are able and willing to

New STS regulation will increase owners' liability. Photo credit Onlinests.net

Due diligence should always be undertaken before an STS commences. Photo credit Onlinests.net

follow all the required and recommended safety and statutory rules. Since the responsibility cannot be hoisted on a sub-contractor, or other participating companies, shipmanagers to the best of their knowledge should always perform a thorough check with respect to the qualification and credibility of the participants. This concept, known as due diligence, should be always followed by shipowners. In addition, when they are vetted or audited by industry organisations, they should be able to prove that they always exercise their due diligence.

At the beginning of this year, a unique database for STS operations' assessments was introduced by ONLINESTS.NET. This service is based on an information system for recording and evaluating the performance of all participants in STS operations via assessment reports. The assessment reports are based on a five minute questionnaire focusing to the most critical factors of the STS operation. All the reports are logged automatically into a dedicated database held with DYNAMARINE and are statistically analysed. The reports are classified and remains available only to the subscribed company.

Ships, participating in this database, have a standing order form their managers, to assess

each STS operation by submitting the questionnaire after the completion of the operation. In return, managers can extract from the database various consolidated statistical data referring to the performance of their fleet, the participating vessels, the STS operators and the POACs (Person in Overall Advisory Control). This information is instantly available and useful for exercising their due diligence and for accelerating the clearing process. Aditionally, each company can extract customised KPI's, in to order define and manage the risk as well as to set up performance goals.

Once STS operations' liability lies with tanker's owners, they have to ensure on a proactive basis that all participating parties, such as STS service providers and POACs comply with the resolution's requirements. This is not as simple as it seems. For example, as noted in the Oil Pollution Manual, Section I, Prevention of Pollution, paragraph 6.2.1.2, a POAC should have a thorough knowledge of a ship's STS Plan and this obviously has to take place prior to the operation's commencement. In addition, a similar procedure should take place regarding the quality assurance of the STS service provider, as per paragraph 2.5 of latest OCIMF/ICS STS guidelines.

In order to prove that they exercise due diligence with all the participating parties, managers should perform a number of well co-ordinated actions on a proactive basis, without complicating the already difficult logistics of such operations. In order to have the logistics optimised ONLINESTS.NET, acting always on behalf of managers, has introduced a methodology for quantifying the quality assurance of the STS service providers in line with OCIMF's coming guidelines. Furthermore ONLINESTS.NET has also introduced a standardised POAC CV, focusing on the resolution requirements and operational needs. By using these tools, data from both the STS service providers and POACS may be integrated into the STS database as a module, available for all.

Charterers also have their duties in the STS organisational chain since they assign and hire the STS service providers and POACs, while tanker owners bare the liability of STS operations' safe conduct. In this respect, charterers should co-operate with tanker operators and assist them while they exercise their due diligence.

The adoption of the STS Plan as a statutory reference becoming part of companies' policies will eventually exceed the legal dictat of OCIMF/ICS (2005) guidelines appearing in the charterparties. The critical question raised is that should a shipowner adopt policies in his/her STS Plan that are strict and therefore raising commercial implications, what are the legal rights of the charterer as per the agreed charterparty?

For example, OCIMF/ICS (2005) does not mention any specific guidelines related to night mooring operations although a shipowner might have adopted a strict policy forbidding night mooring operations during STS. In this case, should the charterer arrange a night berthing operation, an implication might arise resulting in the off-hire of the chartered vessel. In this respect, before a charterer accepts a vessel for a time, or voyage charter, he/she should revise and assess the adopted policies, as per the approved STS Plan and furthermore, the STS Plan should be referenced in the charterparties, thus becoming a legal supplement to the agreement between the charterer and owner.

ONLINESTS.NET has concluded that the possible diverse policies of various STS Plans may be identified and be integrated as a module of the STS information system in order to be evaluated by charterers when vessels are on subjects before becoming fixed.

The screening and risk assessment procedures of the nominated vessels performed by managers on a proactive basis, has to take into account past performance data, as well as classification and inspection's data - such as data from Port State Control Inspections. These procedures, however, have to take into account the time constrains and commercial needs of STS operations without adding difficulties to the already complicated chain of events.

The introduction of a risk management methodology incorporating parameters on a proactive, as well as post analysis function for STS operations, is a positive action towards the exercising of due diligence. In addition, the seafarers' accumulated experience will be recorded. In this way, management companies will develop an effective way of accounting for the introduced risks.

The commercial need of STS operations is recognised without any doubt from all the community, from shipowners and operators to charterers and oil majors. Shipowners are aware of the encountered risks and their liability exposure and thus they are willing to maintain a high reputation profile by combining their screening procedures and policies with state-of-the-art information management systems, as well as assessments of past STS operations.

DYNAMARINE has experience in the owners' liabilities that emerging from STS operations through its past involvement in relevant projects with charterers, traders and commercial operators. The company followed the resolution prior its ratification and in order to address its concerns, the ONLINESTS.NET service was created, which is solely devoted to STS operations.

"We believe that we have introduced to the maritime community and all STS participants individually a variety of supporting services as modules of a global information system towards safe, diligent and effective STS operations," the authors of this article said. TO

**This article was written by Dr Alexandros Glykas and Dr Stelios Perissakis, STS consultants with Dynamarine.com*

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UK shiphandling training centre upgraded

This is because the insurance underwriters and P&I clubs are worried about the increase in casualties, mainly involving groundings and collisions, which they blame on human error.

Several industry luminaries have blamed this on the current trend of promoting officers before they are actually ready. It has evolved due to the perceived lack of officer material coming through the ranks.

Once training has been given and a certificate issued, the navigators are not given sufficient regular refresher courses to keep them up to speed with modern ship design and equipment developments, according to leading industry organisations. As a result, there is more pressure being put on masters and pilots, especially given the need to take into consideration the increased liability question following an accident, or incident.

One UK-based training academy offers various courses, both via simulation and by model ship handling. The two training methods can be combined, depending on the needs of clients.

Warsash Maritime Academy, part of Southampton Solent University, has offered manned model shiphandling training for masters, pilots and senior navigators at Marchwood, near Southampton, for more than 30 years.

However, a few years ago, the academy realised that the lake in use was rapidly becoming unfit for purpose and its lease was due to expire in 2010. The result was that the shiphandling trainers started to look for a new site. Around 18 lakes were examined, before the Southampton Solent University decided to purchase Timsbury Lake, located near Romsey, Hampshire.

In today's maritime world, there are questions being asked regarding the competence of some senior navigating officers.

