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CURRENTS

THE AMERICAN CLUB

AMERICAN CLUB NEWS

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Currents Introduction

Joe Hughes Chairman and CEO

It is commonly believed that there are two certain indicators of the inexorable passage of time (or, more prosaically, that you are getting older). The first is the realization that police officers look younger than you do. The second, at least for those who inhabit the P&I world, is that renewal seasons come around faster and faster as the years go by.

And so they do, or appear to do as the greybeards among us see it. It is also an article of received wisdom within the marine insurance industry that P&I clubs fall into a kind of alternative hibernation during the summer, to be aroused into a state of furious activity over the winter months as the next February 20 commences its baleful approach.

Would that this were truly the case! The conduct of P&I business in the current era has never been more demanding – all year round. Never has life been more complicated for shipowners and for those who serve their interests. Oppressive, politically driven liability regimes, vexatious bureaucracy, the continuing failure of certain countries and regions to apply decency in the exercise of maritime jurisdictional power – all these, and other, factors conspire to create a business climate of unprecedented hostility.

Service providers – particularly P&I clubs – must necessarily rise to the challenges faced by their marine constituency. The American Club remains unequivocally committed to this. The recent appointment of an exclusive correspondent to the Managers in Shanghai speaks to this commitment, particularly given the unrelenting growth of China as a key player in world trade and concomitant maritime enterprise.

So, as the Club enters a new renewal season with a view to further consolidating its position in the P&I world, it will remain dedicated to those service levels both necessary and yet more than sufficient for the care and custody of its Members' interests. The Club aims to exceed expectations in every area of Member support as it progresses its aims and ambitions over the months and years ahead.

Joe Hughes
Chairman and CEO
Shipowners Claims Bureau, Inc., New York

Tanker Surveys (Oil Carriers) Inspection From A P&I Surveyor's Perspective

By Wayne Thomas and Pierce Power
Martin, Ottaway, van Hemmen & Dolan. Inc.

Introduction

Oil tankers by their nature and service in carrying petroleum products with their potential for pollution have come under increased surveillance and inspections. These inspections are carried out by a multitude of organizations and individual bodies in order to meet the changing needs and requirements of Flag State, Port State, Classification Societies, Insurance Underwriters and the vetting inspections of the major oil companies.

Many of the surveys that tankers undergo are often driven by International and National rules, regulations and standards promulgated or implemented by the organizations mentioned above. The types of surveys that a typical tanker may undergo include:

- Classification surveys
- Drydocking surveys
- Flag state inspections
- Port State Control inspections
- Hull & Machinery surveys
- Safety Management Surveys
- Security Audits
- SIRE / OCIMF
- Tanker Management Self Assessment surveys (TMSA)
- Protection & Indemnity surveys

The focus for this article will concentrate on the P&I insurance aspects of Oil Tanker inspections and in particular from a surveyor's point of view. P&I Insurance inspections are typically carried out with the intent to ascertain that the member's vessel falls within an acceptable risk margin primarily in the areas of structural and mechanical efficiency, operational aspects, manning levels, qualifications and particularly safety and the protection of the environment.

To assist the surveyor in carrying out a P&I inspection, the Clubs typically provide guidance in the form of a standardized check sheet or protocol list that is produced and developed by the individual Club. Alternatively, they may use the Standard Survey Forms for P&I Entries that were developed jointly within the International Group of P&I Clubs. These survey guidance forms typically encompass a broad outline of the areas that are of interest to the Club and afford an overview of the condition of the vessel and its maintenance program that are in place at the time of the inspection.

The surveyor may also refer to other internationally recognized publications that apply to tanker inspections in the course of carrying out a P&I survey, such as the International Safety Guide for Oil Tankers and Terminals (ISGOTT, 5th Edition), which gives an in depth review and appreciation of what are the major concerns and guidelines pertaining to tanker vessels and their operation.

Also, there are the Guidelines for the Inspection and Maintenance of Double Hull Tanker Structures and the Guidance Manual for Tanker Structures, both of which are issued by the Tanker Structure Co-operative Forum. The American Bureau of Shipping and other classification societies produce Guidance Notes on the Application and Maintenance of Marine Coating Systems, which are of particular importance and very useful when describing the conditions of the internal coatings to an industry standard.

