



## Dangerous goods by sea

Dangerous goods have always been carried by sea, and it could be argued that it is the safest way of transporting them, under strict conditions of carriage, and when in transit, away from centres of population. Explosives, flammable materials, radioactive cargoes, poisons materials that give off noxious gases, cargoes that become unstable in certain conditions, and many other types of dangerous goods have to be transported safely around the world.

The most important matter is that such goods be properly identified, so that the correct conditions can be provided for their transportation. Indeed accidents have happened when the shipper has neglected to indicate the contents of packages, which have only been revealed as dangerous when they have ignited, exploded or identified themselves in an alarming fashion.



The International Maritime Dangerous Goods Code (IMDG) is the hugely important instrument which governs the marine transportation of packaged dangerous goods. If such cargo is to be carried in a ship, the Code prescribes both the shore side preparation, in the correct packing, labelling, documentation, marking and handling, the passage of the goods through the ports and their carriage aboard ship, which of course notes the stowage and securing, any special requirements for their conditions during the voyage, any segregation issues which need to keep the goods away from other cargo, or the crew accommodation, and any special handling that is needed. It also provides guidance on the correct response to any accident involving such cargo, such as a spillage, or a fire.

The Code is regularly updated, to ensure that new products are included, or any lessons learned from previous incidents are incorporated. Shippers who send such goods by sea, stevedores who handle them in port and the shipping companies which carry them all need to have copies of these valuable volumes to hand, and check up on its latest provisions.

There are other Codes for the transport of hazardous materials in both bulk liquid and bulk solid form as both of these can be dangerous. There are numerous liquid chemicals which can be hazardous, while there are bulk cargoes which can give off explosive fumes or noxious gases that need to be provided for by proper ventilation. There are bulk cargoes which become dangerous because of the motion of the ship during the voyage. Other cargoes can appear perfectly inert, but can react to temperature or humidity, become hazardous or unstable if they are wetted, or deplete all the oxygen in a

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compartment. But knowledge and training, proper precautions and procedures, and careful and honest declarations will keep the most dangerous goods safe on the voyage.

## Should we pay ransoms to pirates?

Hostage taking is one of the worst possible crimes it is possible to imagine, and has attracted the greatest opprobrium from all civilised societies. The payment of ransom has also been generally disapproved of, as it is believed that it will merely encourage others to emulate the criminals if they are successful in their money-making venture. Governments, in particular, strongly disapprove of the payment of ransoms to criminals of all kinds, as they see in this action a breakdown of the normal processes of law. The official line that "The Government of X never pays ransoms to kidnappers, or those who attempt to extort money in such a fashion", tends to be replicated in many parts of the world.

But what can a civilised country or indeed companies or even individuals do, in the face of a failed state, where pirates feel free to capture merchant ships and hold them, and their crews, to ransom?. This has become a very current dilemma which faces the maritime industry because of the activities of the pirate bands operating out of Somalia. At any one time several hundred innocent seafarers and their ships are being held in the anchorages off the Somali coast under the guns of pirates, who have now found in this barbarous activity a reliable income stream that is relatively risk-free and pays them far more than any legitimate activity such as fishing. Those whose ships have been captured point out that despite "official" disapproval of ransoming captives, they have presently no alternatives.

They point out that only governments can do anything about this lawless coast and this failed state which generates piracy, and governments seem unable to offer any other scheme that will restore their ships and crews to freedom. They further point out they, as the employers of these seafarers, have a duty of care for them and must make every effort to end their captivity. The payment of a ransom is the only effective remedy, no matter how repugnant this must be. The process of negotiations with the pirate representatives and the payment of the ransoms has now become a well-developed practice, and while the use of recommended best practice to prevent pirates boarding is effective, and multi-national naval activities have reduced the number of successful pirate attacks, they are still continuing.

Governments argue that if ransoms were stopped, the incentive for fresh attacks would cease. But it is also argued that the potential for the captives to be harmed by the pirates in pursuance of their demands would surely increase, and innocent seafarers should not become pawns in this unpleasant business. The shipping industry argues that whatever precautions might be taken by ships, only an effective government ashore in Somalia will end the attacks, and that this is completely outside the competence of the industry itself. Ask yourself -"How would you feel if your nearest and dearest was in the hands of pirates?"

## Tamilnadu Marine Board gives revenue share of Rupees 4.75 crore to govt

The Tamil Nadu Marine Board, which has recorded a 49 per cent revenue increase during this year, today gave a revenue share of Rupees 4.75 crore to the state government. Minister for Highways and Small Ports Vellakoil M P Saminathan presented a cheque for Rs 4.75 crore to Chief Minister M Karunanidhi on behalf of the Marine Board, an official release here said. After the state government announced a policy for the development of Marine Board



in 2007, the number of small ports g o t increased from 11 to 22 and the p o r t s handled a record 11.75 lakh metric tonnes of cargo during

2009-10. Thanks to the handling of increased cargo, the revenue of Marine Board has increased to Rs 22.57 crore and this marked an increase of 49 per cent. Deputy Chief Minister M K Stalin, Chief Secretary S Malathy and officials were present on the occasion, the release said.

## Watchkeeper: A call for leaders

It used to be said that leaders "are born and not made", although generations of teachers have poured scorn on this notion. The personality of a shipmaster or other senior officer of commercial ships is important, but the actual skills of leadership and management tend to be learned by observation from one's seniors as one progresses through the ranks. The process has been described as a sort of "osmosis" and it can clearly be effective, although bad role models clearly can do damage! The recent Manila conference to modernise the STCW Convention has provided the industry with the mandated requirement to provide an element of formal training in leadership and management. Note that this is hitherto to be regarded as a compulsory subject for study and training, and while the actual means of providing this training may be left to the administration, there is no avoiding the provision. Masters and Chief Mates, Chief Engineers and Second Engineers will, when the Manila amendments come into force, be required to demonstrate their competence in using leadership and management skills as part of their certificate examinations. And at the first certificate of competency there will also be a unit of leadership and management required, although presumably at a rather less onerous level. It is an addition which the industry as a whole has supported, although its success clearly will depend upon the way that administrations structure the training and examination so that the candidates can demonstrate the required qualities. Discussions will be ongoing.

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## From the Editor's Desk



"I will not let anyone walk through my mind with their dirty feet." M.K. Gandhi

"A truthful criticism of public servants in public good was so vital, for the functioning of democracy and the truth was the defence in this case."

Success in today's business environment requires the organization to integrate, build, and support, business process with an enterprise that views risk probabilities and compliance to the best arrived quality standard. These requirements have made the implementation of governance, risk, and compliance (GRC) software a vital step towards achieving business success. Summing-up, I find myself totally underwhelmed, on many maritime related issues, particularly those relevant to Seafarer's Health, Safety and Security related welfare-measures. Viewing the progress and challenges ahead on seafarer's welfare, this area remains only in subjective text document and hence seafarer's-welfare, barely being looked into, but being neglected. If the real needy seafarers have an insight into the funds being utilised in the name of seafarer's welfare, they would find it very disgusting, scratching their head as to what an injustice is going-on, reflecting upon our national maritime administration. Prospects for improvement in seafarer's welfare didn't appear to be much better, since the mariners inducted into the office of the D.G.S., were more interested to compensate their own losses of being ashore, when comparing to their counter-parts paid attractive sea-wages, not realising that the seafarers are performing hazardous jobs out at sea, selfishly wishes to have butter on both sides of the bread, spoiling the lips exposes them, makes life easy. Never realises, that their induction into the government class one cadre, were not of a competitive nature, unlike other entries into UPSC Class One post. Mostly consisted 'junk of under-graduates'. The able, honest, qualified active sailing mariners could not compromise for a government job owing to their family commitment, mainly having got used to hi-fi lifestyle, and not opting severe fall in living standards by earnings. Many technically qualified and experienced mariners still continues to sail, many opted to vessel superintendence and faculty positions. It is regretted to note, the mariners inducted into government-service are more egoistic and indifferent, to their own community of seafarers, doing more harm, owing to their drastic social-uplift comparing themselves to the bureaucrats who made their hard way, having easily forgotten running behind the fitters, helmsmen, seamen etc. to accomplish their responsibility onboard owing to squeezed-manning. There are many pathetic-stories heard of the harassment and humiliation meted out by the active seafarers, when facing the MMD staff, for relevant services. Instead, wish they focus upon many other important areas, for which they exist with more commitment and better responsibility, for the coveted post held by them, in strengthening risk management for safety and security. They need to focus upon the realities of superintendence, co-ordinate and inter-act for out at sea affairs, as a strategy to help the policy makers to make wise-decisions, in assessing risks, allocating resources and acting under conditions of uncertainty i.e. "strong intelligence gathering approach", efforts to minimise the holding up of Indian vessels in foreign-ports etc.

Need, qualified specialised HR personnel, to be inducted to oversee the services rendered to the seafarers, in a fair and just manner, more-importantly valuing their hard-earned time ashore with their family, realising that they are paid only while away from their near and dear ones, out at sea, moreover earning foreign-exchange to the country of origin. Re-calling my memories of late seventies, we had once 'Principal Seamen's Welfare Officer', in the office of the D.G.S., Bombay. It is not known, as to why such indispensable-post was abolished (which cuts-off the valuable feedbacks of out at sea affairs) and now we have been left with only one Seaman's Welfare officer, who was in MMD Chennai, shunted to Kolkata, Kochi and now back to Chennai. Instead a Seamen's welfare officer, need to be posted at least in each major port, for the seamen to vent their grievances, whose genuine voices be heard without bias & prejudice. Corporate Social Responsibilities have become an important mantra of this age, a measure of an organisation's willingness to take proper account of the health, safety and welfare of its employees. But we are also aware of the fact that these responsibilities are shared between direct employers and by all those who have an interest in the proceedings - the 'stakeholders', as they have become identified. The Shipping Companies operating foreign-going vessels, have failed in not coming forward together, to form a consortium to combat "PIRACY" Why? While, 'it is Employer's primary duty to protect their employees, at work'. Issue 23 of the International Human Element Bulletin Alert! Considers these shared responsibilities, demonstrates convincingly that all these links in the chain of responsibility are important, and need to be considered. Safe, Sustainable and dependable shipping depends upon all those interests considering their own contribution to the end result. It is not of much use, the operations department doing their job, if they are being undermined by the financial rug being pulled from under them, or the owners' efforts being hazarded by ignorant or unscrupulous charterers. There is tough talking in this issue of Alert! From contributors like Lloyd's Register's Richard Sadler, who suggests that those at the top, have an obligation to improve the social conditions of seafarers? High time we should recognise, a lot more than producing some nice words of lip-service. We need to reasonably look for a more socially responsible attitude towards the human element. We have to accept that we need to lobby on behalf of the bedrock of our industry-the seafarer-especially in this, the IMO's Year of the Seafarer, to prevent mistreatment, but for simply lip-service.

A Case-Study in the general interest ("of an unspoken truth"). Mr. G.Kamaleswaran, holding CDC No. 36181, goes on record that injustice meted out in MMD Chennai earlier, during the conversion of SGED COC to NCV Grade, wherein those who could grease the palms of the MMD staff at Chennai, got their conversion to NCV Class III Certificate of Competency easily, considering even their fishing vessel experience whereas Mr. G. Kamaleswaran, offered the lower Cert. NCV Class IV Certificate of Competency(95T-0326),with his vast rich experience, on larger FG vessels, of higher capacity. He had raised this issue of injustice with the Office of the Directorate General Shipping, also quoting Dr. P. Mishra's letter(then Dy. Chief Surveyor)under Ref: Eng/Exam-17(13)/89 dated the 1st June 1999, wherein "Fishing Vessel COC have not been equated for eligibility", in the manning of Coastal vessels employed in Indian Coast. Adding prior to this, Engineer & Ship Surveyor, Mr.G. R. Ahuja of MMD Bombay, vide his Letter ED(S)/15/5112 dated 9th Aug.1982, has clearly indicated that sea-service performed on fishing vessels is not assessable for Sea-Going Engine Driver (Motor) Exam. Hence, Surveyor's within the DGS, were of different views and acted to their whims and fancies, without applying the standard norms of good working practice, lacking fairness, transparency and accountability, all this because, Seafarers could not assert themselves but keep digesting the harassment and humiliation meted out by MMD officials, who easily say, that "sea-service is under verification subject to confirmation", even turn-down orally by the subordinate staff, who practically makes the assessment/ evaluation. By which, their further productive sea-service is lost, simultaneously loss of foreign exchange to the G.O.I.'s exchequer, which is never realised. Alas,Shri Gangadharan Kamaleswaran got justice, vide Office of DGS Letter, through Engineer&Ship Surveyor, D.Mehrotra's Ltr. Eng/Exam-15(8)/2002 dated 26th Aug.2004, which approved eligibility for NCV Class III COC. But the precious time lost, was ever lost. All at the mercy of the Shipping Regulatory-Mechanism in practice. Lacks pragmatic approach.

Now this time, Shri. Gangadharan Kamaleswaran is detained at home (ashore) from sailing, since his papers held-up by MMD Chennai, owing to ill-conceived notion for renewal of COC and DC endorsement, though fully complying and qualifying the requirement during this IMO's Year of the Seafarer. This veteran sailor, held ashore from serving out at sea and earning for his family, wasting his valuable productive time. For reasons: Surveyor views SERVICE CONDITIONS. Why not sailed on NCV vessels? This is an unfair and illogical approach. Shipping management finds him more competent, it's employer's acceptance known from years of his practically rich service and not by few minutes of MMD Examiner's magic-wand and short-sighted conclusion(a viva-voce)deciding his competency, but the Ship Management finding him proved, highly-experienced on larger capacity vessels? Had successfully under-gone DG Approved revalidation- course as well. Wasn't his credibility? Not all Indian NCV COC holders certified by MMD Examiners find eligibility to serve on ocean-going vessels? Exceptions, be looked into the merit of each case.