The lake was purchased by Southampton Solent University in April 2009 for around £2.7 mill. Following a complete redesign, accomplished without upsetting the local wildlife that lives on, or in the lake, the topping out ceremony was held on 23rd March, this year. The whole project was finished the following month and the first training courses afloat were held in early May.

Slow speed control

Today, the 10-acre lake has one large and several smaller islands and a canal, which includes both straight and curved elements at one end and has a scale length of four miles. The lake's depth varies from 1-2 m plus 0.9 m in the curved canal section and some harbour areas, which the academy said was ideal for slow speed control and demonstrating the effects of shallow water shiphandling.

Around the shore some 19 jetties and multiple berths, offering a number of shiphandling challenges were built. The berths are a mix of fixed, floating and solid base structures. These are complemented by buoyed channels, critical bends and turning basins that can be combined to achieve the various courses' objectives. The surrounding woodland acts as an effective wind break, meaning that training can be undertaken in most weather conditions.

The whole complex was designed to give the navigators and pilots a realistic feel of slow steaming in shallow water conditions. "It is a very effective way for shiphandlers to train," Warsash's new director Andrew Hair said at the official opening ceremony last June.

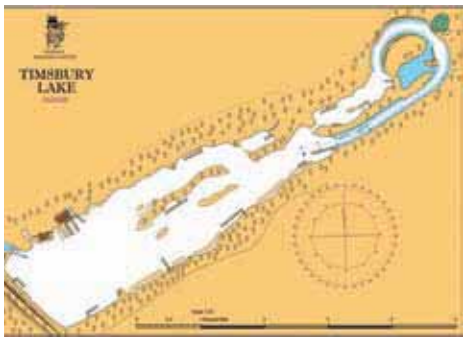
He explained that the training was aimed at slow speed control when navigating in or out of ports and harbours, plus transiting through narrow channels with shallow waters. The centre is designed to handle between six to eight candidates per week. Hair explained that model shiphandling courses can offer more exercises than simulators. However, he said that the two can be combined by putting aside two, or three days for each discipline.

In addition, a teaching/administration building, plus a workshop complete with a wet dock and a five tonne SWL overhead lifting gantry were constructed alongside the lake. The latter is used to maintain the ship models.

Seven models

The focal point for the training are the seven ship models, which are controlled by two persons sitting in each model, which is propelled at a maximum of three knots by an electric motor. The three knot speed is the equivalent of 15 knots in real terms, while each model has been built to a scale of 1:25.

Hair said that the academy was looking into



Timsbury's revamped lake.

One of the models in the warehouse.

The shuttle tanker seen on the lake.

expanding the number of models on offer at Timsbury. Each model costs around £150,000, depending on the type chosen.

In addition to the seven ship models are four tugs – one of Azimuth stern drive, a Voith Schneider water tractor and two steerable Kort Knozzle fitted tugs. These can be used for navigator/pilot training while under tug escort and for port/harbour shiphandling duties.

Among the ship models is a 300,000 dwt VLCC of 344 m in length; a 140,000 dwt twin-screw shuttle tanker of 272 m in length; a smaller VLCC of 210,000 dwt and 324 m in length; a Panamax of 225 m in length; a 40,000 dwt tanker of 177 m in length and a 150,000 dwt OBO of 304 m in length. Some of the models can double up as drybulk carriers, an LNG carrier, a car carrier and a twin screw ro/ro ferry of 160 m in length.

Models can be used for a wide range of shiphandling scenarios. Some can be reconfigured to operate with different rudder types, while four are fitted with bow thrusters. Most have operational anchors and exercises can be conducted to practise normal anchoring procedures, as well as manoeuvring using anchors. In addition, each model can be ballasted with a combination of water and solid ballast, which can be configured to provide loaded, part loaded, or ballast conditions at different trims.

Hair explained that Warsash operated the only shiphandling centre in the UK and there were only five in the world. The courses offered are aimed at vessels' masters, senior officers, pilots and berthing masters from shipping companies and pilotage authorities worldwide.

There is a two to one ratio between trainees and trainers and courses can be adapted to meet specific needs, including shiphandling introduction, pre-promotion assessment, or refresher courses.

New courses

As well as increasing the number of ship models, the academy is also unveiling new courses this year. These include a formal half-day shiphandling assessment, following a four and a half day course and masters and officers combined courses on a ship's bridge simulator followed by the lake model shiphandling course.

Warsash lecturers are all senior seafarers with command and/or pilotage experience. They are backed up by associate lecturers, including serving Southampton pilots, retired pilots and serving masters.

In a typical season, some 200 delegates, representing about 25 different nationalities, attend the Warsash shiphandling training courses and with only six to eight delegates per week, they each receive a highly personalised service, the academy claimed.

Meanwhile in another move, Southampton Solent University's Warsash Maritime Academy and Faculty of Technology have joined together to form a new Maritime and Technology Faculty.

A new single faculty strategic plan was expected to be complete by the end of July 2011.

John Millican has been appointed Dean of the new faculty and will retain strategic responsibility for Warsash Maritime Academy. At the same time, Andrew Hair was appointed director of Warsash Maritime Academy. He assumed the day-to-day responsibility for running the academy, reporting to Millican.

The academy continues to operate as normal and will be retaining its individual autonomy and branding. TO

Shiphandling Training Courses

Standard shiphandling course (4.5 days) – Suitable for masters, chief officers and newly recruited pilots.

Advanced shiphandling course (4.5 days) – Suitable for experienced shiphandlers wishing to further develop their skills.

Formal assessment of shiphandling ability (5 days) – A half-day formal assessment of a delegate's shiphandling skills following completion of a standard 4.5 day course.

Twin-screw course (2.5 days) – Dedicated to the particular manoeuvring characteristics of twin screw vessels, including inward and outward turning propellers. A ro/ro ferry and a twin screw shuttle/LNG carrier are available.

LNG twin-screw course (2.5 days) – Dedicated to the handling characteristics of this type of vessel.

Car carrier course (4.5 days) – As above.

Pilots combined course (5 days) – Professional pilot development, consisting of three days of shiphandling at Timsbury followed by two days on the Warsash bridge simulator, exercising in port-specific locations.

Emergency procedures course (2.5 days) – An intensive course enabling experienced shiphandlers to practice their response to a variety of emergency situations.

Shiphandling appreciation course (2 days) – Designed for senior managers with little shiphandling experience to gain an appreciation of the issues and problems faced by shiphandlers in their respective companies.

In addition, there is an offshore oil operations course. At Timsbury there is a model jack-up rig, in addition to the seven ship models and tugs.

Castrol introduces bio lube range

As part of its ongoing research, leading lubeoil supplier Castrol Marine is looking into different formulations to optimise the ash content in its lubeoils.