Armed with the information and guidance provided by the P&I Club, coupled with the knowledge obtained through the various maritime publications and the surveyor's experience, the surveyor is primed for the inspection. The next priority is to enquire from owners or the managers where and when the inspection is to take place and under what limiting circumstances (such as the available time for the survey and the vessel's status).

Constraints of the Survey

The surveyor is often tasked with performing the inspection while the vessel is trading, in which case it is not uncommon to find that the cargo spaces are occupied with the product being transported, that the vessel is in the process of either loading or unloading the product or that the cargo tanks are contaminated and its not expedient to have the spaces made safe for entry due to time constraints or the prohibitive costs associated with cleaning and gas freeing.

In these situations, key components of the cargo systems will be inaccessible or may be restricted during the course of the survey, thus preventing a complete examination of the cargo worthiness aspects of the vessel. Given the circumstances mentioned, the surveyor will have to balance the need to effectively judge the condition of the cargo systems in order to make a valid risk assessment while making allowances for the operational constraints of the vessel, her crew and cargo in the limited time allotted for the survey.

To assist the surveyor in achieving this balance, it is useful to review the pertinent class and statutory certificates, various survey histories, audio gauging reports, ISM procedures and audits, maintenance logs and records at the start of the survey. This provides that valuable first impression and often is an indication of the management's success (or lack thereof) in the implementation of their policies and the crew's adherence to acceptable standards of practice.

When reviewing the documentation, it may be discovered that there is a past record of recurring problems or issues that warrant closer scrutiny. This does not always mean that the vessel is poorly maintained, but merely suggests areas of concern where particular attention by the surveyor may be warranted.

Major Areas of Concern

The major areas of concern on a routine survey or tanker inspection would be the vessel's structure, cargo worthiness and safety of operation such as personal injury hazards, bridge management, training and environmental. It is not always possible to separate these areas of concern and during the survey it is not unusual to note that problems in one area also reflect on the other areas of concern.

Structural Concerns

The main structural components of a tanker are the hull envelope, cargo tank structure, ballast tank structure and engine room and accommodation house structures. While all these components are important and need to be evaluated, on tankers the focus is more on the ballast tank and cargo tank structure.

Unless the vessel is surveyed while on dry-dock or during a repair period, access to the cargo tank structure may not be possible. Although the cargo tanks may not be readily accessible, the structure within the water ballast tanks on most tankers can be accessed while the vessel is in operation provided reasonable stability criteria is observed and that the proper tank entry procedures are carried out. Observing that the vessel's crew performs the proper tank entry procedures is considered an integral part of the survey and shows how structural and safety aspect interact during the survey.

When inspecting the water ballast tanks, care should be taken to adequately assess the internal structural condition of the shell plating, bulkhead plating and their stiffening members with close attention paid to any defects sighted. Typical defects encountered are distortions, buckling, fracturing, pitting, knife edging, thinning or the loss of structure due to corrosion. In addition, one must assess the condition of tank fitted equipment, such as anodes, piping, valves and the various level or sounding apparatus.

A key factor affecting the structural members in the ballast tanks is the condition of the internal coatings, which should be described using standard phraseology. Class records use the rating system of Good, Fair, or Poor when describing the condition of the coatings.

A coating in Good conditions has only minor spot rusting, while Fair condition is described as local breakdowns at the edges of stiffeners and welded connections and/or light rusting over 20% or more of the areas under consideration, but less than that defined for the Poor rating. Coatings in poor condition are defined as having general breakdown of the coating over 20% or more of the areas or hard scale at 10% or more of the areas that are under consideration. If fair or poor conditions are noted it would be appropriate to enquire as to what measures were in place to address the coating conditions, i.e. maintenance program.

Observations of the structure in other parts of the vessel, such as the external side shell plating, void tanks, pump room, machinery and accommodation spaces, is easier as these areas are typically more accessible and are not usually subjected to the same rigorous environmental conditions that are found in the ballast tanks.

Inspection of the structure in a ballast tank is often limited due to the lack of adequate access or proper staging, the fact that horizontal surfaces may have an accumulation of debris or mud obscuring the underlying structure or that the inspection is carried out under low levels of illumination, frequently only

by a flashlight, in which case not all defects will be readily apparent under the restrictive conditions.

Cargo Worthiness

Inspection of the main deck, its fittings, appurtenances and the following cargo specific equipment is conducted with particular attention being paid towards the structural and mechanical efficiency, operational and functionality aspects of these devices.