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At a recent meeting of the UK Maritime and Coastguard Agency's Human Element Advisory Group, attended by a broad cross section of industry, the UK MCA has set out its proposals for the various elements that could comprise the Leadership and Management unit in the various examinations. Those training for the various professional certificates have already seen their respective syllabuses expanded to take in a range of additional material and the UK has proposed that the underpinning knowledge necessary to demonstrate this competence will be delivered and assessed as a "stand-alone unit", perhaps employing simulators, or at least assessing a candidate's ability to manage teams of people. The course, it is suggested, will include principles of management and leadership as part of the underpinning knowledge and an understanding of such matters as leadership and management styles, the attributes of an effective leader and models of good practice. A range of important leadership

qualities will form part of the underpinning knowledge that the candidate will have to demonstrate, in both routine operational and emergency situations.

There are also a number of quite radical developments that seem to be included in this new element of STCW. Clear communication is a thread that runs through so much of the requirements, with the need to demonstrate competent leadership and management capability. Briefing and debriefing clearly, sharing understanding, the ability to intervene confidently and correctly when something is wrong, assessment of situations and interaction with others all require a certain linguistic understanding in addition to what might be described as "conventional" leadership qualities. There may be rather more to this new element out of Manila than meets the eye! Articles written by the Watchkeeper and other outside contributors do not necessarily reflect the views or policy of BIMCO.

## W o r l d I n f o D e s k

**Clean Shipping: doing more with less:** Is Corporate Social Responsibility more productive than mainstream regulation? The answer should be a simple "no" but when the issue is shipping's environmental impact, the issue is far from cut and dried. What if CSR was the key to unlocking the regulatory logjam, perhaps providing a template for the future, based more on consensus than prohibition?

True, the traditional approach has received something of a boost in recent days. With the apparent endorsement of the IMO process by the UN ahead of the next COP meeting in Cancun, shipping's regulator has achieved a significant win.

It should mean that for all practical purposes, the UNFCCC will not simply load shipping with green taxes in its quest to raise the USD 100 billion it rashly pledged to developing nations by 2020 after COP15 in Copenhagen. That still leaves COP16 the problem of where to find the money but the UN has at least recognised that any market-based emission reduction measure should apply to all ships equally and be agreed through the IMO.

This is good news, but it overlooks the reality of the situation at the IMO. Put simply, without a significant policy shift among UNFCCC parties, the IMO looks like making little progress on CO2 in the near term. No observer at MEPC 61 can have been in any doubt that the IMO's work on greenhouse gases is in a state so fragile that it risks cracking under the weight of its own contradictions.

The IMO is often called tortuous but this is because it is a law-making body, not a trade association. What it does must be both rigorous and consensual, and for that to work it must have unity. That unity - on CO2 at least - is nowhere to be seen.

Outside the plenary hall, it can hardly have escaped the attention that there is a growing number of shipowners who are wholly opposed to what they consider arbitrary measures which will result in increased costs for no apparent benefit. Growing louder too are the voices calling for exemptions or even the scrapping of sulphur controls in emission control areas. The review on fuel availability which will precede the global sulphur cap is, some say, a foregone conclusion, with industry interests laying the ground for delayed

implementation. It might seem uncharitable to mention the Ballast Water and Hong Kong conventions, both years from entry into force and with as many opponents as supporters.

Just as a new ribbon is fitted to the IMO typewriter, let's move on. Where does CSR fit in to this messy picture? I think it has the potential to answer several needs at once. CSR initiatives are not the same as IMO regulation and they have clear disadvantages when compared with properly-shaped global legislation.

If global regulations were good and fair enough - and included not just compliance but continual improvement too - it would be possible to argue there would be no need for CSR, but in reality rules are nothing like that. The alternative that CSR offers to shipping is voluntary participation in systems where the stakeholders - producers, cargo owners, forwarders, ports and end users as well as shipowners - all contribute and stand to benefit.

Sometimes all CSR delivers is a glow of satisfaction with a tinge of "greenwash". But it has the potential to reward compliance that outperforms the minimum required standards. Green CSR takes its lead from established industry practices - voluntary quality systems such as SIRE, CAP and others - which invite owners and operators to work above minimum quality requirements. It is hardly a leap of faith to imagine that the same should be possible for environmental regulation.

Sweden's Clean Shipping Project has been proving this very fact since 2007, signing up the country's biggest shippers to a programme that invites their carriers to enter a range of environmental performance information into a database and receive a score by fleet and individual ship. Owners of 10 ship types are required to complete of a questionnaire on a vessel's operational impact, scoring in five areas: SOx and PM emissions; NOx emissions; CO2 emissions; chemicals; water and waste control. The information is entered on a ship-by-ship basis but is also added to carrier's fleet score.

Not the most delicate tool perhaps, but it is fast becoming a requirement to trade among the country's large public-facing companies. The CSP's Clean Shipping Index (CSI) has just launched into Europe, with early indications of good support.

One large Dutch shipper has signed up with another pending. The Dutch Shippers Council and ministry of infrastructure and environment have signalled their support. The Environmental Shipping Index - in part developed by the port of Rotterdam for the International Association of Ports and Harbors - has also indicated it is prepared to collaborate where possible.

The CSI has no third party verification built in, though this can currently be obtained from two classification societies with others sure to follow. Verifying compliance is estimated at a few thousand dollars per ship but it is likely that if successful, class societies will begin to build in CSI compliance to inspection routines, since most of the data should already be available.

The project's sponsors so far have included the European Union and local authorities in Sweden and more will be needed if the project expands. It relies on transparency but also provides feedback to owners and reports to shippers, promoting continuous improvement. The CSP says it is willing to embrace partnerships where possible - with the ESI or the US-based Clean Cargo Working Group - in order to gain traction and there is no doubt that refinements will be needed as the project develops.

But what is perhaps most important about the CSP is that by approaching the issue from the opposite perspective to that of mainstream regulation, it has been able to achieve so much in so little time at such low cost. Though it sounds hopelessly simplistic, instead of starting with the problem, the CSP started with the solution and worked backwards. In the process, they provided a timely lesson for all would-be lawmakers: design a system to be driven by those with the most to gain and you can do a lot with very little.

**Watchkeeper: Age and infirmity:** From time to time, usually when the freight market is depressed by a substantial oversupply of ships, there is a campaign against the old. It would be good for safety or efficiency, it will be suggested, if elderly ships are consigned to the scrapheap, leaving the maritime world to the safer and the more efficient. It is rare that the campaigners go so far as to point out that life will become financially better for those who remain; the inference is there for those who will make it.

Invariably this picture is painted with a very broad brush, with no discrimination between those elderly vessels which have been maintained carefully by their owners and those which really could benefit by a conversion to razor blades. Sensible owners have criticised the insurance sector for its use of these blunt weapons that will jack up premia on a ship's 15th birthday, on the crude basis that old ships statistically produce higher claims. Owners who spend a great deal to keep their ships updated and carefully maintained point out that there needs to be less age-related action and more based on the reality of a ship's condition. They have also pointed out the unfairness of the stroke of a legislator's pen, or the change in a charterer's policy, which effectively devalues their capital asset, without a shred of justification.

The environment is now added to safety and efficiency as a reason for persecuting the elderly. There is growing pressure in Europe, where these matters are closer to politicians' hearts than perhaps elsewhere for an arbitrary age limit on elderly ships. Once reaching this limit - some have suggested 30 years, others 25 years, such ships would effectively lose their license to trade, their certificates would be withdrawn, and they would

be consigned to the recycling industry. The prime reason would not be their condition, or a compelling need to upgrade efficiency in the industry, but the inability of elderly vessels to meet new emission standards. The second, and perhaps unspoken pressure is that of the market - get rid of elderly ships and those whose fleets are newer, can be rather better rewarded.

Perhaps this is a cynical view, but it is, nonetheless, unsatisfactory in that it discriminates only on account of a vessel's age. It might be that the machinery of this elderly ship has been cosseted for its life by devoted professional staff, working for a shipping company which works hard to maintain the highest standards, denying their engineers nothing in terms of the finest spare parts, regular overhauls, the best quality fuels and lubricants. Under this arbitrary age-related prescription there will be no discrimination between this excellent old vessel and one that is, to put it bluntly, neglected.

And what encouragement is there to continue to carefully maintain the older ship, whose value as an asset becomes little more than that of the scrap price during the last years of its "permitted" life? By all means persecute sub-standard vessels, which can be properly identified by regulators and their Port State Control machinery. But let such discrimination be fair and based on something rather more than prejudice, ill-thought-out regulation and still-controversial notions about emissions and efficiency, against a background of overtonnage.

**Requirements concerning mooring, anchoring and towing:** The P&I Club Gard have recently reported that an increasing number of cases and incidents involving lost anchors have been reported.

The causes for loss of anchors and chains vary but many seem to include lack of proper seamanship and maintenance. There are likewise an increasing number of cases of breaking chains and/or anchors where the root cause to some extent indicates that the quality of the material used for the breaking parts could be questionable.

It should be noted that the loss of anchors and chains at designated anchorages can be costly if the authorities call for lost anchors and chains to be removed.

It should be mentioned that losing anchors and/or chains caused by or simply by dragging anchor in adverse sea and weather conditions entails the risk of; collisions, groundings and even loss of the ship as well as causing possible damage to underwater installations.

The governing rules for anchoring equipment is the unified rules of the International Association of Class Societies (IACS), which are setting the minimum standards for the material's grade, strength, length and size of chain, number and weight of the anchors, the strength of the chain stoppers and the needed power for the anchor windlasses and the holding capacity of the brakes.

The ship's Class calculates an Equipment Factor by using a formula, based on the displacement, the breadth, the air draft to top of accommodation above the summer load waterline, ensure that the forces on the ship by current and wind from both the front and the sides are taken into account.

The Equipment Factor formula assumes that max speed of the current is 2.5 m/sec, and max wind speed of 25 m/sec which seems at the high end for normal conditions experienced

worldwide, but it is also assuming that the ship can use a ratio of between 6 and 10, the ratio being the length of chain paid out and the actual water depth. It should be noted that large size ships in deep water anchorages do not have sufficient chain length to reach the Equipment Factor formula's assumed ratio!

Ships Masters should bear in mind the following:

- Anchoring equipment is not designed to hold a ship in adverse sea and weather conditions or to prevent a ship from drifting.
- Anchoring equipment is only for the temporary holding of a ship within a sheltered area.
- Ships anchored in areas with possible exposure adverse to sea and weather conditions should have a procedure and policy in place for when to heave anchor and go to open sea to avoid the possible dragging of anchor and drifting.
- The condition of the anchorage holding ground
- Wind forces acting on the ship i.e. meaning that ships in ballast is more vulnerable than loaded ships

The rules for anchoring equipment can be found in the below linked document "Requirements concerning mooring, anchoring and towing", by the International Association of Classification Societies.

**The modern Ship Manager:** In recent years we have seen a dramatic growth of "third party" ship management, employed by shipowners who wish to outsource the operational management of their ships. There are many attractive aspects to this practice, not least being the fact that a large number of the expensive elements of ship operation are undertaken by somebody else, leaving the owner able to focus on his asset.

Sometimes called by the old-fashioned term - ship husbandry - ship management takes a number of different forms, all of which are available to an owner of a ship who wishes to avail himself of these services. The simplest form might be to outsource the employment of the ship's crew, removing the owner from this labour-intensive activity. Then a ship manager might take over the technical management of the ship, effectively organising its technical operation, maintenance, dry-docking, the provision of spares and ensuring that it is kept in optimum condition, with the minimum of time off shore every year.

A more complete form of management contract will see the technical and operational management of the ship overseen and organised by the management company, while if necessary, full commercial management might ensure that the ship is traded profitably for the owner by the management company.

The advantages of this form of ship operating are several. Some of the ship management companies are very big indeed and are able to enjoy all the advantages of scale that would be denied the owner of just a few ships. From fuel to spares, from dry-docking to the best arrangements with agents and brokers, the big ship manager will be able to cut an attractive deal. Additionally, such a manager will have exceedingly sophisticated systems in place to ensure that the ship is run properly, that everything is accounted for and that clear reports will be sent to the owner regularly. The best manager will have recourse to the best possible crews, and highly effective

superintendency teams to ensure that the ships are run well, with quality systems in place.

It is also attractive for some ship operators who own and operate their own ships, to perhaps put a number of ships out under third party management, to benchmark their own operating costs and keep a check on their own efficiency. Today, it is estimated that there are up to one third of the world fleet that is being run, in one form or another, by third party ship managers around the world. Many are large international companies in their own right, with their own network of offices in maritime centres around the world.

## **Ports strive to enhance operational efficiency: Various systems being put in place in**

**Indian ports for increasing productivity:** Leading ports in India have placed enhancement of operational efficiency high on their agenda - one way of taking advantage of the growing volumes. Already some major ports (that are government owned) are operating beyond capacity. Accordingly private port operators are using this opportunity to draw more of the cargo to their own ports and not just the cargo overflow.

K Mohandas, Union Shipping Secretary, government of India states, "Most major ports are operating at 80% to 85% capacity which is not a healthy situation. A \$ 12.4 billion capacity enhancement scheme for major ports is already underway. It envisages taking the capacity of 12 major ports to 1 billion tonnes by March 2012."

Various ports are putting different model in place for enhancing operational efficiency. But some systems are common and are proving to be beneficial.

"Reducing berth occupancy and increasing its utilization has been the policy of our management," says Rajeev Sinha, Wholtime Director of Mundra Port & SEZ. "We have a terminal operating system at Mundra port as a result we have been able to bring in a drastic improvement. The object is ultimately to have a web based system wherein operators do not have to come to the port for anything."

Another aspect that has proved a boon is the Security & Surveillance System being installed in several ports. It permits keeping a watch on everyone working within the port. "Having installed the system at Mundra we were surprised to find that a large number of persons used to stay inside the port for days together," he said. "It has also helped to avoid major and minor accidents which were a regular feature. We are also able to take several precautionary measures in advance."