In addition, the BP subsidiary is introducing a range of bio lubes and has reported ongoing success with its academy.

Research is ongoing on lubes with the major engine manufacturers (OEMS) on gas engines, for example the use of 4-stroke engines on dual-fuel LNGCs. Too much ash in lubeoils can cause ash to build up in combustion chambers, leading to potential combustion problems, the company said.

A recent major development was the launch of a range of environmentally responsible lubes. Research and development has been ongoing for a few years. This resulted in the release of the company's Bio Range of lubes.

"Although such non-mineral lubes are more costly, they give a better performance. For example, they offer a better option for on board deck machinery where risks of spilled lubes getting into the sea are greater," Paul Harrold, technology manager, Castrol marine and energy lubricants, explained.

Castrol estimated that some 244,000 tonnes of lubricants enter the sea each year, 28,000 tonnes coming from stern tubes alone.

The mixture of crude oil base stocks and additives – up to 30% of the finished lubricants – can result in persistent, bio-accumulative and toxic chemicals entering the marine environment, Castrol said.

Castrol Academy's 11 course models

Vessel types.
Machinery installations.
Main propulsion engines.
Power transmission systems.
Auxiliary equipment.
Basics of lubrication.
Base oils and additives.
Fuels and specifications.
Lubrication selection.
Used oil analysis.

> "...while measures can be taken to reduce the likelihood of a lubricant spillage, the scale of the pollutants means that the problem cannot be fully resolved by preventive means alone."

Machinery failure and human error are the prime factors behind spillages. The company said that while measures can be taken to reduce the likelihood of a lubricant spillage, the scale of the pollutants means that the problem cannot be fully resolved by preventive means alone.

Castrol's Bio Range is claimed by the company to be the world's first comprehensive range of high performance lubricants. The aim of the development was to provide significantly improved environmental characteristics over conventional lubricants, for example -

- Superior biodegredation.
- Significantly reduced toxicity to marine organisms.
- Enhanced renewability – products contain components derived from renewable sources, minimising their mineral oil content.
- Significantly reduced potential for bio-accumulation in marine organisms.

Castrol claimed that its Bio Range lubricants offer equivalent, or better operational performance than their mineral-based counterparts, with no compromise on reliability.

In addition, the range is compatible with most normal construction materials and seals, so are easily retrofitted to existing equipment with minimal downtime.

Bio range products can help shipowners and operators in achieving compliance with ISO 14001 requirements and in following regulatory body guidelines, including the US EPA's recommendation of environmentally preferable lubes for stern tubes, thrusters, stabilisers and wire ropes.

Harrold also commented that as the technologies mature, cost drivers will favour scrubbers over the use of distillates to meet the new emissions' criteria.

Academy gains approvals

Another major initiative is the Castrol Academy. This was formed a few years ago to help marine engineers and other seafarers in developing and improving skills and knowledge levels.

It was developed in response to the results of an industry wide survey conducted by the Institute of Engineering and Technology in which 55% of the respondents reported problems with recruiting experienced and well trained technical seafarers.

The courses combine traditional print-based modules with interactive DVDs and online assessments. The online programmes combine online self-study courses and written assignments with online support tools. It guides the participant through each step of the learning process.

The Academy has gained the approval of the Institute of Marine Engineering, Science and Technology (IMarEST), Royal Institute of Naval Architects (RINA) and DNV.

Recently, Castrol renewed its corporate membership of IMarEST's marine partners initiative.

The company also sponsored IMarEST's booklet 'Sea Your Future – A Guide to Marine Careers', which the institute claimed had been hugely successful at recent careers' fairs and exhibitions, as well as being well received in marine colleges and universities. TO

Looking to the 'High North'

Work is continuing at the IMO on draft regulations to control Arctic navigation - the so called Polar Code.

At a session of the IMO's sub-committee on Ship Design and Equipment (DE) held earlier this year, Denmark made proposals on ship construction, life-saving appliances and ships' emergency preparedness.

However, the work was not finalised at last March's meeting and therefore the countries involved decided to continue the work in a so-called Correspondence Group until the next sub-committee session due to be held in February 2012.

According to the Danish Maritime Authority (DMA), the plan was to have the so called Polar Code ready by late next year, or early 2013. It is not only intended for operations in ice covered waters, but also for Arctic operations and will supplement other regulatory instruments, including SOLAS and MARPOL.

The first proposal for the Polar Code came to the surface with IMO's guidelines for ships operating in Arctic ice covered waters, adopted in 2002. In the guidelines, reference was made to the Unified Requirements for Polar Class adopted by IACS in 2006, which produced the framework for vessel operations in icebound waters.

These guidelines were revised and approved in 2009 to include both the Arctic and the Antarctic. In addition, the revised STCW requirements now includes guidance regarding training of masters and officers for vessels operating in Polar waters.

The DMA has said that the long term goal is to develop a risk-based Polar Code, as a supplement to the IMO instruments, a recent report stated.

The Danish Shipowners' Association has divided the IMO guidelines into three commercial sectors - the Arctic Sea routes, the Eastern and Western transport corridors and Arctic trading, for which vessels will be needed to operate in and out of the Arctic.

Vessels able to trade in the Arctic will be needed to exploit the energy raw materials in the area, the production and related maritime services for oil, gas and other raw materials' exploitation.

Denmark has also been involved with the Northern Sea Route, as last year, an Ice Class 1A Danish bulk carrier took a cargo of 41,000 tonnes of iron ore from Kirkenes in Norway to Xingang in China, making the trip between 4th and 27th September.

According to the DMA in a recent article, there are no current plans for more transits by Danish vessels, but any future sailings would be undertaken in close co-operation with Russian authorities, as nuclear powered icebreaker assistance would still be needed in the summer months.

In the article, the DMA said that there were some obstacles to be overcome before using the area as a transit route. For example, the water depth in the Dimitry Laptev Strait is 6.7 m, restricting ship size to 20,000 dwt. In addition, the Sannikov Strait has a water depth of 13 m, allowing vessels of up to 50,000 dwt to transit.

Icebreakers might not always be available, while the insurance costs will be high. The charter rate for the icebreakers could also be prohibitive.

The DMA said that that an Arctic maritime highway would not happen for a decade and maybe even longer. However, the attraction is the estimated undiscovered conventional oil of around 90 bill barrels in the Arctic region.

By comparison, when the production in the North Sea peaked in 1999, about 2 bill barrels per year was being produced from the whole of the area. The world's future energy supply could come from the Arctic alone, the DMA said.

When Arctic oil and gas resources and the mining industry eventually become developed, a significant amount of labour, supplies etc will be needed. This will call for an increase in the number of vessels of all types needed to supply Arctic areas.