Cargo specific equipment:

- Inert gas (IG) system
- Cargo piping and heating systems
- Cargo pumps and manifolds
- Cargo washing and Oil discharge monitoring equipment
- Level alarms and Gauging equipment
- Cargo control room and mimic boards
- Safety Equipment and Emergency stops
- Firefighting and foam systems
- SOPEP Equipment
- Loading computations and Calibration records

The potential risk of an environmental casualty is also assessed when inspecting the cargo specific equipment by taking into account its condition and postulating the *"what if"* factor of a failure, which could lead to the consequence of a scenario where the domino effect or chain of events exposes the vessel to a major oil spill.

The primary means of conveyance for the product to or from the vessel is by the piping system, which is typically mounted on the main deck and exposed to the elements. The condition of the pipelines and its associated valves, couplings, supports, gauges, spill trays, and alarms, should be closely scrutinized for potential deficiencies. Being exposed to the elements, the pipelines and appurtenances are highly subject to corrosion, pitting, mechanical damage and leakages, all of which may or may not be readily apparent. This equipment, if not appropriately maintained, may often be the first source of loading or discharge delays.

The inert gas system is a major piece of cargo specific equipment fitted to tankers that, if not functioning

correctly, could expose the vessel to the risk of a catastrophic explosion. These systems usually consists of a method for generating the inert gas, such as a dedicated boiler or off the main engine exhaust, a scrubber, IG system fans, a deck water seal and pressure/vacuum breakers. Care must be taken in monitoring this equipment to include the deck seal is satisfactory and that the O_2 content can be monitored.

Use of IG systems on various cargoes is occasionally a source of confusion, and it is often worth while to establish the crew's familiarity with the standards in this regard.

Deck piping and valves should be color coded and the results of the last pressure tests should be stenciled on the lines and valves where they can be clearly seen with the relevant pressures and date.

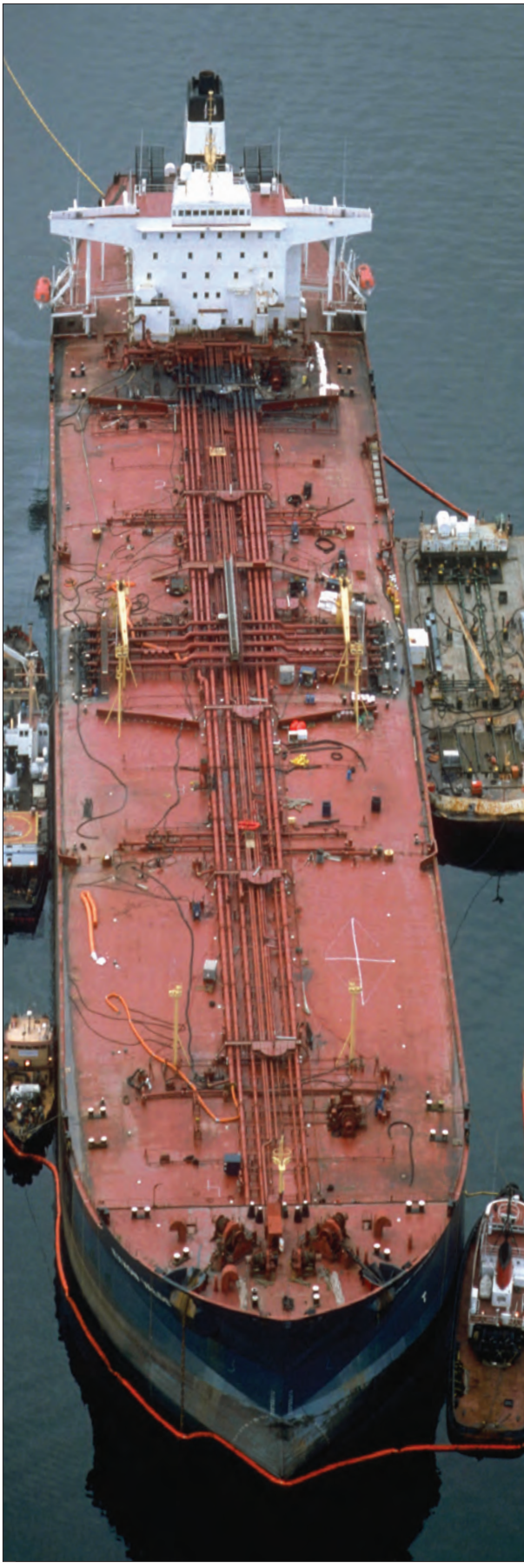
The safe operating condition of the machinery and its equipment is paramount as the possibility of failure can cause personal as well as environmental catastrophes.