To handle the high density traffic, Mumbai Port has installed the Vessel Traffic Management System (VTMS). Though expensive it has helped to bring in efficiency in handling the traffic which could not have been possible otherwise. Many ports in South India including Chennai port are in the process of finalizing deals for having VTMS installed and may turn out to be the order of the day in port operations.

Pipavav Port has set up a Container Freight Station (CFS) within the port limits for consolidating cargo moving to or from the immediate hinterland. Unlike many other ports where the CFS is located several kilometers from the quay, the CFS at Pipavav is in very close proximity - approximately 200 meters - to the container berths. As a result, containers can typically be moved from the CFS to the vessel in just ten minutes, a clear time and cost savings advantage for both cargo owners and shipping lines.

"If goal is performance then why should terminals perform differently?" asks Capt Rohit Suraj, Regional Director of TBA B.V. "Designing a terminal by minimizing risk and maximizing performance can be achieved by designing through simulation of what one desires to achieve in the future. The use of less space for achieving higher output can be accomplished through the use of software. Automation by itself does not mean you can get productivity but how well you adjust with the situation."

Growth that is happening obviously can be managed by using IT systems according to Vineet Malhotra, Sr V.P. of Kale Consultants. "Technology may bring in automation, but the biggest achievement is to do business by a novel way. If today a port handles 7 million TEU for growth you need to get set to handle 40 million TEU in the future." He advised that port should not invest in IT but pay for using it because by owning it, it will not help when you have to invest again in three to five years for upgrading technology.

Tom De Smedt, Sales Manager of Phaeros points out that within a port there are large number of players and one or more terminal operators. Besides there are the ship agents, truckers, cargo agents, freight forwarders, etc. "For efficiency there has to be a good communication system to interact with each other and avoid duplicity of operations by data sharing," he asserts. "This can be brought about through Port Community System (PCS)." Phaeros has been in demand for installation of PCS and Terminal Management System in Indian ports.

Ports are also considering various other options to increase productivity. Dock Aid System for berthing vessel that can help eliminate accidents while berthing vessels; Automatic Mooring System which avoid the need of human intervention; Oil Spill Detection system using radars and Fertilizer Cargo Complex System for speeding up bagging process are gaining prominence.

However Dinesh Lal, Co Chairman of FICCI National Infrastructure Committee and Group Director - India, A. P. Moller Maersk cautions, "The port users should not be penalized for being offered higher productivity and the port policy framework should be designed to make it user friendly."

**A "new generation" of bulkers:** Dry bulk carriers are tough, no-nonsense ships operating in a rough and competitive world, moving mountains of coal, iron ore, grain and other bulk shipments around the world with a minimum of fuss. They have to be exceptionally robust - with some iron ports capable of hurling 16,000 tonnes per hour into a ship, with the cargo grabbed out in the discharge terminals with massive steel grabs weighing fifty tonnes empty, the punishment upon a ship's structure can be severe. A better understanding of both the static and dynamic stresses upon these hard-worked ships has been gained in recent years and is being reflected in modern designs.

The new generation of bulk carriers is composed of sophisticated and efficient ships, designed for more economical operations and far more environmentally sustainable than earlier vessels. Scale economies, with most classes of bulk carrier able to carry more cargo, also help to make these ships a more attractive proposition for the operator. "Greener" propulsion machinery, with substantial reductions in harmful emissions is also being offered by a number of shipbuilders specialising in bulker construction.

Early bulk carriers were basically a huge rectangular box, subdivided into holds with a ship-shaped bow and stern. The latest vessels are optimally shaped to reduce resistance, while a great deal of work has gone into enhancing the flow of water over the propeller, both by refining the shape of the stern and with a range of fins and ducts that help to make the propeller far more efficient. It has also been possible to optimise the design of the rudder and tailor it to the hull, so that energy is not wasted in keeping the ship on course.

As with other types of ship, bulkers today tend to employ a range of modern coatings to help to reduce resistance and the growth of fouling. Bulkers often find that they are at anchor waiting for a cargo berth for extensive periods and fouling can build up quickly, so special coatings that can keep growth at bay have been developed.

But in the bulker's holds, where abrasion damage can come from grabs and from ore or coal being "shot" into the ship by powerful loaders, special coatings have been developed that will withstand such damage and ultimately prevent internal corrosion to the structure. Other "unseen" improvements come from the ability of modern ships to handle their ballast in a more efficient fashion, with far more pumping capacity and arrangements to exchange ballast at sea in a far safer manner than merely overflowing the tanks, a system required to prevent the transmission of alien species in ballast water.

## **EU Advance Cargo Notification Clauses available end November:**

BIMCO's Documentary Committee meeting in London on Friday 12 November approved two new standard clauses for the industry. The clauses address the impending EU Rules on advance cargo declaration which are due to come into force on 1 January 2011. Advance notification will apply to all trades and affects cargoes exported from EU member states as well as imports into EU members states.

The Clauses, one for voyage charter parties and one for time charter parties, are modelled on the previously published BIMCO US AMS Clauses. Although there is no bond requirement under the EU rules, the two systems are nevertheless similar in the way that the commercial parties should allocate responsibilities. Under the voyage charter party version it is the shipowner who assumes the role of ship operator and thus responsibility for compliance with the Rules. Under the time charter party version the responsibility rests with the charterer.

The new EU Advance Cargo Notification Clauses will be published as a Special Circular with explanatory note by the end of November. The Clauses will be available to download from the BIMCO website free of charge as soon as they are published.

## **Shipping industry updates flag state performance table:**

The Round Table of international associations (BIMCO, International Chamber of Shipping/International Shipping Federation, INTERCARGO and INTERTANKO) have published their latest "Shipping Industry Flag State Performance Table", which is updated on an annual basis.

The Table, which accompanies the well established "Shipping Industry Guidelines on Flag State Performance", summarises factual information, derived from the public domain. The intention is to provide a general appreciation of a flag's

performance and to encourage ship operators to reflect on a flag's quality before using it.

As the table demonstrates, the vast majority of the world fleet is registered with flag states which take their responsibilities very seriously. Most flags have ratified most of the key International Maritime Organization (IMO) Conventions, the adequate enforcement of which is shown by their Port State Control records. There is always room for improvement and most flags continue to receive a small number of potential negative performance indicators (black blobs). However, many flags have improved on their performance in previous years, some dramatically, and notably six flags had no potential negative performance indicators at all in 2010. Since the Table was first compiled in 2003, there has been a noticeable decline in the number of flag states that appear on the black lists of regional Port State Control authorities.

Unfortunately, there are still a number of poorly performing ship registers, and for 2010 the list of the very worst performing flags, which the Round Table believes shipowners should think very carefully about before using, includes: Albania, Bolivia, Cambodia, Columbia, Costa Rica, Cote d'Ivoire, Democratic Republic of Congo, Georgia, Honduras, Lebanon, St Kitts and Nevis, Sao Tome and Principe, and Sierra Leone.

The Table (and accompanying Guidelines) are intended to serve as a complement to the Voluntary IMO Member State Audit Scheme, by which maritime administrations are subject to external audit under the auspices of IMO with regard to their implementation of IMO Conventions relevant to the safety of life at sea and protection of the marine environment. The shipping industry associations welcomed the decision taken by the IMO Council to make this scheme mandatory in due course.

### **Greenhouse gas emissions from ships:**

Meanwhile, IMO has been addressing the reduction of greenhouse gases (GHGs) from ships, as part of IMO's contribution to the worldwide efforts to stem climate change and global warming and good progress has already been made on related technical and operational measures, with further work being undertaken on market-based measures.

Further consideration of measures to reduce GHGs from ships will continue at the next session of IMO's Marine Environment Protection Committee (MEPC 61), which will meet from 27 September to 1 October 2010.

Eastern European countries to get help in tackling alien invaders under innovative EBRD/IMO Marine Biosafety Initiative

The Russian Federation and Ukraine will be the first countries to benefit from a training programme aimed at helping selected Eastern European countries reduce the risk from harmful organisms and pathogens transferred in ships' ballast water, under an innovative Marine Biosafety Initiative, launched by the European Bank for Reconstruction and Development (EBRD) in partnership with the International Maritime Organization (IMO), through the Organization's GloBallast Partnerships Programme (GloBallast).

The EBRD is providing funding for a series of training programmes in selected countries in which the EBRD operates (beginning with training in the Russian Federation and Ukraine, scheduled to start in early 2011), while GloBallast will provide already-developed training material and support the project technically via IMO's GloBallast Programme Coordination Unit (PCU).

The training programme is seen as a crucial tool in assisting the shipping and port sector in the selected countries in building technical and institutional capacity to meet the mandatory requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), adopted by IMO in 2004 to address the problems caused by alien species transported to non-native eco-systems in ships' ballast water, with potentially devastating consequences.

Lack of capacity has been identified as the single most important barrier in addressing ballast water issues in developing countries and in meeting the Convention requirements. This could significantly impact on the competitiveness of both port and maritime sectors in the EBRD regions, as the ships and ports will have to meet the international requirements once the BWM Convention enters into force.

The IMO-EBRD Marine Biosafety Initiative builds on a series of capacity building tools developed by the GloBallast Partnership Programme, and will target a wide spectrum of private sector stakeholders in the selected group of countries.

The modular, two-phased training programme will build the basic capacity among a wide range of stakeholders including private and public sectors in the first phase of training.

The advanced training in the second phase will be more specialized and will focus on compliance and operational issues of ballast water management by targeting mainly the private sector including ports operators, the shipping industry and technology developers.

Building capacity to address ballast water management issues in the EBRD region will assist the EBRD member countries to put in place appropriate legal and policy frameworks that will drive the compliance process, and the same time prepare the ground for investment in related infrastructure such as sediment reception facilities, shipping fleet modernisation and technology development and commercialization. The capacity building activities will also provide the private sector with the right technical and institutional skills to meet the international requirements of the countries they trade with. Most importantly, this will lead to the protection of the regional shores, coastal economies and public health from the biosecurity risks related to the transfer of harmful organisms and pathogens by ships' ballast water and sediments.

The IMO-EBRD Marine Biosafety Initiative represents a very innovative partnership model between a United Nations body such as IMO and a Multilateral Development Bank, in addressing a serious global environmental issue while catalyzing competitiveness among the private sector players, such as shipping and ports, which heavily support the economic development of the EBRD region.

### **Background**

The problem of aquatic invasive species is largely due to expanded seaborne trade and traffic. Ships must take on ballast water in order to maintain their stability and draft when travelling with light loads, for instance when they're on the way to pick cargo. When the ships are then loaded with heavy cargo, they discharge the ballast water. When emptying the ballast water - which they carried from the previous port - they may release organisms and pathogens that are potentially harmful in the new environment.

The international community has been actively addressing the issue of transfer of harmful organisms and pathogens through ships' ballast water for over a decade. These efforts culminated in the adoption, in 2004, of the International Convention for the

Control and Management of Ships' Ballast Water and Sediments, which has been ratified to date by 25 countries, representing 24.28 per cent of world merchant shipping tonnage. The convention will enter into force 12 months after ratification by 30 States, representing 35 per cent of world merchant shipping tonnage.

### Focus on Indian Ports' expansion: Conference on "Indian Port Expansion and Capacity Upgrading"

China based Noppen Co. Ltd made its Indian debut with a well attended conference on "Indian Port Expansion and Capacity Upgrading" held last week at Mumbai. Participants from various quarters of the globe had opportunities to gather a wealth of information, participate in networking and for some it was an occasion to transact business - a feature that appears to be becoming a regular occurrence at such events.

The focus remained mostly on non major ports most of which are privately run and responsible for bringing in dynamism to the maritime sector of India. Strategies that brought about the remarkable growth of ports set up by the Chowgule group, Gautam Adani at Mundra and Geetapuram port of Ispat became issues for protracted discussions. Advantages of new technologies and equipment with ability to transform a port's performance and enhance productivity were showcased.

Capt Sandeep Mehta, CEO, of Port of Mundra compared his port with that of Antwerp. Highlighting the outstanding features of Mundra port he illustrated its similarities with Antwerp port. "Mundra port which enjoys a draft of 17.5 meters is projected to handle 14.5 million TEUs by 2015," he said. "All out efforts are being made to enhance connectivity and put in place extensive back up facilities. The airport within Mundra port & SEZ is being extended to handle commercial flights which are expected to commence soon. We believe in building ahead of the demand and factoring in automation. We also have two berths to handle coal at the Mormugao port, and the joint venture Adani Petronet (Dahej) Port Pvt. Ltd. set up for developing a Multi Purpose Port to handle solid cargo at Dahej is expected to start operating from 2011."

Mr Raj Khalid, representative of the Port of Antwerp in his presentation on Antwerp port concurred on the similarities between the ports of Mundra and Antwerp as described by Capt Mehta. He stressed on the potential features that lends efficiency and high productivity to a port that are common to the ports.

Atul Kulkarni, the Chief Executive Officer of the Chowgule Group focused on the "Role of Non-major ports in India's Port Development". He gave rare insights into the challenges faced in attracting more cargo and the importance of connectivity for achieving better throughput.

"Geetapuram on the West coast 50 km from Mumbai features a draft of only about 7 meters," said Edward Dias their General Manager - Operations. "The port's increasing throughput features bulk cargo including iron ore, cement, clinker, coal and sulphur. Located on the mouth of Amba River where siltation was high and a perennial problem the scope of deepening the port was limited.

Two major ports viz Chennai and Kandla became the core of the panel discussion. Chennai port unlike Mumbai port, also a city port, did not face the problem of road congestion like in Mumbai. While the traffic from Mumbai has to pass through the city, cargo moves in and out of Chennai port directly on to the highway

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which is in the vicinity of the port itself. Gearing up to meet the capacity growth two additional roads are being developed which will ensure faster evacuation of the cargo. A unique feature of Chennai port based in South India was the escalation in the amount of cargo coming in from up North and also from across the country as far as Ludhiana. Kandla port on the other hand was more of a tidal port but suffered from a shallow draft.