Melting ice

As for the area itself, Russia's environmental agency recently reported that a near-record rate of Arctic ice melt had opened shipping lanes fit for cargo traffic between Europe and Asia.

In early August, the Federal Hydrometeorological and Environmental Monitoring Service said that the Arctic ice cover was declining at a record pace and as a result, had opened an extensive area on the Northern Sea Route that could cater for largely icebreaker-free shipping.

The Russians claimed that the ice extent has declined by 56% in many areas leaving the sea open for transits through September.

The National Snow and Ice Data Center (NSIDC) reported that a Belgian tanker

> "We will ... replenish the country's icebreaking fleet...The introduction of these ships will allow us to ensure stable, year-round work in the Arctic and the passage of vessels along the entire route from the Pacific Ocean to the Atlantic"
>
> **Russian Prime Minister Vladimir Putin**

Search and Rescue is going to become a vital component of an Arctic Code, or guidelines. Photo credit – Viking.

company plans to send six, or seven more ships through the Northern Sea Route over the summer. Russian icebreakers also plan to escort up to 15 vessels before the summer ends.

The Northern Sea Route is about one-third shorter than the Rotterdam-Yokohama route via the Suez Canal, which results in lower fuel costs and therefore emissions.

After the rapid ice melts in July, by the end of the month the retreat had slowed thus halting the near-record breaking rates, due to a series of low pressure systems and storms that caused a decline in the melting process and left the season still behind the record-minimum year of 2007. The NSIDC said that this did not mean good news, as the organisation explained that the turnaround in weather would likely push the ice apart into a thinner, but more extensive ice cover.

A recent study by news agency Bloomberg confirmed that Russia had plans to revive the Arctic Sea passage to service energy projects and provide a shorter supply route to Asia.

Major Russian tanker concern Sovcomflot (SCF) is heavily involved in trials and has sent laden vessels to Asia, via the Arctic Northern Sea Route.

The opening up of the Northern Sea Route could allow state-owned SCF to speed up LNG deliveries to China and win cargoes between Europe and Asia by offering a quicker alternative to the Suez Canal.

SCF, along with companies such as OAO Novatek, has used the Arctic route, which Russian Prime Minister Vladimir Putin promised to transform into a year-round passage. However, to make this a success, Russia must revamp ports, install search and rescue facilities and build icebreakers, valued at 30 bill rubles ($1.1 bill) each, to provide a safe passage for tankers, Bloomberg was told.

The Northern Sea Route dates to 1932, when the old Soviet Union sent the first vessel from Arkhangelsk to the Bering Strait. The route, open from July to November, is about a third shorter than the almost 13,000 mile journey from Rotterdam to Yokohama, via the Suez Canal, thus saving both time and fuel, plus cutting emissions.

Going forward, this route could also prove to be an alternative to the pirate-strewn waters off East Africa/Indian Ocean and the 'Arab Spring' revolutions in the region around the Egyptian waterway.

SCF plans to expand its gas transportation business, as energy producers gear up to bring Arctic projects on line later this decade. In 2010, the company shipped 70,000 tonnes of gas condensate through the Arctic for Novatek, a company which plans to start producing LNG on the Yamal peninsular for sale to European and Asian customers in 2016.

As Asian demand for LNG rises, the Northern Sea Route will become more important, Bloomberg said, talking with the leading Russian players.

For example, the Gazprom-led Shtokman project in the Barents Sea, which could contain more than 3.9 trill cu m of gas, is scheduled to begin initial production in 2016. Rosneft, Russia's biggest oil producer, is developing fields in the Kara Sea that could hold as much as 35.8 bill barrels of resources. The first well is due to be drilled in 2015.

Overall, the report said that Russia's Arctic shelf may hold more than 100 bill tonnes of oil equivalent, quoting the Russian Natural Resources Ministry.

Demand for transits using the Northern Sea Route is rising. Atomflot, the state operator of nuclear icebreakers that charges shipping companies for accompanied passages, confirmed that it had received 15 applications for transits this year, about three times as many as in 2010.

To ensure safe passage through Arctic waters, nuclear icebreakers are required to

deal with ice of more than 2 m thick in places.

However, Russia must retire 12 of its 15 nuclear and diesel-powered icebreakers by 2020, according to the Russian Transport Ministry, which also said that three nuclear and six diesel powered icebreakers, costing a total of 143.5 bill rubles, will be required to replace them.

"We will by all means replenish the country's icebreaking fleet," Putin told a meeting of the ruling United Russia party in Yekaterinburg on 30th June. "The introduction of these ships will allow us to ensure stable, year-round work in the Arctic and the passage of vessels along the entire route from the Pacific Ocean to the Atlantic," he reportedly said.

SCF also plans to send a Suezmax along the route to China to benefit from economies of scale and is looking to invest in more ice class vessels. The route will save 40% of the journey time compared with the Suez Canal, the report said.

"Northern Sea Route will become a more profitable than the Suez Canal," Leonid Mikhelson, Novatek's CEO told the Russian media on 17th June. Russia's second-largest gas producer may export seven condensate, or light crude cargoes, via the Arctic to Asia this year, he added.

Eurochem, Russia's largest nitrogen-fertiliser producer, sent its first shipment of 44,000 tonnes of iron-ore concentrate to China via the route in July and plans to run monthly trips, logistics director Igor Nechaev said.

According to Bloomberg, traffic transiting the Suez Canal rose 7.3% in the year through April to average 54.5 mill tonnes per month, suggesting the canal hadn't suffered from the violence that toppled President Hosni Mubarak in February, or any knock-on effects of piracy, thus far. TO

Fatigue damage in ice addressed

Lloyd's Register has introduced a new notation, 'ShipRight FDA ICE', which is aimed at helping owners with procedures to manage their asset risks when trading in ice conditions.

LR said that this is a vital new tool to help assess designs and reduce the risk of fatigue damage in the hull structures of owners' and operators' ice-strengthened vessels.

The class society said that this timely development of new procedures under the notation comes as changes in the exploitation of natural resources, the climate, world trade and marine infrastructure, are increasing marine activity in cold-climate areas.

Greater trade through the Arctic is driving demand for larger ice-class vessels, particularly oil tankers and LNG carriers. It is increasingly important that the industry develops a better understanding of the risks involved, including the potential for fatigue to affect the strength of ships' hull structures, according to Dr Shenming Zhang, the project leader and a lead specialist in LR's marine product development department.

"Designers and owners need to have confidence in the structural performance of the latest generation of large ships. The fatigue performance of these hull structures as the ships navigate in ice-covered waters is a key component in their operational capability and reliability," said Dr Zhang. "This assessment will give operators and owners the confidence to operate in these demanding and challenging environmental conditions."