Functional tests should be carried out, where possible, on the various alarms and emergency stops through out the main deck and pump equipment. In addition the oil monitoring equipment should be checked and the last calibration test noted.

A review of the planned maintenance system on board should give an indication as to the various tests and protocols that have been carried out by the crew and also give an insight as to whether the crew is maintaining the machinery and equipment to a satisfactory standard.

Operations Safety & Environmental

Of paramount concern is the personal safety of the crew. Personal safety equipment and clothing, such as coveralls, safety boots, gloves, helmets, safety harness, respirators etc., are generally provided by the Owners and operators. The intent of this equipment is to afford the necessary protection to the crew during the normal course of their duties.



Procedures are generally in place for the crew instructing them in the use of this equipment and clothing. But only noting the condition of safety equipment and the response of the crew to their use of the clothing and equipment will give a good indication as to the crew's attitude and professionalism.

It is exactly the crew's attitude in the use of personal equipment and safety that determines the actual effectiveness of the safety program in place.

Firefighting and foam systems to include the deck piping, fire monitors, fire suit and lockers, breathing apparatus, life jackets, survival suits etc., should be similarly checked for their condition, stowage and correct operation. If time permits, carrying out safety and fire drills will give an indication as to the operating condition of the systems and also the crew's familiarity and professionalism with the equipment.

Reviewing the maintenance records for the fixed fire fighting equipment, fire extinguishers, breathing apparatus sets etc., plus the latest foam analysis will also give an indication as to the maintenance program onboard.

The surveyor must also note any possible tripping/fall hazards such as loose catwalk grating, missing guard rails, bent corroded or worn ladders.

During the survey an assessment should be made as to the adequate manning of the vessel and as to the professionalism and qualifications of the crew. A review of the individual working hours of the crew member to see if they are getting and complying with the required rest periods as dictated by the STCW should also be made.

An indication as to how the crew present themselves will give an insight as to their attitude in carrying out their duties onboard the vessel. Multinational crews can function under varied cultural stresses. While it is difficult to assess whether such stresses are present, occasionally there are specific indications of such stresses and they should be a factor in the overall assessment by the surveyor.

Additionally, language skills and the understanding of the ship's language are vital factors in the overall ships performance.

Survey Conclusion

The time afforded to carry out P&I surveys can be quite short and time management by the surveyor is critical as the intent of the survey is to be able to provide the club with a general overview of the prevailing conditions onboard the vessel plus alerting the club to any potential risk which may be apparent.

Once the survey is completed, any deficiencies that are noted / found should be recorded and explained to the master and crew if required. A copy of this defect list should be left with the master of the vessel with a copy forwarded to the club.

It should be noted that the survey is conducted without prejudice and is intended to give a general insight and impression as to the condition of the vessel and her equipment. A survey is a form of communication that relies on the time, skills and the competence of all the participants. The intent is to then pass on the general impression to the client, in this case the P&I Club.

The completion of the survey is only one step in a lengthy process of gradual improvements in ship operations and it should be remembered that the success of the survey also depends on the follow up and further discussions of the findings.

This article is the first in a series of three articles on hatch cover inspection and maintenance prepared by Mr. Walter Vervloemsem from International Marine Consultants & Surveyors (IMCS) in Antwerp. Further articles on the subject of hatchcover maintenance will be forthcoming in the May 2008 and November 2008 issues of CURRENTS.

Hatchcover Inspections and Maintenance – The Basics

An introduction

Ever since steel hatch covers appeared on the scene in 1941 (single pull prototype), their use became more and more widespread. Around 1965, a large proportion of ships was already fitted with mechanically operated steel gasketted hatch covers, requiring less personnel for their operation and allowing easy and swift opening and closing. With the demand of building specific ships for specific trades and/or cargoes, more ship specific hatch cover types were designed ever since (bulk – general cargo – reefer – container (panamax/post panamax etc…). However, notwithstanding the wide variety of hatch covers available on the market today, all hatch covers have one thing in common, i.e. when they are not properly maintained and looked after, they are all vehicles for disasters, ranging from loss of life, to pollution, accidents and wetting damage to cargo. Sufficient reasons for the insurance industry to investigate deeper into this specific problem and placing efforts in finding or proposing solutions to reduce claims as a result from wetting damage through leaky hatch covers.