The second day of the two-day conference was committed to various aspects of port activities which help to increase productivity and performance. Sami Korpela, Country Manager of Konecranes, presented the versatility of their cranes. He dwelt on the "Newest Automations for Handling Equipment and How to Cope with Volume Growth Efficiently".

A significant aspect of port operations that caught the interest of the participants was "The Role of Advanced VTS systems in Port Operation". Rainer Woerner of Atlas Maritime Security elucidated how the vessel traffic system worked and its importance in the offshore, port and coastal waters. Its increasing importance was accentuated with the growing traffic, need for cost effectiveness and efficiency and the new challenges.

"Efficiency in Port Operations through Terminals and Port Community Software" an aspect that is gaining popularity among port operators in India was explicitly illustrated by Stan De Smet, General Manager of Phaeros. "This is a system where in all stakeholders communicate with each other and creates a win-win situation," he said. "It is fine to have 10 cranes and other equipment. But you need planning tools for ensuring they are utilized effectively. If you can do with 8 cranes why install 10?"

What made this conference interesting is that it featured some unique ideas and systems for port operations now being tried in different ports. The organizers have planned more such conference in the coming year.

**No point in trying to prolong Hong Kong's maritime hub position: Hong Kong's halcyon maritime days are over, usurped by mainland ports that can offer the same efficiency at a cheaper price and with easier access.**

Earlier this week a coalition of maritime industry groups called for the government to establish a policy bureau to strengthen Hong Kong's position as an international maritime centre.

The alliance, comprising the Hong Kong Shipowners' Association, Hong Kong Seamen's Union, the Institute of Seatransport and the Hong Kong Logistics Management Staff Association, said the government needed to do something to stave off competition from Singapore and Shanghai.

Hong Kong was in danger of losing its international maritime status, they warned, and was lying fourth in the busiest ports in the world list.

"This ranking may drop even further. The issue of finding ways of maintaining and upgrading the status of Hong Kong as an international maritime centre is of the utmost urgency," a paper by the alliance said.

The way to go about improving Hong Kong's maritime status, according to the four groups, involves asking for government intervention in developing maritime-related services such as shipbroking, chartering, ship finance, arbitration and legal services rather than trying to boost cargo and container throughput.

This is an interesting development. Way back in 2004, the government released its Study on Hong Kong Port - Masterplan 2020. In that report, it was found that the reason Hong Kong's market share of south China exports was falling was because of the added costs involved in trucking boxes to the port.

So important was containerised cargo - especially the direct export variety from south China factories - that the report concluded it was "mission critical" for the very survival of the port that the cost of trucking containers from the Pearl River Delta factories to Hong Kong be reduced.

Six years later and we now hear from the industry that boosting container throughput is a waste of time.

What an incredible turn around - from mission critical to waste of time in just six years. But however startling that may be, it is in fact a welcome return to reality. Because it is indeed a waste of time trying to attract more containers to Hong Kong, and it always will be as long as it costs more to export a box from the port viz-a-viz Shenzhen just over the fence.

Shippers of lower-in-value ocean freight make their export port decisions based on cost, and Hong Kong is a good third more expensive per box than Shenzhen. This is because of factors like cross border delays keeping truck trips down to one a day, it is because of the high cost of cross border trucking licenses and the fact that mainland drivers are not permitted to drive in Hong Kong.

Hong Kong's government has made inaction into an art form and it would rather do nothing than take on the many vested interests embedded in the transport industry. Someone in the Transport and Housing Bureau once told me that even though it would be a great cost-saver, it would be "political suicide" for a legislator to recommend mainland truckers be allowed to drive their containers into Hong Kong and deliver them to Kwai Chung container port. The functional constituency for transport would have an embolism.

The laissez faire principle so embraced by Hong Kong's rulers really means not tampering with vested interests that rig the market. So to look to the government for assistance in developing maritime services is worth a good few hyucks.

Perhaps the services can be developed to some degree, but Hong Kong will never again be the busy port it once was. Sometimes the world just moves on.

**MARPOL Annex VI - LR guidance notes:** The changes to nitrogen oxides (NOX) controls introduced by the Revised MARPOL Annex VI - applying to marine diesel engines with a power output of more than 5,000 kW and a displacement at or above 90 litres per cylinder, installed on ships constructed on or after 1 January 1990 but before 1 January 2000. The revised NOx controls require an Approved Method (if one is commercially available) to be fitted to engines no later than the first renewal survey which occurs 12 months or more after the date that IMO is notified of the Method's certification. The purpose of an Approved Method is to restrict NOx emissions to no more than the limit values given for Tier I engines. On 5 October 2010, the Administration of Denmark notified the IMO of the certification of an Approved Method for certain MAN B&W S70MC engines. The IMO has published this information in Circular MEPC.1/Circ.738 which is applicable to all vessels regardless of flag. The Approved Method is certified for engines with a Maximum Continuous Rating (MCR) of between 2,530-2,810 kW/cylinder and a speed between 81-91 rpm. Installation of this Approved

Method will be mandatory no later than the first renewal survey (five-year survey) for MARPOL Annex VI which occurs on or after 6 October 2011, subject to its commercial availability.

What should owners and operators do now? Owners and operators of ships which are within the construction date range, and which have MAN B&W S70MC engines, should assess if their engine performance falls within the range of operation outlined above. If it does, the Approved Method should be installed before the next MARPOL Annex VI renewal survey. Lloyd's Register's guidance notes have been prepared in order to assist shipowners, and other interested parties, in understanding the issues associated with the retrospective Approved Method requirements as given in regulation 13.7 of MARPOL Annex VI as revised in 2008. These guidance notes represent Lloyd's Register's understanding of the Approved Method requirements and hence do not supersede any relevant flag state instructions. These notes will be retained under review and will be amended as necessary in the light of developing experience and the issuance of any general IMO, or other, guidance on this matter.

### **Nickel ore carriage warning - important alert!**

Members are probably aware of the recent sinking of two bulk carriers with fatalities, Fu Jianand NASCO Diamond, reported in the Lloyd's list on 28 October and 11 November respectively. Both bulk carriers were reportedly transporting nickel ore from Indonesia to China. BIMCO has in the past reported on the carriage of nickel ore and the problems associated with its carriage. In view of the above two incidents, which occurred within a span of less than two weeks of each other, the Secretariat felt that it is timely to alert members again on the transport of this cargo. Nickel ore cargoes, which consist of a mixture of very fine clay-like particles and larger rock particles of various sizes, are known to be unstable cargoes. This is largely attributed to the problematic nature of these cargoes; it is not homogeneous in form and there are significant variations in moisture content and physical consistency. Essentially, the ore is mined, stored in open stockpiles and then shipped. In view of these factors, whether these cargoes can be accurately analysed for purposes of determining the transportable moisture limit and the actual cargo moisture content is highly questionable. Even though the International Maritime Solid Bulk Cargoes (IMSBC) Code sets out the standard methods of determining the Flow Moisture Point of cargoes which may liquefy, these test procedures were developed primarily for homogenised metal concentrates, whereas nickel ore is clearly not. Moreover, metal concentrates have a typical moisture content of about 10%, whereas nickel ore often has a moisture content in the range of 25-40%. These problems make identifying the risk liquefaction level, which is of vital importance for safe carriage, difficult and will inherently put the safety of bulk carriers at risk when such cargoes are loaded. In one case, a ship capsized within 48 hours of departure. In the past, various P&I clubs have reported on incidents whereby ships faced severe stability problems as a result of the liquefaction of cargoes of nickel ore mined in Indonesia and The Philippines. Another problem with this cargo is the paper documentation coming from shippers. Shippers' confirmation that the cargo is safe for shipment and/or its moisture content should be treated with extreme caution. Owners have been known to challenge the documentation provided by shippers and when there was doubt as to the condition of the nickel ore, the so-called "can test" - which involves the striking against a hard surface of a can filled with ore - proved to be a practical and useful method of obtaining an early indication of the possibility of cargo flow. In

some instances, following further advice from experts and - where appropriate - independent laboratory testing, the cargoes were rejected as being unfit for shipment.

According to the IMSBC Code (section 4.5), sampling and testing for moisture content shall be conducted as near as practicable to the time of loading. The interval between sampling /testing shall never be more than seven days. If the cargo has been exposed to significant rain or some form of moisture exposure between time of testing and loading, further tests shall be conducted to ensure that the moisture content is still less than the cargo's transport- able moisture limit (TML). As illustrated, there are serious concerns and difficulties establishing the safety of this cargo for shipment; members are strongly advised to exercise great caution when contemplating such shipment and are urged to contact their own P&I clubs for advice and detailed guidance.

### **IMO set to discuss Unfair Treatment and LLMC Liability Limits**

BIMCO will be represented at the 97th session of the IMO's Legal Committee taking place on 15 to 19 November at the headquarters of the International Maritime Organization (IMO). The meeting will include a presentation by BIMCO on its recently revised study on treatment of seafarers as well as informal considerations of an Australian proposal to amend the liability limits of the Protocol of 1996 to the Convention on Limitation of Liability for Maritime Claims, 1976 (1996 LLMC). Other issues to be discussed include practical issues relating to the implementation of the 2001 Bunkers Convention and review of national legislation on piracy.

**Fair Treatment of Seafarers:** Based on a submission made to the Legal Committee, BIMCO will introduce the main findings of its recently revised study of the treatment of seafarers as well as its two surveys on fair treatment and abandonment of seafarers respectively. Among other things, the submission highlights the problematic drifting towards a more severe liability regime. Other possible elements of unfair treatment are identified, including very lengthy detentions as a means of security for possible future claims. At the meeting, BIMCO will present these findings to the Legal Committee, while pointing also to an unfortunate pattern of fair laws seemingly being applied unfairly, with seafarers being detained after an incident, either on a presumption of criminal negligence or as financial security. BIMCO has also cosponsored a paper submitted by the Comité Maritime International (CMI) dealing with fair treatment of seafarers. The paper focuses on the apparent failure of certain States to comply with their treaty obligations under the UN Convention on the Law of the Sea (UNCLOS), which bars coastal States from imprisoning seafarers on board foreign vessels for any pollution offence beyond their territorial waters, or for one within those waters, unless involving a wilful and serious act of pollution.

### **IMO set to discuss Unfair Treatment and LLMC Liability Limits: Liability Limits of 1996**

**LLMC:** The Legal Committee will also consider a proposal made by Australia to amend the limits of the 1996 LLMC in accordance with the tacit amendment procedure set out therein. This issue was included as a new work programme item of the Legal Committee at its 96th session, but as the formal criteria in the 1996 LLMC for discussing this issue have not yet been met, only informal deliberations can take place at the meeting. Although these will be non-binding on member States, the debate will form an important part of any future work carried out by the

Legal Committee in this regard. It is expected that the criteria, including the number of co-sponsors needed for requesting the IMO Secretary-General to circulate a paper seeking to amend the limits of liability under 1996 LLMC, will be fulfilled shortly meaning that such a proposal could probably be considered formally by the Legal Committee at the end of 2011 or in 2012.

A number of submissions have been made inter alia by Australia for the informal discussion, dealing with issues that have to be considered in relation to the possibility of amending the limits of liability of the 1996 LLMC. These include experience of incidents and the amount of damage resulting therefrom, changes in the monetary values and the effect of a proposed amendment on the cost of insurance. BIMCO intervened in the discussions taking place at the 96th session of the Legal Committee stressing the need to have an internationally applicable system of limitation of liability, which is reliable, predictable and realistic. At the same time the political sensitivities were noted and the wish expressed by a large number of delegations to consider the issue acknowledged. BIMCO will actively engage in the upcoming informal discussions of the Committee with a view to protecting the interests of the shipping industry and the continuation of a globally applicable system of limitation of liability, thereby avoiding regional initiatives. Members will be informed in due course about the outcome of the meeting.

**"Intelligent" Combustion Monitoring for 2-Stroke Diesels:** Wärtsilä introduced its Intelligent Combustion Monitoring system for two-stroke diesel engines; a system designed to provide ship operators and owners with information that enables operators to optimize vessel engine performance, and to be aware of the condition of components in the combustion chamber.

By operating at optimal firing pressures, fuel cost savings of up to two percent compared to deteriorated parameters can be achieved. Furthermore, the condition information ensures that maintenance is carried out at the right time.

The Wärtsilä Intelligent Combustion Monitoring system provides a means for measuring the pressures in each cylinder during the entire combustion process, continuously, in parallel, and under all load conditions. By monitoring the exact position of the crankshaft, and in combination with advanced mathematical modelling of the engine, it provides highly accurate, real-time data for diagnostic analysis.

Conventional cylinder pressure measurement systems, such as portable pressure indicators, or on-line systems that measure the combustion pressure cylinder by cylinder in a scanning sequence, are influenced by movements of the fuel rack, rpm variations, and sea conditions.

Wärtsilä solution, according the manufacturer, has the ability and real time capacity to collect the combustion pressures and angle values for each cylinder, in parallel and simultaneously, stroke by stroke. The crankshaft deflection is calculated on a continuous basis, thus ensuring that the information given is accurate regardless of engine load conditions. The monitored data covers, amongst other things, the thermal overload of individual cylinders (MIP); the mechanical overload of individual cylinders (Pmax); the optimal fuel efficiency; power readings (MIP and IPOW); the condition of the cylinders (Pmax + diagram shape); load dependent monitoring of the combustion parameters (MIP, Pmax, aPmax, Pcomp, Ptdc, Pign, aPign, etc.) and comparisons between cylinders; the tracking of gas leaks due to worn liners or broken piston rings (Pcomp); the tracking of

exhaust valve components (Pcomp); and the tracking of the fuel equipment (Pmax + diagram shape).