The Arctic is estimated to hold about 20% of the world's remaining recoverable hydrocarbon reserves. Further exploration and transportation is expected off the coasts of Alaska, Canada, Greenland and Russia. In addition to hydrocarbons, large quantities of minerals may need to be shipped from the Arctic to ports in Europe and Asia.

The ShipRight FDA ICE assessment procedure examines ship-ice interaction loads, ice-load impact frequency, ice-load distribution, structural responses and the fatigue behaviour of hull structures in cold temperatures, including associated fatigue responses.

The fatigue-response assessment is determined for different winter conditions and ice thicknesses on typical routes for winter trade.

An example of steel fatigue failure after experimental testing at low temperatures.

This new level of comprehensive structural analysis puts greater emphasis on the quality of the design details, particularly in the higher risk regions of the hull, LR said.

Fatigue damage is a direct consequence of cyclic stresses and construction standards, with alignment also playing an important part. It can lead to a failure of key structural elements which, in worst-case scenarios, may result in major structural failure.

The procedure provides the measure to identify high-stress locations and to help reduce the risk of structural failure. It was developed from LR's experience with vessels operating in ice and uses full-scale measurements conducted on vessels navigating in ice and is further validated by experimental testing.

Extensive fatigue testing on welded joints of mild and higher tensile steels at low temperature were carried out during the procedure's development.

"The needs of the industry are changing and the development of larger, ice-strengthened vessels is just one example of this. This new procedure extends the boundaries of current fatigue-calculation methods," said Dr Zhang. "We are committed to reducing the risks to ships, to crews and to the environment. By helping to improve the fatigue performance of the hull, we can increase confidence that vessels will be suitable for trade in cold climates."

By using a developed methodology on ice-load spectrum, structural stress responses to these loads and the associated 'S-N curves' (which define the number of stress cycles that are needed to produce a fatigue crack in a structural detail) fatigue damage can be determined for the typical structural details of larger, ice-strengthened ships. The results will identify the fatigue accumulation for different winter conditions and trading routes.

Vessels complying with the requirements of the procedure will be eligible to be assigned the notation ShipRight FDA ICE, LR said. TO

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RS to class the first CSR high ice class tanker

Norilsky Nickel's newbuilding 18,500 dwt Arctic tanker *Enisey* is the first vessel of high ice class Arc7 to be constructed in compliance with the IACS common structural rules (CSR).

The volumes of cargo transportated in the Arctic seas of the Russian Federation are expected to increase. Transportation by sea from the Arctic offshore oil and gas facilities requires additional features of a vessel to be included to ensure the year round navigation in the extreme low temperatures and severe ice conditions.

Such features include Arctic ice class with adequate hull strengthening and a powerful propulsion unit.

Since 2006, 10 Arctic vessels capable to move through ice fields independently, without icebreaker assistance, have been constructed to RS class, including five Arctic double-acting (DAT) large capacity tankers.

The highly specialised ice class Arc7 DAT tanker *Enisey* is under construction at the Nordic Yards Wismar, Germany. The tanker was ordered by Russian ore and mining company Norilsky Nickel.

"*Enisey*, designed for independent navigation in the Arctic, is believed to be the first CSR compliant oil tanker with such a high ice class", said RS vice director general on new construction and current IACS chairman Pavel Shikhov.

Due to its unusual stern shape, *Enisey* is capable to move through ice fields of up to 1.5 m thick at two knots. The 'double-acting' concept is based on an Azipod propulsion unit with the propeller power output of 13 MW enabling movement stern first under extreme ice conditions. There will be 10 cargo tanks fitted for independent transportation of three cargo types.

According to Nordic Yards, the tanker was ordered in February 2010 and construction started in July of that year. Trials were scheduled to take place in August 2011, while the vessel's delivery was stemmed for September 2011. She will be mainly used on the Russian northern sea routes.

LNGC interest

The resurgence in gas carrier ordering has impacted on some of RS' recent activities.

Norilsky Nickel's Ice Class tanker *Enisey* seen fitting out at Wismar. Behind the tanker is one of the Russian company's multi-purpose cargo vessels about to leave the fitting out quay.

Enisey: Principal particulars

Class notation: KM (*) ARC7 [1] AUT2-ICS EPP ANTI-ICE VCS IGS-IG ECO BWM CSR Oil tanker (ESP)

Length	160 m
Breadth	26 m
Depth	14.2 m
Deadweight	18,500 tonnes
Gross tonnage	16,110
Estimated speed	15.3 knots
Maximum complement	23

In February of this year, RS signed a three-year co-operation agreement with Bureau Veritas, covering the development of joint guidelines for LNGCs and FPSOs.

This agreement will greatly facilitate research into the technological challenges of shipping, RS said. Under the co-operation agreement, common guidelines for LNGCs based on GAP analyses, as well as the BV and RS rules and the IMO IGC Code, are expected to be issued during first-quarter 2012. These will include the requirements for operating in Arctic areas.

In addition to the parameters used for the LNGC guidelines, they will include feedback gained from work undertaken in connection with a project on the Shtokman natural gas field in the Russian sector of the Barents Sea, one of the largest in the world.

Meanwhile, RS has extended its co-operation with Shtokman Development AG. The co-operation is primarily aimed at achieving the appropriate quality and safety of the Russian design offices' and shipbuilding yards' services.

"Oil and gas offshore fields' development requires strict compliance with safety and environmental regulations. Bridging of all the gaps in Russian regulatory framework regarding offshore fields is the most important objective and our joint contribution in safety standards improvement. The agreement we signed sets new tasks, which we are ready to carry out with the highest quality", explained RS director general Nikolay Reshetov.

In addition, the two state-of-the-art 170,000 cu m capacity LNGCs recently ordered by Sovcomflot (SCF) for Gazprom Global LNG will be classed by RS. The vessels will be equipped with a tri-fuel diesel-electric power plant, allowing the use of LNG as fuel.

Application of gas will enable to cut NOx and SOx emissions, which is important for modern vessels in view of the tightening of international requirements to air emissions from ships, RS said.

The LNGCs will be built in South Korea with the class notation - KM (*) Ice2 AUT1 OMBO EPP ANTI-ICE LI CCO ECO-S WINTERIZATION(-30) Gas carrier type 2G (methane).

They were ordered from STX Offshore & Shipbuilding on the back of 15-year timecharters to Gazprom Global LNG.

According to SCF, delivery of the first vessel is scheduled for the fourth quarter of 2013, with the second vessel following in the second quarter of 2014. The 'Atlanticmax' design is of RS' ice2 class with winterisation enhancements.