**Co-operation agreement with ABB:** The Wärtsilä Intelligent Combustion Monitoring system integrates the well-known ABB Cylmate system, for which ABB and Wärtsilä have signed a co-operation and distribution agreement earlier this year. Under this agreement, Wärtsilä takes responsibility for global sales, installation, and lifetime service of the system for all two-stroke engines, both for upgrades to engines in operation and as an option for new-buildings. The synergies of this co-operation between two world-renowned technology providers offer numerous customer benefits. Wärtsilä's global sales and services network provides worldwide customer support; the system can be supplied on a turnkey basis with installation and commissioning handled by a single entity; and the engine designer's specialist services and support capacity is further enhanced. Further development of the system's technology will be carried out jointly, utilizing the combined know-how of the system developer and the engine designer.

**Tough Ruling:** It seems the rule of law is increasingly taking a higher profile in cases of vessels taken by pirates...this can be great when it involves jailing pirates, not so great when it denies seafarers some sum of recompense for their ordeal.

The vessel the "Danica White" has long been an interesting case for those following the Somali piracy issue. This was a vessel that seemingly went against all semblance of commonsense...slow, low, hardly any crew, poor watchkeeping, lack of awareness, no defensive measure or strategy. A steaming pile of Anti-Best Management Practice. Maybe unsurprisingly the vessel was captured by Somali pirates in 2007 and held hostage for 83 days.

Perhaps prompted by these perceived and well publicised failings the Danish sailors' union, Sømændenes Forbund, recently initiated a case against the shipper and Captain, arguing that the cargo ship's crew had not been informed of the dangers of sailing in the Gulf of Aden and of what precautions they should have taken if attacked by pirates.

Despite their captors being paid a reported 4 million kroner for their release, the crew members of the vessel were found by the court not to be entitled to compensation. In a ruling which upheld an August 2009 decision by the Copenhagen City Court.

It was not known at press time whether the case could or would be appealed to the Supreme Court.

So here we have a ship which was taken as a direct result of the failings of management - if you do not have enough people to secure the vessel, if you do not understand the threats being faced and of the means to mitigate such risks, then you are doing things wrong. When shipowners and their management fail in their duties it seems incredible that the crew should not only suffer, but suffer without adequate recompense.

The Danish Maritime Authority is also implicated in these failings - For the Danica White was THEIR vessel...so the failings, the weaknesses in compliance and the downright ignorance must somewhere rest on their shoulders. Seemingly not!

**Practice Makes Perfect:** The decision for the Danish court to so blithely dismiss the role of shipping companies in the security of their vessels, and of the direct link to the leadership of their Flag State was staggering especially as the vessels which are now being taken are usually the ones who have failed to take proper action.

The shipping industry is good at learning lessons from a bloody nose...and in the pirate wars we have slowly but surely honed the techniques which can protect vessels, these have become Best Management Practices (BMPs).

However, just because advice exists and guidance is out there doesn't mean that all will pay attention. OK, so a pamphlet of best practice may be a sticking plaster on a broken leg - but it is worrying to find out that adherence to these practices is weak, patchy and all too often nonexistent.

The guidance within the BMPs is a route map to hardening the vessel, it is not about 'cherry picking' guidance or addressing individual elements - it is all or nothing. The advice is simple, enact the guidance and you have a chance, ignore it and the likelihood of being hijacked increases. There are far too many vessels, which for a host of reasons are failing in their duty to protect themselves, leaving crews and vessels vulnerable.

Whether through ignorance or negligence, some are playing fast and loose with the rules, a 'Russian roulette' approach which places seafarers and the responding armed forces at risk. Things have to change, there can be no excuses we have to implement ways of responding and reacting. Unfortunately the advice within the BMPs is seen by many to be a hassle which takes up valuable time and resources.

With so many crews and operators struggling to impose and implement the standards of BMP it is clear that a stronger hand is needed in both guiding and enforcing compliance. There are lessons from many Flag States, with the US leading the charge in applying stringent standards and measures for its own flagged and owned vessels. It seems perhaps that it is time for others to follow suit and to better enforce the standards on vessels. The next phase will include tough sanctions on vessels which fail to do minimum required. Anything less than the 'best' simply is not good enough, a harsh truth but one which can no longer be ignored.

**Taking Action:** It is becoming increasingly clear that if you do not act to secure your vessel, then you will be clamped down upon. The time for playing silly beggars has passed.

The Philippines government has even announced that it will begin to compile a blacklist of shipping companies that have failed to protect their crew by following best practice guidelines.

Embassy officials have reportedly requested a full list of shipping companies known to have flouted guidelines from the UK Maritime Trade Operations office in Dubai, which acts as the primary point of contact for merchant vessels and liaison with military forces in the region.

While the wishes of the Filipinos have not yet been granted, it is clear they will not take no for an answer and are even pushing for access through the United Nations Security Council.

Their decision to clampdown on the poor operators is in its infancy - and as such no formal decision has actually been made on what they intend to do with offending shipping companies..Especially given as there could be some shocks in the roll of dishonour. Cruise ships cutting corners, major players flirting with hotspots...and not putting more people onboard, etc...We could be in for some real enlightenment.

One feature of the decision to act seems to be prompted by the desire to promulgate a list of those companies deemed not to be acting appropriately to, "allow the government to guide seafarers accordingly".

Whether this would effectively mean that crews would be withdrawn from vessels that appear on the list or operators remains something of a moot point - but it shows there is a

hunger to shine a great big security spotlight on those not taking the problem seriously.

Maybe this is finally the start of naming and shaming...and not just from a security perspective..With MLC looming there really does need to be a maritime "trip advisor". Poor cabins, bad food, inadequate facilities...whatever the problems let's have a mechanism to highlight them. There needs to be a way that prospective employees can get an independent and trusted view of what a company or ship is like...we have not been great at grasping the 'internette', but the time is here!

**Piracy Update:** In order to keep the shipping industry up to date with the ongoing EUNAVFOR mission off the coast of Somali, the latest anti-piracy briefing was recently held at the International Chamber of Shipping (ICS) headquarters in London.

Led by the impressively named Major General Buster Howes, Rear Admiral Hank Ort of the Netherlands, head of a NATO naval affiliate and Peter Hinchcliffe Secretary General of ICS, it began with what sounded initially a rather upbeat note. It seems pirate attacks are being kept at the lowest level believed possible within the International Recommended Transit Corridor (IRTC). Hooray!

Outside the IRTC area though it seems we are no closer to defeating the pirates. Boo!

Given the size of the area to be policed, this is perhaps unsurprising. With 2.6million square miles of sea to cover there is no feasible way that sufficient military presence can effectively be brought to bear. Even at speeds of 30knots there is a minuscule operational foot print for naval vessels.

It was quoted that it would take 83 helicopter equipped vessels to provide effective 1 hour responses in the area. Given that most attacked vessels are only able to request help with around 10mins warning, then the problems are clear.

With a relatively effective naval presence around the transit corridor, the pirates are moving ever outwards. A capability boosted not simply with mother ships, but the investment in piratical accoutrements such as new outboards and armaments.

The ICS view remains that there is no acceptable level of piracy. Every single attack is one too many! So it seems some additional 'muscle' is needed. But where should it come from?

The issue of private security fleets was discussed, and an increasing number of companies are in the process of fitting out vessels or actively pursuing venture capital funding to do so. The view of EUNAVFOR was not wholly against the idea, but that there were serious considerations to be addressed.

Private security companies have a role, but who are they and what are they doing? While the sea area is immense, the battle space can get squeezed if crowded with private security. Legions of legitimate players can add value, but there are real dangers too. It seems that where such practitioners are known, respected, accountable and even more importantly contactable, then there is potential.

Time for the security guys to get their act together..

**Adding It All Up:** According to Wikipedia, "Lies, damned lies, and statistics" is a phrase describing the persuasive power of numbers, particularly the use of statistics to bolster weak arguments...when it comes to counting the real impact through the numbers of piracy attacks we seem to be in the rather bizarre habit of understating the problem.

The hugely respected International Maritime Bureau (IMB) released its latest piracy attack figures last month, and while the

numbers made worrying reading, for some the concern remained of not enough attacks being recorded.

We were chatting to maritime security expert, Andy Robinson, who has been compiling attack figures for years for the IMS training courses, (so much so that even retirement hasn't cured him of the bug)...and he is increasingly concerned that something somewhere is going very wrong.

Right, so here's the science...by using data from a range of independent sources (IMO, ReCaap, US Office of Naval Intelligence) it seems we are underestimating the problem. So while according to the IMB Somali pirates have carried out 35 of the 39 ship hijackings reported globally this year, Andy has totted up 49 hijackings.

The IMB were also rightly concerned about the rebound in attacks in the South China Sea, a one-time hotspot where piracy had been virtually eradicated by naval patrols. Incidents in the area have tripled to 30 in the year so far. Yet again Andy thinks it's much worse....So far he has recorded 47 incidents in Vietnam, Malay, Thai, Singapore and Malacca Straits.

As far as the hottest of hot spots, the Gulf of Aden the IMB has seen a fall to 44 compared with 100 for the same period of 2009. Andy also recognises that there is some success in the region, his stats aren't quite so rosy...as he tallies it as 100 incidents in the Gulf of Aden & Red Sea in 2010, compared to 150 in 2009 over the same period.

So far this year, pirates have boarded 128 ships and fired at 52, while 70 vessels thwarted attacks. One crew member has been killed, 27 injured and 773 taken hostage.

We do not want to be seen to be dismissive of the IMB efforts - far from it, the organisation is vital to the global fight against maritime crime. We just want to raise the issue of under-reporting, and even worse...under counting AND under reporting. We are at the thin end of the wedge here, and if we can't get the sums right it will be increasingly hard to get the response right.

**Miners Not Seafarers:** The whole world seemed united last month in watching and cheering as 33 Miners were rescued from the depths of the earth and their Chilean mine trap,

After 70 days they were lifted by their special rescue pod and brought blinking and bemused to the surface - emerging into the bright sunlight and the arms of the wives, girlfriends, families and a media savvy El Presidente.

While the rest of the world saw this as a wonderful happy story (and let's face it, it was) for us in the shipping fraternity it seemed like something of a slap in the face. The miners got an incredible media cavalcade, a rousing welcome home, plus film and book deals beckoning...but what of other innocent workers trapped against their will...the poor seafarers being held in Somalia?

While it seems being trapped by rock is cool, being captured by rockets is not. While there has been billions of words expounded about the miners, not a whisper about the crews in Somalia.

We are a dirty little secret - piracy is someone else's problem, the people involved are someone else's problem...and the world seems ignorant in its bliss. It is wonderful to come together to cheer the triumph of the human spirit on one side of the world, but we shouldn't be so blinded by the media glare so as to ignore the plight of seafarers when the human spirit fails and young Somali men turn to crime off Africa.

For some there was even shock that hundreds of feet below the ground the miners were still made more comfortable than many at sea today...with TV, Internet, and chocolate treats, life in the mine seemed rosier than many experience at sea.

Add to that the fact that the miners' employers did all possible to get them home! There was no abandonment in this case. Perhaps we can learn a lot from the responsibilities, the ties and deep compassion that the mining company felt for their men.

From now on we should all make a pledge - the next time someone you know mentions the Chilean miners you should remind them of the seafarers held in Somalia. Let's start a chain of consciousness...together we can bring attention where it is sorely lacking. If we don't do it, who will?

**Snakes on a Yacht:** You can never be too careful these days. Taking health and safety concerns to a new level last month, two police community support officers (PCSOs) ordered a yacht club to be evacuated after spotting a cobra!

The PCSOs raised the alarm after spotting the killer snake curled around the handlebars of a bicycle. They somehow remained calm and cleared the area around Thorpe Bay Yacht Club, in Essex, while they called in expert help.

Staff at the local Police control room rang up specialists, and the "Dangerous and Wild Animal Rescue Facility" was scrambled...only to discover the cobra was a rubber toy.

Mr Newby of the rescue centre said: "I grabbed all the kit I would need to protect myself from a venomous snake, including a snake hook and my snake stick, which I need to grab snakes to stop them biting.

"I spotted the officers beside the yacht club boat yard when they said it was a rubber model. I must admit I laughed and asked if I could keep the snake."

Essex Police, said: "It was only a very realistic replica snake, but I'd rather we'd over-reacted to a false alarm than ignored a real emergency."

Which is all a far cry from the Shiptalk Christmas party 1999, in which our Full Monty act and legendary pant python routine actually brought people flocking into the Royal Benwell Yacht Club. Though we are sure the levels of screaming were the same!

**Support the Mercy Ships cause:** Mercy Ships UK is holding a reception for the maritime community at the House of Lords on 14 January.

Mercy Ships has operated hospital ships since 1978 and has proved medical treatments to 12 African countries and treated over 400,000 patients to date. The ship Africa Mercy, has a total staff of 450 volunteer doctors and nurses and provides 78 patient beds in addition to its day care facilities. The operation of the ship is funded by charity, Mercy Ships UK, whose annual budget is £4.4m.

Tickets for the reception, which will be followed by a tour around the House of Lords, are available for £80 per person.



# **DIRECTOR GENERAL OF SHIPPING**

**No. 1-CC (INDoS)/2010**

**15th November 2010**

It is to inform that the INDoS Cell is being shifted to the new address from 29th November, 2010:

OLD ADDRESS: Officer in Charge, INDoS Cell, LBS College, Hay Bunder, Mumbai - 400 033

NEW ADDRESS: Officer-in-Charge, INDoS Cell, Nau Bhavan, 3rd Floor, Ramji Bhai Kamani Marg, Ballard Estate, Mumbai - 400 001.

Sd/-

**(Deepak Verma)**

*Dy. Director General of Shipping*

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## **DGS Order No. 06 of 2010**

**NO: SS/Misc(42)/2003-Pt.**

**15.11.10**

**Sub:** Notification for Construction, Survey, Certification and Operation of Indian River-Sea Vessels - Type 1, 2, 3 & 4

Noting that seamless transition of goods from inland waters by River-Sea Crafts will integrate the sea segment of the supply chain and provide an additional means of hinterland connectivity for transport of goods into the country;

Recognizing that seamless integration of River-Sea Trade using Coastal Ships will play a major role in the growth of Indian economy and provide an alternative means of quick discharge and dispersal of cargo from mother ships at major ports and its carriage by the sea route to various ports along the sea board;

Considering the reservations expressed by the Coastal Shipping Industry with regard to the prevailing Merchant Shipping legislation applicable to coastal ships which makes coastal shipping uneconomical due to high cost of construction and operation;

Realizing that high construction and operating cost of ships is a major impediment for the expansion of coastal and inland shipping in India;

Anticipating that reduction in the operation and construction cost of coastal vessels by defining a distinct river-sea vessel would encourage coastal shipping, inland water transport and trade as well as ship building and thus further the growth of the maritime sector.

Further recognizing that construction and safety standards, which are currently applicable to coastal ships under the M.S. Rules can be moderated without affecting the safety of the ship in order to reduce the cost of ships construction and operation as also allow up-gradation of existing inland vessels for coastal operation;

Further realizing that the River-sea vessel Notification (DGS Order No 4 of 2008) issued on 10th July 2008 required revision since certain operational and pollution prevention measures required further review.

Further recognizing that new types of River-Sea vessels are to be introduced in order to address varying needs of the trade.

Now the Director General of Shipping, in exercise of the powers vested in him under the provisions of Section 456 of the M.S Act 1958, read together with S.O. 3144 dated 17.12.1960 hereby exempts Indian ships other than passenger vessels, oil tankers, gas carriers and off shore support/supply vessels, operating along the Indian coast and within the territorial limits of India from the following provisions of the M. S. Act, 1958 as amended, and dispenses with the requirements to observe the M.S. Act provisions contained in the Sections listed here-to-below provided strict compliance is shown to the requirements and stipulations detailed in Annexes I to XII & XIII of this Notification.

- |    |                                 |   |
|----|---------------------------------|---|
| 1. | Preamble and General Provisions | Annex-I   |
| 2. | Section-76                      | Certificates of Competency to be held by officers of ships Annex-II |
| 3. | Section-175                     | Accommodation for seamen Annex-III                                  |

4.	Sections-284 & 311	Cargo Ship Safety Construction & Survey	Annex-IV
5.	Section-285	Prevention of Collision	Annex-V
6.	Sections-288, 289 & 290	Life Saving Appliances	Annex-VI
7.	Section- 289 & 290	Fire Fighting Appliances	Annex-VII
8.	Section-291	Radio Communication Requirements	Annex-VIII
9.	Section -356	Safety of Navigation	Annex-IX
10.	Sections-299A, 300, 303, 307(2), 307(3) & 318	Surveys and Certifications	Annex-X
11.	Sections-356C, 356E&356F	Issue of Pollution Prevention Certificate	Annex-XI
12.	Section 344O, 344Q & 344R	Ship Security measures	Annex-XIII

This order supersedes DGS Order No. 4 of 2008.

Sd/-

**(Dr. S.B. Agnihotri)**

*Director General of Shipping &  
ex. officio Additional Secretary to Govt. of India*

**Following draft syllabii/course curriculum have been prepared by Sub-committee for Chapter II revision (to address STCW 2010 amendments) inviting comments/views of the Principal Officer, MMDs, industry, DGS approved training institutes and all the volunteers/faculty members.**

- 1) Upgradation training (STCW 2010) for Masters and Deck Officers (FG and NCV) holding STCW 1995 CoCs (finalized version)
- 2) Advanced Shipboard Management (ASM) Syllabus- (amendments in track change mode)
- 3) Advanced Shipboard Management (ASM) draft guidelines- (finalized version)
- 4) Chief Mate FG- Phase 1 and 2 Syllabus- (amendments in track change mode)
- 5) Chief Mate FG- Phase 1 and 2 draft guidelines- (finalized version)
- 6) Chief Mate Phase 1 Exam Paper format- NAVAL ARCHITECTURE
- 7) Chief Mate Phase 1 Exam paper format- SHIP SAFETY, EMERGENCIES, DAMAGE CONTROL AND MANAGEMENT
- 8) Reference document for Courses.

## **LEGAL:**

### **English Commercial Court Considers the Effect of Sanctions on a P&I Club:**

Brian Green, Victoria Anderson, Jeanne Kohler and Alexander G. Henlin of the firm of Edwards Angell Palmer & Dodge have lately reported upon this case in the pages of Lexicology which is run in association with the Association of Corporate Counsel.

In *Islamic Republic of Iran Shipping Lines v Steamship Mutual Underwriting Association (Bermuda) Limited* [2010] EWHC 2661 (Comm) the Commercial Court in England had to assess the impact of the Financial Restrictions (Iran) Order 2009 (the Order), and a licence made under it (the Licence), on the provision of marine professional and indemnity (P&I) insurance.

The claimant, Islamic Republic of Iran Shipping Lines (IRISL), was a member of the defendant P&I club, Steamship Mutual Underwriting Association (Bermuda) Limited (the Club), which provided cover for a wide range of risks, including pollution. Insurance cover (or security) is required by the International

Convention on Civil Liability for Bunker Oil Pollution Damages 2001 (the Convention) in respect of ships trading in the territorial waters of States who are a party to the Convention.

Mr Justice Beatson had to consider the extent, if any, of cover the Club was allowed to continue to provide to IRISL taking into account the Convention and the construction of the Licence. The judge held that on its proper construction, the Licence did permit the Club to continue to provide insurance cover in respect of those risks requiring cover by virtue of the Convention, in addition, it allowed the Club to meet all claims in respect of those risks.

The judge also had to consider whether the terms of the Order and Licence discharged the insurance by reason of frustration. Counsel for the Club submitted that the court should look at the contract as a whole and whether its purpose as gathered from the terms had been defeated or whether the contractual obligation was radically different from that which had been undertaken by the parties.

Beatson J held that whilst the scope of cover permitted was

significantly narrower than it was prior to 30 October "its nature is not different". Distinguishing the House of Lords decision in *Denny-Mott and Dixon v James Fraser and Co*, the judge held that the contract between the Club and IRISL was to provide indemnity insurance and that "[p]art of that purpose remained lawful." Following his finding that the contract was not frustrated, the judge held that IRISL was entitled to be indemnified in respect of its costs and liabilities arising out of the casualty.

## **Bureau Veritas launches Polar Rules and Ice Guidance:**

Leading international classification society Bureau Veritas has published new rules for Polar Class vessels and specific guidance on ice/structure interaction. The rules are aimed at speeding Arctic and Caspian Sea oil and gas development by facilitating the building of tank, cargo and offshore service vessels which can operate unsupported by icebreakers in very heavy ice. The guidance note aims to facilitate floating LNG and oil platform construction in high Arctic conditions.

According to Philippe Baumans, director of development, Bureau Veritas, "BV's new "Rules for the Classification of POLAR CLASS and ICEBREAKER Ships", bring together for the first time the requirements for icebreakers and the requirements for Polar Class cargo and other service vessels such as oilfield support vessels. Our Polar Rules covered the requirements for ships operating in the high Arctic, accompanied by an icebreaker, and there are separate rules for icebreakers. But for extracting oil and gas from the Arctic, and also from the very icy and difficult Caspian Sea, there is an increasing demand for vessels which can carry cargo and also ram and break ice unsupported by an icebreaker.

Under our new Polar Rules that is possible, and the owner can choose an icebreaker class from 1 to 7 for the cargo vessel, tanker or psv they need, which will reflect the heaviness of the ice that can be dealt with unsupported".

BV is currently classing a series of offshore vessels specifically for the Caspian Sea, which has very heavy ice characteristics. "We are considering a specific Caspian notation, as although the ice requirements in the Caspian are similar to the Arctic in some ways, in others they differ," explains Baumans. "Understanding ice loads and structure in detail is vital to that, as it is for the new generation of offshore floater that will be needed for high Arctic fields such as Shtokman."

That is why BV has published Guidance Note NI565 "Ice Characteristics and Ice/Structure Interactions". The purpose of this Guidance Note is to collect and provide data on ice characteristics as well as giving some guidance on the calculations of the forces generated by the ice on ships and offshore structures. It indicates some information on the different types of ice and on their mechanical properties. It gives some analytical formulae and methodologies to estimate the forces applied on the structures due to ice, with respect to the different modes of failure of the ice.

"We have done extensive work with St Petersburg University

and Aker Arctic on ice loads, much for the Shtokman project and aimed at clarifying the needs for floating LNG platforms and LNG shuttle tankers.

These guidance notes are a way in which we can share that knowledge with industry," explains Baumans. "We have further refined our IceSTAR ice load calculation software, which we hope to make available to industry

next year. We also expect to publish new rules and guidance for using podded propulsion in ice next year. That will facilitate the development of double acting tankers and gas carriers. They will break ice stern first and make ocean transits bow first, maximising the hull form efficiency in each environment."

## **US confirms Al-Qaeda attack on Japanese VLCC:**

The Japanese-controlled VLCC 'M Star', damaged last July near the Strait of Hormuz, was attacked by an Al-Qaeda linked group, said the US Department of Transport.

The crew of the tanker reported an explosion shortly after midnight on 28th July that injured one seaman but caused no oil spill or disruption to shipping in the strait.

A militant group called Abdullah Azzam Brigades said that a suicide bomber member had attacked the tanker. "Government and industry sources can confirm that the claim by the Abdullah Azzam Brigades ... is valid," the US Department of Transportation's Maritime Administration said in an advisory to mariners dated 19th November.

"The group remains active and can conduct further attacks on vessels in areas in the Strait of Hormuz, southern Arabian Gulf, and western Gulf of Oman," the advisory warned.

Ships in these waters should "exercise increased vigilance and caution" particularly during the night and should keep a special eye on activities of smaller vessels, it said.

Bordered by Iran, Oman and the UAE, the strait, gateway to the Middle East Gulf, sees 40% of the world's seaborne oil passing through. It is guarded by US and other warships.

It is not known whether the MOL Tankship-managed, Marshall Islands flag VLCC was specifically targeted, or whether it was just a random attack.

## **Russian MR attacked off Lagos:**

The Sovcomflot/Novoship controlled MR 'NS Spirit' was attacked by pirates while at anchor off Lagos last Monday.

According to Novoship, 10 armed people attacked the tanker and opened fire with automatic weapons 30 miles off the coast.

One crew member was hospitalised while the others managed to hide. Soon after the attack pirates left the tanker.

According to the state maritime rescue co-ordination centre, the tanker's master was also injured during the attack.

The Liberian flag 47,000 dwt 'NS Spirit' had a crew of 22 Russians. She was bound for Lagos with 37,700 tonnes of fuel oil at the time of the attack.

### **READERS' KIND ATTENTION**

Back issues of "MARINE WAVES" from 2005 to 2008 in 2 volumes are available for sale until stocks last. Please rush your bookings to avoid disappointment. E-mail : [seafarersman@indiatimes.com](mailto:seafarersman@indiatimes.com)  
[seafarersman@hotmail.com](mailto:seafarersman@hotmail.com)

## Could nuclear ships offer the solution?

Lloyd's Register and BMT Nigel Gee Members have set up a new research consortium, together with Greek-based Enterprises Shipping and Trading US-based Hyperion Power Generation to examine the marine applications for small modular reactors (SMRs).

The consortium plans to investigate the practical maritime applications for small modular reactors as commercial tanker-owners search for new designs that could deliver safer, cleaner and commercially viable forms of propulsion for the global fleet. It believes nuclear power is technically feasible and has the potential to drastically reduce the CO2 emissions caused by commercial shipping.

"This is a very exciting project," said Lloyd's Register CEO, Richard Sadler. "We believe that as society recognises the limited choices available in the low-carbon, oil-scarce economy -- and as land-based nuclear plants become common place -- we will see nuclear ships on specific trade routes sooner than many people currently anticipate."

The consortium believes that SMRs, with a thermal power output of more than 68 megawatts, have the potential to be used as a plug-in nuclear 'battery'. The research is intended to produce a concept tanker-ship design based on conventional and 'modular' concepts. Special attention will be paid to analysis of a vessel's life cycle cost as well as to hull-form designs and structural layout, including grounding and collision protection.

Enterprises' Victor Restis said: "Despite the fact that shipping contributes much less to the world's atmospheric pollution than other shore-based industries, we believe that no effort is too great when it comes to safeguarding a better world for future generations. We are extremely honoured and proud to be part of this consortium at this historic event, as we strongly believe that alternative power generation is the answer for shipping transportation."

"We are enthusiastic about participating in the historic opportunity presented by this truly ground breaking consortium," said John 'Grizz' Deal, the CEO of Hyperion Power. "In addition to fitting the basic requirements as the model for studying the application of SMRs in commercial naval propulsion, the Hyperion Power Module [HPM] can also help to set new nuclear maritime standards. The HPM's design includes a non-pressurised vessel, and non-reactive coolant. These features, among others in the HPM, should encourage the industry to strive for even higher levels of inherent safety in their models."

"Nuclear propulsion offers the opportunity for an emissions-free alternative to fossil fuel, whilst delivering ancillary benefits and security to the maritime industry," said Dr Phil Thompson, Sector Director -- Transport, for the BMT Group. "We look forward to using our wide range of maritime skills and expertise to identify the through-life implications, risks and potential for developing and using SMRs in the civilian maritime environment and to provide a framework for its safe and reliable introduction and utilisation."

## Seafarers' Legislation Faces Year-Long Ratification Delay:

Full ratification of the Maritime Labour Convention (MLC) which will have far reaching implications for the whole shipping industry, including commercial yachts, is now likely to be delayed by a year until April 2012.

"Although the required gross tonnage figure has been reached

there is, however, some doubt as to whether the necessary number of countries will be achieved by the end of this year," said John Wade, technical services manager with Isle of Man-based Dominion Marine.