The vessels will incorporate all the latest requirements in terms of environmental protection, energy efficiency, crew accommodation and working conditions, as well as vessel safety.

They will have the ability to operate between almost all existing LNG terminals, including the possibility to offer year-round gas exports from Russia's first LNG project - Sakhalin-2 and in the future - from the Shtokman LNG project terminal, SCF said. TO

Admiralty Shipyard in major research project

St Petersburg-based JSC Admiralty Shipyards is well known for building sophisticated ice class tankers for Russian interests.

Last year, the yard completed two ice class Panamax shuttle tankers for Sovcomflot for use in Arctic waters- *Mikhail Ulyanov* and *Kirill Lavrov.*

Prior to this, between 2003 and 2008, the yard delivered eight 47,400 dwt product tankers also to Sovcomflot. At the end of 2007, the yard also delivered two multi-purpose icebreaking tugs to Dutch concern Wijsmuller.

Since then, Admiralty Shipyards has been constructing a scientific expedition vessel earmarked for the Russian Antarctic Expedition on behalf of the Federal Hydrometeorology and Environment Monitoring Service (Rosgidromet).

The contract was signed on 1st December 2008. Upon the vessel's delivery scheduled for September of this year, she will be operated by the Arctic and Antarctic Research Institute of Rosgidromet.

The new flagship of the scientific and expedition fleet will replace the *Akademik Fedorov* and is designed to provide services for the Russian Antarctic Expedition, such as:

- Replacement of the personnel at the Antarctic stations,
- Delivery of cargoes/supplies for the Antarctic stations unloading on bare shores and on ice.
- Research activities in the sea and natural resources.
- Removal of garbage from the Antarctic.

The vessel was designed by Baltsudoproect, the central design bureau using the years of experience of operating vessels in the Antarctic, thus providing comfortable conditions for the crew and expedition personnel in ambient temperatures of down to minus 40 deg C.

TO

Sovcomflot's DAT Panamaxes *Mikhail Ulyanov* and *Kirill Lavrov* seen fitting out at St Petersburg.

HIGH-TECH VESSELS FOR ARCTIC EXPLORATION FROM ADMIRALTY SHIPYARDS

In the second half of XXI century reserves of oil and, partially, of gas in such traditional regions of production as Western Siberia or Persian Gulf will be depleted. At the same time the demand for energy resources worldwide in this period will be multiplied. One of priority economic tasks of the near future will become development of hydrocarbon resources of the Arctic area, where, according to estimates of American scientists, are contained up to 30% of the world reserves of gas and 13% of the world reserves of oil.

However, in order to avoid energy famine after 2050 it is necessary right now to select keys for arctic marine storehouses. Accordingly for development of the arctic shelf - technically complicated activity which demands enormous financial outlay, it is also required unification of efforts of all the countries which have modern technologies.

One of the oldest enterprises of Russia JSC "Admiralty Shipyards" takes up its niche in production of technically complicated, unique vessels for research and development of areas of the Arctic and the Antarctic. Beginning from the year of 2000 and up until today JSC "Admiralty Shipyards" delivered to the Customers 5 tankers of arctic class with deadweight of 20 000 tons, Project 20070 and 20071, 2 shuttle tankers of double action with deadweight of 70 000 tons, Project P70046, built in international cooperation with design company Aker Arctic Technology, Finland. At present a research and expedition vessel is being built for research and development of areas of the Antarctic. The vessel is to be delivered to the customer in September of this year.

A special place among the delivered ships is occupied by two shuttle tankers of double action. These vessels are destined for carrying of crude oil from the Prirazlomnoye field, they are equipped with high voltage diesel-electric propulsion plant of total power of 25 MW. This vessel is able to move bow ahead in clear water and stern ahead in strong ice. At the same time onboard the vessel has been fully implemented the concept of double navigation bridge, one bridge is intended for movement of bow ahead while its complete analogue - for movement of stern ahead. The vessels are equipped with dynamic positioning system of class DP AA1. During period of the sea trials was confirmed the accuracy of keeping of the vessel in automatic mode within 40 cm from the given point of keeping.

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Baltic winter boosts ice class tanker rates

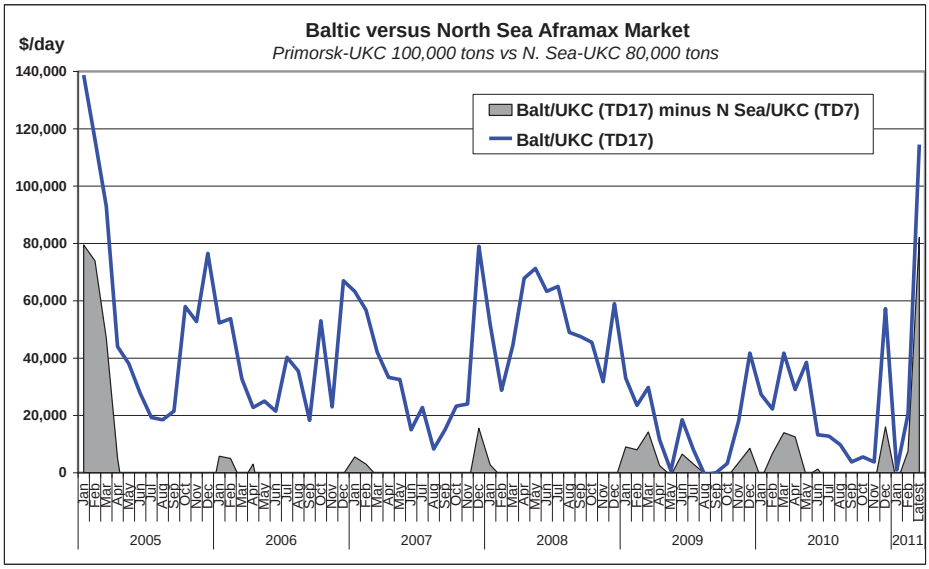
The advantage of owning an ice class tanker was bought home last Winter, which was particularly harsh in the northern hemisphere.

This provided unexpected benefits to owners operating in the ice class Aframax spot market. According to a report from Gibson Research earlier this year, earnings steadily firmed from nearly zero at the end of January 2011 to $25,000-$30,000 per day by the third week of February, as a result of sub-zero temperatures in the Baltic and wide-spread ice class restrictions.

At the time, ice class Aframaxes were the star performers of the tanker industry. Harsh weather conditions, coupled with additional disruptions and delays swiftly led to an extreme tightness in ice class spot supply, despite the rapid growth in the ice class Aframax fleet in recent years.