His prediction comes after attending the Global Superyacht Forum 2010 in Amsterdam which saw delegates from the leading brokerage houses and major shipyards taking part in the industry's largest and most valuable conference event.

The Convention, conceived by the International Labour Organisation, provides comprehensive rights and protection at work for more than 1.2 million seafarers. It updates more than 65 international labour standards relating to seafarers which have been introduced over the last 80 years.

Wade said the present intention is that the requirements of the MLC will be incorporated into a revised Chapter 21 of the Large Yacht Code, stipulating inter alia possible acceptable floor areas etc for crew accommodation in large commercial yachts.

"It had always been considered that pleasure vessels did not come under the requirements of the Convention but now the UK Maritime and Coastguard Agency is suggesting that any vessel which has an employed crew on board may come under the Code requirements," said Wade.

"It was stated that a legal interpretation had been put forward that vessels which are 'commercially owned by a corporate body' will have to comply with the requirements of the MLC, although the Marshall Islands have stated that their interpretation of this is different in respect of the definition of 'ordinarily engaged in trade'."

The Code, said Wade, states clearly that there should be a level playing field and there should be no more favourable treatment for any vessel, even for those whose country had not ratified the Convention.

Referring to the Passenger Yacht Code, which had been introduced for vessels with up to 36 guests and a maximum of 99 persons on board, Wade said it had been developed by the Cayman Islands with input from other members of the Red Ensign Group. The document had previously been circulated within the industry and some 40 per cent of the responses received had been incorporated into the final document.

"Although the Code can be applied to vessels greater than 24 metres, realistically it will apply more to larger size vessels," said Wade. "Currently there are 11 vessels being built to the Code for Cayman Islands' flags, with a further three in the process of design each being over 90 metres in length."

## Employment Peaking at Great Lakes

**Shipyards:** When the 1,000-ft-long Great Lakes freighter Edwin H. Gott arrived at Bay Shipbuilding Company in Sturgeon Bay, Wisconsin, it marked the beginning of the busiest time of year for Great Lakes shipyards. This project and other annual winter maintenance work on U.S.-flag Great Lakes ships will provide jobs for more than 1,200 men and women at U.S. shipyards around the Great Lakes.

The Gott, one of the largest U.S.-flag vessels working the Great Lakes, is having new engines installed this winter that will increase its fuel efficiency and significantly reduce its air emissions. The vessel, built in Sturgeon Bay in 1978, carries iron ore from the Twin Ports of Duluth, Minnesota/Superior, Wisconsin, and Two Harbors, Minnesota, to Gary, Indiana, Detroit, Michigan, and Conneaut, Ohio, as well as Nanticoke

in Ontario, Canada. A full load on a ship this size, 70,000 tons when water levels permit, will keep a major steel mill in operation for more than four days.

There are three large shipyards and several top-side repair facilities on the Great Lakes. Bay Shipbuilding Company is located in Sturgeon Bay, Wisconsin, and its winter workforce tops 750. Donjon Shipbuilding and Repair in Erie, Pennsylvania, ups its workforce to more than 140 from December to April. Employment at Fraser Shipyards, Inc, in Superior, Wisconsin, grows to more than 200 during the winter. These three yards alone generate an annual payroll of nearly \$50m.

Smaller shipyards and repair facilities are located throughout the Great Lakes. Toledo, Ohio, is home to H. Hansen Industries and IronHead Marine. Cleveland, Ohio, hosts Cleveland Shiprepair Co. and Great Lakes Shipyard. Basic Marine is based in Escanaba, Michigan. Other support services are available in Buffalo, Detroit, Chicago, Muskegon, Michigan, Sault Ste. Marie, Michigan, and Milwaukee.

The U.S.-flag Great Lakes fleet numbers approximately 70 large self-propelled vessels and integrated tug/barge units. In a strong economy, these vessels can carry upwards of 120 million tons of dry- and liquid-bulk products and generate more than 1,600 shipboard and shoreside jobs. Since vessels operate 24/7, it actually requires more than 2,200 mariners to keep the fleet sailing from late March until late December or early January.

When these vessels arrive at their winter berths, they are often returning to the very place they were built. Under U.S. maritime law, the Jones Act to be specific, vessels that transport cargo between U.S. ports must be built in the United States, as well as owned by U.S. citizens and crewed with American mariners.

"Maintaining and modernizing American domestic vessels is a real economic driver in communities with shipyards and repair facilities," said Mark Ruge, counsel for Maritime Cabotage Task Force. "On the Great Lakes, it has been estimated that a wintering vessel generates at least \$800,000 in economic benefits to the community."

Two other U.S.-flag lakers have been repowered in recent years. In addition to the one repowering scheduled for this winter, new generators will be installed on some vessels, and a mid-sized ship will have its steam turbine rebuilt.

Other projects for this coming winter include renewing steel in cargo holds and overhauling bow thrusters. Bow thrusters jet water in either direction and allow vessels to better maneuver in confined waters.

Unloading system conveyor belts will be replaced on several vessels. Virtually every U.S.-flag laker is capable of discharging cargo without any assistance from shoreside personnel or equipment. The cost savings are but one benefit. With self-unloading vessels, virtually any waterfront property can become a working dock.

Most of these projects will not be performed in drydock. However, a number of U.S.-flag lakers will be placed in drydock so the U.S. Coast Guard can sound the hull during an internal and external stem-to-stern inspection of the vessel.

When the U.S.-flag Lakes fleet returns to service next spring, a new vessel will continue to take shape at the Donjon yard in Erie, Pa. The yard is building a 740-ft-long self-unloading barge that will be coupled with a tug also under construction

there. As construction of the barge ramps up to full speed, employment at the yard will reach 200.

Raw materials dominate the Jones Act trades on the Great Lakes. Iron ore for the steel industry can top 50 million tons. Coal for power generation can total more than 27 million tons. Limestone cargos for the construction and steel industries can approach 30 million tons. Other cargos include cement for the construction industry, salt to de-ice wintry roads, industrial sand, asphalt, and light fuel and heating oils.

## **Government of India - Ministry of Shipping - Development Of Ports:**

Major Ports of India have formulated perspective/business plans to facilitate transformation of these ports into world class facilities suited to the requirements of the future economy of India. These perspective/ business plan of the Ports contains long term vision for the Port and goals to be achieved with the detailed strategy and plan of action. The perspective plans of Major Ports consist of long term plan for 20 years and short term plans for 7 years for the respective Major Ports.

Various steps have been undertaken to improve the productivity and efficiency of Major Ports, namely, construction of new berths and terminals to remove congestion, replacement of old cargo handling equipments, mechanization of berths and terminals, deepening of channels, widening of roads and providing adequate rail-road connectivity for faster evacuation of traffic, implementation of Electronic Data Interchange and Port Community System (EDIPCS) for online handling of Shipping documents, etc.

No specific organizational changes are being implemented to attract private investment in the Ports.

The above information was given by the Minister of Shipping, Shri G.K. Vasan in Lok Sabha.

## **Tightening labor market ahead for shipping?**

As shipping markets recover, the industry will most probably face a tightening labor market, with recurrent shortages for officers, cautions Douglas Lang of ship management group Anglo Eastern.

Mr. Lang is chairman of the steering committee for the BIMCO/ International Shipping Federation study of the worldwide supply and demand for seafarers. The first pioneering study was conducted in 1990 and has since been updated every five years. The conclusions of the 2010 Update were presented today to governments attending the current IMO Maritime Safety Committee meeting in London.

The worldwide supply of seafarers in 2010 is estimated to be 624,000 officers and 747,000 ratings, while the current worldwide demand for seafarers is 637,000 officers and 747,000 ratings.

"Our results suggest a situation of approximate balance between demand and supply for ratings, with a modest overall shortage of officers of about two percent," says Mr. Lang. Though some individual shipping companies may be having serious recruitment problems, overall supply and demand are currently more or less in balance.

The BIMCO/ISF study shows that shortages are more acute in specialized sectors such as tankers and offshore support vessels.

There is also an underlying concern about the current and future availability of senior officers of some nationalities.

While there is some evidence of continuing recruitment and retention problems, these are not as severe as foreseen in the Update produced by BIMCO and ISF in 2005. Encouragingly, says BIMCO, the data suggest a notable improvement in supply side numbers over the past five years, notably in China, India and the Philippines, but also in several OECD countries.

The 2010 Update also presents various global supply/demand balance scenarios for the next decade.

Mr Lang remarked: "There are many uncertainties, but our results indicate that the industry will most probably face a tightening labour market, with recurrent shortages for officers, particularly as shipping markets recover. Unless measures are taken to ensure a continued rapid growth in qualified seafarer numbers, especially for officers, and/or to reduce wastage from the industry, existing shortages are likely to intensify over the next decade. Supply appears likely to increase in many countries, but the positive trend that has been established for training and recruitment over the past few years must continue to be maintained to ensure a suitable future pool of qualified seafarers."

The 2010 Update is based on data collected from questionnaires sent to governments, shipping companies and crewing experts. It also incorporates the views and perceptions of senior executives in shipping companies and maritime administrations, and detailed statistical analysis provided by the Warwick Institute for Employment Research. For the first time, the study has been assisted by Dalian Maritime University which has helped obtain input from Asian countries where it had previously been difficult to obtain definitive data.

**New Era for Tanker Shipping:** DNV classification society unveiled the Triality VLCC concept vessel. So called because of the "tri" or three features of its design: the vessel is fuelled by liquified natural gas (LNG), has a special hull shape that does not require the use of ballast water and virtually eliminates harmful exhaust emissions. A further bonus is its attention to the problem of vapours emitted by the cargo and providing a solution to use them. Although the vessel introduces new concepts in design, it uses currently available technology and in DNV's opinion offers an alternative to conventional crude oil tankers using heavy fuel oil that is financially attractive. The LNG fuel is carried in two separate IMO type C pressure tanks of 13 500 m3 capacity, providing sufficient fuel for 25 000 nautical miles of operation. The tanks are located on deck in front of the superstructure. Electrical generators have a dual fuel capability (LNG and MGO). The cargo oil pumps are steam driven, powered by auxiliary boilers using vapours recovered from the cargo (VOCs). The new vee shaped hull with revised cargo tank layout dispenses with the use of ballast water in the empty condition: rendering a higher net efficiency for a round trip.

More than 500 tons of cargo vapours can be collected and liquefied during one round trip. These liquefied petroleum gases (LPG) are stored in deck tanks and used as fuel for the steam driven cargo discharge pumps. Unused LPG can be returned to the cargo tanks or delivered to shore during oil cargo discharge. DNV estimate that the capital cost of their new design will be 10-15 per cent more however the through life cost saving will be 25 per cent less than an equivalent VLCC of conventional design.

## **Risk Assessment: are we focused on the right things?**

Having just returned from Thanksgiving holiday in New England, I experienced firsthand the frustrations of air travelers who must submit to sometimes intrusive and now controversial inspections in order to fly in a post 9-11 world. If it makes us safer, I'm certainly Okay with it. And, the truth be known: it wasn't too bad at all. TSA procedures are hardly standard, however. The toothpaste tube that sailed through the X-Ray machine on the way up to Manchester, NH was confiscated on the way back to Charlotte. That said, the efforts to protect the flying public, if less than perfect, at least show a certain level of competence and standard operating procedure.

You can agree or disagree with the preceding paragraph, but I think maritime industry security expert Dr. Jim Giermanski, CEO of Powers Global Holdings says it best when he insists, "The greatest potential threat of death, injury and destruction is not by air, but rather by sea, truck, or rail. While no single death as a result of terrorism is tolerable, there is a fundamental and significant difference between airline passengers and vessel, truck, and rail which by their core purpose is the servicing of seaports and land ports-of-entry. Taking out one major seaport port can also lead to the destruction of our economy and ultimately injury to all of us."

Giermanski also asks, "Which is a greater threat - airline passengers or containers and trailers? Are they equal? Are they proportional? It appears that DHS is not quite sure because if it were, it would spend as much time and effort on outbound containers as it does on outbound airline passengers especially when air travelers are merely moving from one domestic location to another. Does a successful terrorist event have to occur before it merits DHS attention?"

GAO says that we have work to do. And, while it didn't take a report that likely costs tens of thousands of taxpayer dollars to produce for us to be aware of this metric, it is helpful to get things boiled down once in a while to see where we have gone astray. More than nine years after the tragedy of 9/11, and following hundreds millions of dollars in security enhancements, you now have to ask yourself this: are the ports any safer? Well, are they?

**A "new generation" of bulkers:** Dry bulk carriers are tough, no-nonsense ships operating in a rough and competitive world, moving mountains of coal, iron ore, grain and other bulk shipments around the world with a minimum of fuss. They have to be exceptionally robust - with some iron ports capable of hurling 16,000 tonnes per hour into a ship, with the cargo grabbed out in the discharge terminals with massive steel grabs weighing fifty tonnes empty, the punishment upon a ship's structure can be severe. A better understanding of both the static and dynamic stresses upon these hard-worked ships has been gained in recent years and is being reflected in modern designs.

The new generation of bulk carriers is composed of sophisticated and efficient ships, designed for more economical operations and far more environmentally sustainable than earlier vessels. Scale economies, with most classes of bulk carrier able to carry more cargo, also help to make these ships a more attractive proposition for the operator. "Greener" propulsion machinery, with substantial reductions in harmful emissions is also being offered by a number of shipbuilders specialising in bulker construction.

Early bulk carriers were basically a huge rectangular box, subdivided into holds with a ship-shaped bow and stern. The latest vessels are optimally shaped to reduce resistance, while a great deal of work has gone into enhancing the flow of water over the propeller, both by refining the shape of the stern and with a range of fins and ducts that help to make the propeller far more efficient. It has also been possible to optimise the design of the rudder and tailor it to the hull, so that energy is not wasted in keeping the ship on course.