This severe lack of available tonnage prompted further strong gains in rates and earnings. Daily returns for 100,000 tonne crude cargoes from Primorsk to Wilhelmshaven (TD17) jumped to nearly $115,000 per day in early March this year, the highest level seen since December 2006.

As a result, earnings for ice class tankers moved well above those for the non-ice class Aframaxes trading North Sea – UK/Continent (TD7). Although such a huge premium offered a considerable boost to ice class tonnage owners, it does not happen very often, Gibson said.



Source: Gibson Research.

A similar large-scale premium was last seen over six years ago, when the difference between ice and non-ice class Aframaxes in the Baltic/NW Europe jumped to nearly $80,000 per day on a monthly average basis in January 2005.

Looking back over the past five years, the winter ice class premium was more typically in the range of $5,000-$15,000 per day, which usually develops between December and April – the northern hemisphere winter.

As long as a harsh weather creates havoc and ice class restrictions remain in place, owners will continue to reap the benefits of investing extra money into ice class tonnage.

In the longer term, there is also a potential for a further growth in ice class demand, as crude oil exploration in the Arctic gains momentum and more frequent weather extremes occur, linked to global warming, Gibson said.

TO

> “As long as a harsh weather creates havoc and ice class restrictions remain in place, owners will continue to reap the benefits of investing extra money into ice class tonnage.”

Entering enclosed spaces – best practice needed

A recent study carried out by the Marine Accident Investigators International Forum (MAIIF) found that the principle causes of death in enclosed spaces were due to –

- Lack of knowledge, training and understanding of the dangers of entering enclosed spaces.
- Personal protective equipment, or rescue equipment not being used, not available, improperly used, or in disrepair.

Enclosed spaces include deep tanks and double bottoms whose condition can change in 24 hours, as can conditions in chain lockers etc.

If a seafarer was unprepared before entering an enclosed space, he or she should not have entered. Procedures should be followed to identify if the space is potentially dangerous.

Accidents in enclosed spaces are frequent, often fatal – but crucially, also avoidable.

It has been proved that in many instances, those who go to rescue seafarers experiencing problems in an enclosed space, act on instinct, rather than evaluating the situation before taking action.

A continuous dynamic risk assessment should be conducted when entering an enclosed space. Best practice should be observed, including the use of an enclosed space rescue team with the right equipment on standby.

For example when entering deep tanks, a tripod should be erected over the entry point from which a seafarer can be attached to a harness, allowing the other members of the team to raise and lower the seafarer as necessary.

Training package

To help reduce the number of accidents, running at an average of around two deaths per year, Videotel Marine International has joined forces with Mines Rescue Marine to launch a new training series - Entry into Enclosed Spaces.

The programme delivers a hard hitting message to both ship board and shore based personnel that will ensure that when working in enclosed spaces, the correct equipment is used and good safety procedures become second nature.

Be well prepared before entering an enclosed space.

Mines Rescue Marine's Michael Lloyd (left) seen with Videotel's Stephen Bond (right) at the launch of the training video.

"There is no excuse for the unacceptable casualties we have seen recently," said Stephen Bond, deputy chairman, Videotel. "Again and again we hear of seafarers coming to grief in enclosed spaces. These incidents could have been avoided by an understanding of the dangers of entering enclosed spaces and the critical importance of following proper procedures. We are convinced that the 'Entry into Enclosed Spaces' training series will help save lives.

"We are delighted to have been able to work with Mines Rescue Marine to create this programme. For over 100 years, their Mines Rescue Service has developed its specialist skills, experience and knowledge gained from working in a difficult and potentially dangerous environment to effect the rescue and escape of mineworkers from underground. This experience has proven invaluable in helping to construct the training programme, ensuring it is both realistic and practical," he said.

With comprehensive written material including case studies and student exercises, the package consists of six programmes covering awareness; preparation and procedures; equipment; enclosed spaces entry; emergency procedures and rescue; and the correct use of breathing apparatus.

The package is available in a range of formats - interactive CD-ROM, through Videotel on Demand (VOD) and VHS/DVD with supporting booklets.

Bond explained that it took around 18 months to put the whole package together with the help of leading organisations, such as the IMO, ICS, IMEC, LR, MAIB, Merchant Navy Training Board, Nautilus, Bahamas Maritime Authority, Nautical Institute, Chemical Distribution Institute and shipowners including BW Fleet Management, MISC, MOL Tankship Management, Shell and V Ships, plus others.

At the launch of the training package, Nautilus UK's national senior secretary Allan Graveson said "If the regulator fails, the owner picks up the cost on the balance sheet and the seafarers pay with their lives.

"We need a change of regulation, culture, equipment and training," he stressed. TO

Cargo tank methanol spraying addressed

Although prohibited by many chemical tanker operators, methanol spraying of cargo tanks does occur, sometimes with fatal consequences.

Leading distributor of 3D animation vessel safety videos – Karishima Consultancy Services (KARCO) – has addressed this problem in its latest accident recreation series of videos 'Fatal Consequence of Negligence and Non-compliance.'

Developed using KARCO's highly visual 3D animation technique, it digitally recreates a tragic accident involving a chemical tanker, which led to loss of three lives besides structural damage to the vessel coupled with the resultant commercial losses.

This 3D animated video was developed for shipowners/operators for effective information dissemination and training of seafarers to prevent a recurrence of such accidents in the future.

The video very graphically recreates the scenario, including the actions of the ship's crew, which led up to the explosion resulting in the loss of the three lives. The accident is then analysed for root causes along with a model of the 'fire triangle' to graphically understand what happened.

The video signs off, showing the corrective actions implemented by the management to prevent any repeat of such accidents.

It is based on the methanol spraying of cargo tanks on board a chemical tanker, which is a prohibited procedure with many operators. However, KARCO said that it is an essential video for on board training of chemical tankers' personnel, as it shows how even laid down procedures are ignored, due to the vagaries of human behaviour, which can lead to disastrous consequences.

The video was screened at a Shell Chemicals safety seminar held in Singapore on 30th June 2011. KARCO claimed that it had received good reviews, including complements ranging from a "must have video for chemical tankers" to "will surely discourage uncontrolled actions by ships personnel" to "perhaps a new standard in accident reporting & training".

The company commenced producing customised 3D safety training videos in 2007. Since then, KARCO's library now contains several titles covering real time accidents along with other relevant titles on anchoring, SIRE VIQ inspections, etc. TO

Milbros offers improved service

Heidenreich Innovations' Milbros software has been upgraded by the introduction of new online commodity and cleaning database for chemical tanker owners and operators.

The company said that the handling of Annex 1 and Annex II cargoes must be accomplished with due care. By using www.Milbros.com, an owner/operator now has access to a database containing 10,920 commodities, with associated cleaning instructions to help ensure the safe handling of the various cargoes.

The database includes –

- Tank cleaning instructions.
- Material safety data sheets (MSDS).
- Regulatory data (IBC Code product names).
- GESAMP profiles.
- Prior cargo lists (FOSFA, NIOP, EU and Kosher).
- Specifications and cargo handling.
- Coating resistancy (stainless, zinc, epoxy).
- USCG compatibility groups and exceptions.
- Heating requirements.
- Inerting/N2 requirements.
- Safety emergency information.
- Chemicals' physical properties.

The information is available online via two subscription levels- standard and premium.

The standard subscription is aimed at individuals and small companies that need full access to the commodities and cleaning information with basic search capabilities, but do not need to edit the information, or enter private data into the system. This subscription gives a read-only access.

As for the premium subscription, this is for companies that need all the features of a standard subscription, but also want to be able to maintain their own private set of data.

For companies operating their own vessels, a 'booking list' option gives the tools an operator needs to track the commodities being carried in the tanks on each voyage. This option also gives the operator the ability to email and export certain pages of the commodity database to the vessels and other parties.

In another move, Heidenreich has teamed up with Veson Nautical to integrate the latter's IMOS (Integrated Maritime Operations System) with Q88.com's vessel questionnaire system.

With this integration in place, users can eliminate double entry, automate manual processes and make information for new vessels instantly available, thereby improving the efficiency of the internal vetting and pre-fixture processes, Veson claimed.

"Getting ships vetted in a timely manner is crucial in today's volatile market," said Fritz Heidenreich, Q88 president. "We are very excited to help charterers streamline the vetting process."

John Veson, Veson Nautical president, said. "The integration between IMOS and Q88 makes it easy for charterers to move quickly from the gathering of information to the execution of business." TO

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Vetting Status Report

MR undergoes stern repairs in Rotterdam

Westfal Larsen Shipmanagement's 46,270 dwt chemical/products tanker underwent stern repairs at Rotterdam in June.

The Bergen-based company explained that the vessel was repaired afloat by Wetering by ballasting the forward section down, enabling the Dutch repairer to attend to one damaged propeller blade.

In addition, the tanker, built at Daedong in 2000, underwent the renewal of her stern tube bearings /seals.

Rotterdam-based Wetering operates in northern European ports and has a lay by berth in Rotterdam, which can accommodate vessels of up to 200 m in length and drawing up to 6 m.

A work boat was used to access a platform located at the vessel's stern, which was clear of the water, to enable the repairs to be completed. TO

Risanger **was ballasted down by the head to lift the stern, thus enabling afloat repairs to be undertaken.**

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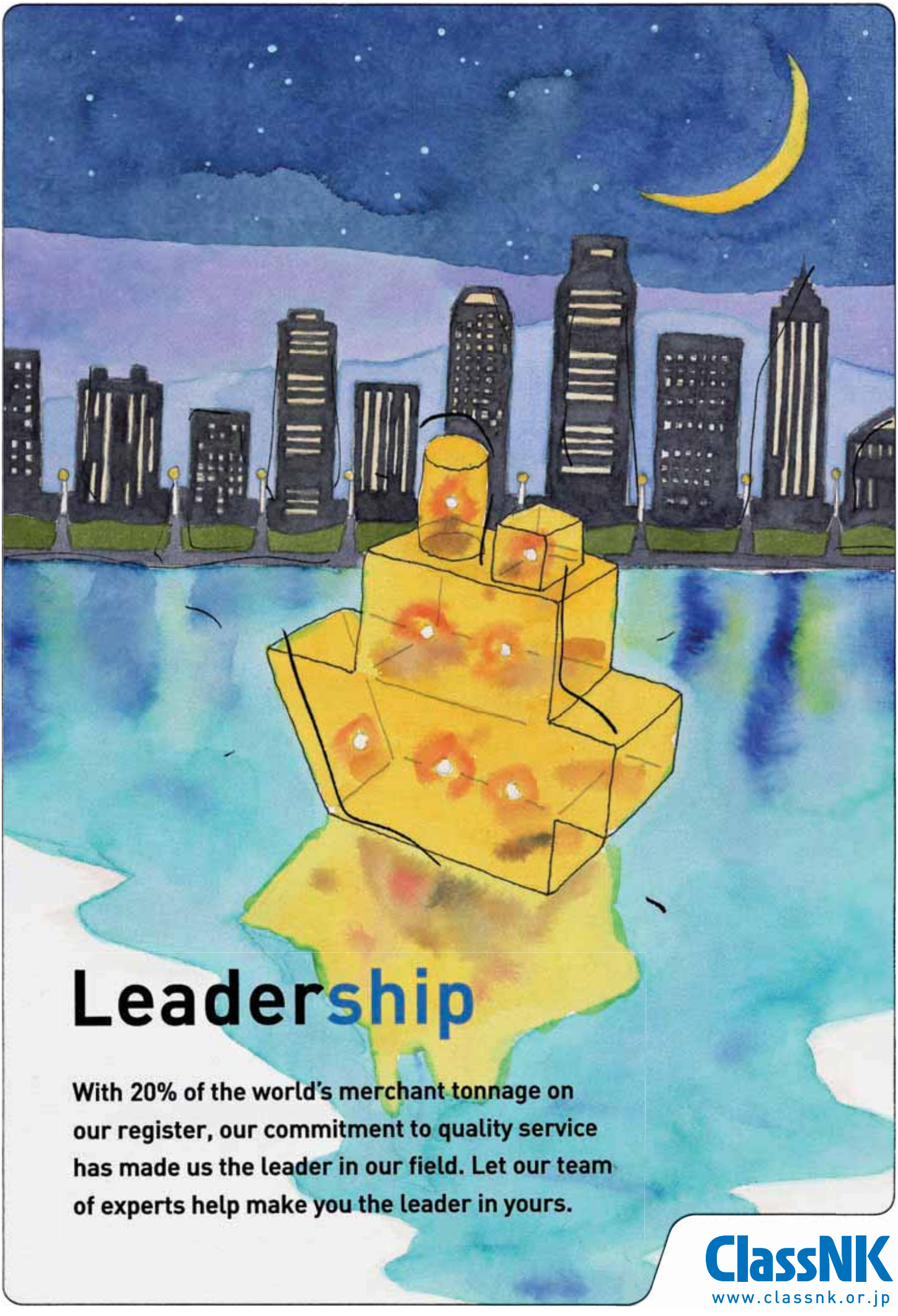
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