As with other types of ship, bulkers today tend to employ a range of modern coatings to help to reduce resistance and the growth of fouling. Bulkers often find that they are at anchor waiting for a cargo berth for extensive periods and fouling can build up quickly, so special coatings that can keep growth at bay have been developed.

But in the bulker's holds, where abrasion damage can come from grabs and from ore or coal being "shot" into the ship by powerful loaders, special coatings have been developed that will withstand such damage and ultimately prevent internal corrosion to the structure. Other "unseen" improvements come from the ability of modern ships to handle their ballast in a more efficient fashion, with far more pumping capacity and arrangements to exchange ballast at sea in a far safer manner than merely overflowing the tanks, a system required to prevent the transmission of alien species in ballast water.

**Antonini: Overcapacity Remains the Biggest Problem:** In addressing a conference in Nan Tong which included 120 of the world's leading shipbuilding executives from Japan, Europe, China, Korea and USA (JECKU), CESA Honorary Chairman and Fincantieri chairman Corrado Antonini said in his keynote speech: "Despite signs of recovery in global shipping, the situation of most shipyards in the world remains difficult as orderbooks still continue to decline while international experts estimate that at best only 50% of the newbuilding capacity could be utilized in the next 10 years. So overcapacity remains the biggest problem of our industry and we have to take the responsibility of adapting our offer to the reduction in demand which we will have to face for several years to come."

While current market conditions present a number of challenges, Antonini sees opportunities, too, particularly in regards to ever more stringent demands regarding environmental rules worldwide.

"At various international fora, there has been an increasing demand for tightened environmental regulations and a push for a greener fleet," Antonini said. "Such change opens opportunities for companies that anticipate the new trend. We will need to face technical challenges of new designs and configurations. We will need to look into new markets such as off-shore, wind energy and CO2 capture and storage."

#### **Subsidy Fight: 20 Years and Running**

With a challenging global economy, too much capacity and ever tightening environmental rules souring the future prospects of commercial shipbuilding, Antonini noted that perhaps the biggest threat to a global balance is the matter of a worldwide stance on the use of shipbuilding subsidies, a fight that has been largely fruitless for more than two decades.

"In parallel, I would also like to call upon the shipbuilding leaders attending this meeting to take their share of responsibility, to put in practice the lessons learnt from the past,

and ask for more cooperation at the political level to the benefit of our future prosperity as industrial community," Antonini said. "I make specific reference to the OECD activities. If we, the global industry leaders, do not pass a strong and clear message to our respective governments, they will not be able to agree on a fair and balanced instrument to help our industry.

We believe that an international discipline on subsidies and pricing would, particularly in these times of crisis, be of great value to ensure a return to healthy market conditions. Unfortunately, WP6 has not been able so far to generate any constructive result. Today, unless the November meeting reveals major changes, we must realize that the prospects of an international agreement to establish normal competitive conditions in the global shipbuilding market appear, at least for the foreseeable future, no longer realistic."

#### **"Intelligent" Combustion Monitoring for 2-Stroke Diesels. Friday, October 29, 2010**

Wärtsilä introduced its Intelligent Combustion Monitoring system for two-stroke diesel engines; a system designed to provide ship operators and owners with information that enables operators to optimize vessel engine performance, and to be aware of the condition of components in the combustion chamber. By operating at optimal firing pressures, fuel cost savings of up to two percent compared to deteriorated parameters can be achieved. Furthermore, the condition information ensures that maintenance is carried out at the right time. Wärtsilä Intelligent Combustion Monitoring system provides a means for measuring the pressures in each cylinder during the entire combustion process, continuously, in parallel, and under all load conditions. By monitoring the exact position of the crankshaft, and in combination with advanced mathematical modelling of the engine, it provides highly accurate, real-time data for diagnostic analysis.

Conventional cylinder pressure measurement systems, such as portable pressure indicators, or on-line systems that measure the combustion pressure cylinder by cylinder in a scanning sequence, are influenced by movements of the fuel rack, rpm variations, and sea conditions.

Wärtsilä solution, according the manufacturer, has the ability and real time capacity to collect the combustion pressures and angle values for each cylinder, in parallel and simultaneously, stroke by stroke. The crankshaft deflection is calculated on a continuous basis, thus ensuring that the information given is accurate regardless of engine load conditions. The monitored data covers, amongst other things, the thermal overload of individual cylinders (MIP); the mechanical overload of individual cylinders (Pmax); the optimal fuel efficiency; power readings (MIP and IPOW); the condition of the cylinders (Pmax + diagram shape); load dependent monitoring of the combustion parameters (MIP, Pmax, aPmax, Pcomp, Ptdc, Pign, aPign, etc.) and comparisons between cylinders; the tracking of gas leaks due to worn liners or broken piston rings (Pcomp); the tracking of exhaust valve components (Pcomp); and the tracking of the fuel equipment (Pmax + diagram shape).

#### **Turbocharger - Turbine Side Ports strive to enhance operational efficiency.**

**Various systems being put in place in Indian ports for increasing productivity.**

Leading ports in India have placed enhancement of operational efficiency high on their agenda - one way of taking advantage

of the growing volumes. Already some major ports (that are government owned) are operating beyond capacity. Accordingly private port operators are using this opportunity to draw more of the cargo to their own ports and not just the cargo overflow. K Mohandas, Union Shipping Secretary, government of India states, "Most major ports are operating at 80% to 85% capacity which is not a healthy situation. A \$ 12.4 billion capacity enhancement scheme for major ports is already underway. It envisages taking the capacity of 12 major ports to 1 billion tonnes by March 2012."

Various ports are putting different model in place for enhancing operational efficiency. But some systems are common and are proving to be beneficial. "Reducing berth occupancy and increasing its utilization has been the policy of our management," says Rajeev Sinha, Wholetime Director of Mundra Port & SEZ. "We have a terminal operating system at Mundra port as a result we have been able to bring in a drastic improvement. The object is ultimately to have a web based system wherein operators do not have to come to the port for anything."

Another aspect that has proved a boon is the Security & Surveillance System being installed in several ports. It permits keeping a watch on everyone working within the port. "Having installed the system at Mundra we were surprised to find that a large number of persons used to stay inside the port for days together," he said. "It has also helped to avoid major and minor accidents which were a regular feature. We are also able to take several precautionary measures in advance."

To handle the high density traffic, Mumbai Port has installed the Vessel Traffic Management System (VTMS). Though expensive it has helped to bring in efficiency in handling the traffic which could not have been possible otherwise. Many ports in South India including Chennai port are in the process of finalizing deals for having VTMS installed and may turn out to be the order of the day in port operations.

Pipavav Port has set up a Container Freight Station (CFS) within the port limits for consolidating cargo moving to or from the immediate hinterland. Unlike many other ports where the CFS is located several kilometers from the quay, the CFS at Pipavav is in very close proximity - approximately 200 meters - to the container berths. As a result, containers can typically be moved from the CFS to the vessel in just ten minutes, a clear time and cost savings advantage for both cargo owners and shipping lines.

"If goal is performance then why should terminals perform differently?" asks Capt Rohit Suraj, Regional Director of TBA B.V. "Designing a terminal by minimizing risk and maximizing performance can be achieved by designing through simulation of what one desires to achieve in the future. The use of less space for achieving higher output can be accomplished through the use of software. Automation by itself does not mean you can get productivity but how well you adjust with the situation." Growth that is happening obviously can be managed by using IT systems according to Vineet Malhotra, Sr V.P. of Kale Consultants. "Technology may bring in automation, but the biggest achievement is to do business by a novel way. If today a port handles 7 million TEU for growth you need to get set

to handle 40 million TEU in the future." He advised that port should not invest in IT but pay for using it because by owning it, it will not help when you have to invest again in three to five years for upgrading technology."

Tom De Smedt, Sales Manager of Phaeros points out that within a port there are large number of players and one or more terminal operators. Besides there are the ship agents, truckers, cargo agents, freight forwarders, etc. "For efficiency there has to be a good communication system to interact with each other and avoid duplicity of operations by data sharing," he asserts. "This can be brought about through Port Community System (PCS)." Phaeros has been in demand for installation of PCS and Terminal Management System in Indian ports.

Ports are also considering various other options to increase productivity. Dock Aid System for berthing vessel that can help eliminate accidents while berthing vessels; Automatic Mooring System which avoid the need of human intervention' Oil Spill Detection system using radars and Fertilizer Cargo Complex System for speeding up bagging process are gaining prominence. However Dinesh Lal, Co Chairman of FICCI National Infrastructure Committee and Group Director - India, A. P. Moller Maersk cautions, "The port users should not be penalized for being offered higher productivity and the port policy framework should be designed to make it user friendly."

## HEALTH:

Maritime London member Norton Rose has published a wide ranging examination of the health of the shipping, aviation and rail industries based on the responses of 679 individuals to its Way Ahead Transport Survey conducted in September and October.

### Key findings of the report include:

- The transport industry as a whole is showing signs of cautious optimism about the state of the recovery.
- 17% of respondents think that the global financial crisis is already beginning to dissipate, with a further 14% expecting improvements within twelve months.
- Joint ventures are being actively sought across all three transport sectors and in all key markets around the world.
- Government support, equity funding and bank debt are expected to be the three primary sources of funding for the industry as a whole over the next two years.
- 44% of respondents agree that infrastructure investment will be the single most helpful form of government support.
- An increase in fiscal incentives is the most likely trigger for a sustained investment in greener technology.
- 63% of respondents are currently engaged in improving their technological performance in order to reduce their environmental impact.
- The Asia Pacific and Middle East and North African (MENA) regions are the most buoyant transport markets.

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## Turbochargers - Lasers Used in Latest Repair Innovation

Turbocharger parts destined for scrap can now be repaired using a new laser cladding technology, called 'Laser Aided Additive Manufacturing' (LAAM) introduced recently by Singapore-based turbocharger specialists TruMarine. In essence this works by focusing a laser beam on a metallurgical additive composition, bonding it to the component needing repair. Classification society Det Norske Veritas has already recognised that LAAM technology is more than a temporary repair of damaged or worn turbocharger parts by giving the process their approval. The cladding of turbochargers with particularly thin shafts, easily deformed by high temperature thermal repair, has been impossible up to now, but by means of LAAM technology they need not necessarily be replaced and discarded, but can be restored to the original quality of manufacture. The essential turbocharger has down to it the delivery of higher engine output, lower specific fuel consumption and cleaner exhaust gases, boosting the performance of the low-speed two-stroke engine that deliver the main propulsion in much of the the world's deep-sea cargo tonnage. With such responsibilities the turbocharger warrants careful monitoring and maintenance (which it doesn't always get) in order to operate at maximum efficiency: the rotor shaft bearings, rotor shaft disc labyrinths and piston ring grooves are areas often prone to need repair or replacement. Of course,



operators with a lame turbocharger on their hands have the option of installing new replacement parts, but with constraints of time and cost in mind, many prefer to get the existing unit repaired, which is where TruMarine may offer a solution. Among the benefits they list are: high bonding strength; improved resistance to corrosion, erosion, wear and fatigue; and low dilution of the base material. The quick turnaround offered is often a major plus as well. This Singapore-based company, with over thirty years experience in marine turbocharger repair, claim they are also able to restore the new generation of super-alloy turbochargers to good as new condition by means of their new laser enhanced technology.

## Vizhinjam to become major transshipment port in S. India

### Another transshipment hub in the offing in south India, at Vizhinjam

Vizhinjam, a port located near the Southern tip of India and close to the international shipping route is being developed into a major transshipment port. Once completed it is expected to attract annually over 10,000 ships that is half the number that pass through the Suez Canal. According to estimates much of the cargo that goes to Colombo, Singapore and Dubai is likely to pass through Vizhinjam, making it a mega foreign exchange earner for the country.

With a natural depth of 23 meters plans are underway to dredge the port to increase the draft by another 6 meters thus making it capable to accommodate even the biggest ship in the world. The state government of Kerala has set up a special purpose vehicle - Vizhinjam International Seaport Ltd (VISL) - with a mandate to attract private sector participation for the port's development and to set up the external infrastructure. This company which is responsible for setting up the \$ 556 million project is being funded by a consortium of banks and financial institutions lead by the State Bank of Travancore (SBT). The Kerala State Ports Minister V. Surendran Pillai said, "The project would be implemented by Vizhinjam International Seaport Limited under direct control of the government. Besides SBT, others including Dhanlaxmi Bank, South Indian Bank, Federal Bank, State Bank of India and other financial agencies would provide the loans."

The State cabinet has also decided to give in-principle approval to set up a Special Economic Zone over 120 hectares currently being acquired and another 110 hectares being reclaimed. Multilateral institutions such as Asian Development Bank and the World Bank are on the radar, to raise the estimated at \$ 355.6 million required for setting up the civil infrastructure, including the breakwater. The superstructure for port operations and terminals would be built in the private-public partnership (PPP) mode. The Request for Qualification (RFQ) will be called today. This would be followed by the publication by the pre-qualification bids by Christmas. The final award of the project is scheduled for February 2011 after assessing the same for techno-feasibility and related parameters. Requiring very little maintenance dredging, due to its sheltered location, the port would have two breakwaters of 1.5 km and 6 km with harbor basin and wharfs. In all, about 30 berths have been envisaged, capable of handling Mother Vessels. The handling capacity is targeted at 4.1 mi TEU/annum on the completion of the first stage of the project."

DP World's International Container Transshipment Terminal (ICTT) at Vallaradam Island, is another major project in South India set to take off in a month's time. It was earlier scheduled to have been commissioned in August this year but got delayed due to lengthy delays in completing dredging work. According to officials D. P. World's transshipment hub is expected to reduce India's dependence on foreign ports where the containers are presently get transshipped. Senior Vice President & Managing Director of D. P. World Sub Continent, Capt Anil Singh said, "Over two million TEUs containers of Indian cargo destined for Western India gets carried to Jebel Ali, Colombo and Salalah for handling transshipment. All this transshipment will begin to take place at ICTT once the terminal becomes operational in."

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