Lead concentrate in bulk, wet damaged as a result from leaky hatch covers

However, ever since steel hatch covers made their entry, some 60 years ago, there has been little, if any, improvement on the number of claims as a result of leaky hatch covers and analysis shows that hatch cover deficiencies still account for a significant part of the reported deficiencies (20-30% of deficiencies found) during ship inspections. Moreover, claims analysis statistics revealed that hatch cover claims contribute for a dominant part of the wetting damage claims filed against vessels. Therefore it is interesting to ask ourselves why, in the same period, technology allowed us to fly to the moon, set up the world-wide web and why we have not been in a position to eradicate hatch covers leaks. Would this mean that making hatch covers weather tight is really rocket science?

Although hatch cover designers have to overcome difficult problems, as will be explained further in this article, ensuring weather tightness need not be extremely difficult. However, everything starts with inspection and testing in a systematic and professional way. Only by doing so, the reason of the problem will be pin-pointed and correct feedback will allow decision makers to work out loss prevention initiatives and guidelines to prevent more problems and claims. In my opinion, the reason that no real progress has been made so far is that hatch covers generally never get the attention they deserve and that inspections are generally too superficial and seldom come to the right conclusion. One can expect that, if incomplete information is relayed to principals and industry decision makers, statistics based on this info will be wrong and any measures taken on the base of wrong information will not have the desired effect.

Analysis of major claims over a considerable period somewhere between 1990 – 2003, identified the below listed items as key hatch cover parts being the chief reason or contributory factor to wetting damage claims as a result from leaky hatch covers. These parts were:

- Hatch cover packing rubbers
- Securing devices
- Pontoons and panels
- Drain channels/valves
- Opening mechanisms
- Compression bars

Moreover, a more in-depth analysis showed that packing rubber problems are the dominant cause of water ingress problems (about 30%). Perhaps this analysis result is the best example to illustrate that many conclusions in hatch cover related claim reports were not correct. Following the fact that a huge proportion of claims were attributed to deficient packing rubbers, owners have been encouraged to ensure that hatch cover packing rubbers were in a good condition, i.e. soft and pliable and free form any wear, abrasion, physical damage, and most importantly, not showing an excessive permanent set/imprint. Whenever any of these defects would be seen, it was recommended that packing rubber should be changed, which is exactly what has been done over the last 40 years with little effect.

Apparently, and over the years, the question why packing rubbers became damaged or unduly compressed has not been addressed and it is exactly the omission for looking deeper into this question that is at the base of most of the problems which we still see frequently today during inspections on board of ships. Moreover, many owners have been (and still are!) replacing packing rubbers systematically without dealing with the root cause, which, in most cases, is to be found in a deficient steel-to-steel contact or in a reduction of panel wheel diameter or trackway height. This just to illustrate that what is easy to identify (excessive set) is not always the real cause of the problem.

However, how comes that, if the steel to steel contact is so important, it does not pop-up in the top 6 of key parts which were previously identified and listed as being the (root) cause for water ingress? As far as I can tell (after having trained more than 500 surveyors, consultants, shipyard personnel etc. world wide), this is because most of those involved in hatch cover inspections are not familiar with the basic principles of hatch cover mechanics, simply because they were never informed in a correct way. (Generally those who are knowledgeable tend to keep the information to themselves. Exchanging views and sharing information is the only way that will lead to improvement).

In order to find an answer on many of the frequently seen hatch cover problems, it is important to understand the basic principles of hatch cover mechanics. I usually try to explain these basics to surveyors, consultants, class, shipyard and P&I during the SDT – IMCS training course on hatch covers and hatch cover testing but it will be appreciated that it would be beyond the scope of this article to enter into details. However, in this article, I will try to explain the key issues of hatch cover surveying and testing in a condensed manner, as far as possible.

The departure point is that hatch covers, and especially the types of hatch covers that we see on board nowadays, are heavy pieces of equipment. Their structure is such that they are stiffer than the structure of the ship to which they are fitted. If hatch covers would be rigidly fitted to the ship (an extreme case would be that hatch covers should be welded to the ship), then they would simply break away from the coaming whilst the ship is at sea. It is important to understand that hatch covers have to move in unison with the ship to which they are fitted, and this can only be achieved if they are “elastically fitted/mounted” to the ship’s structure. It is important to understand that hatch covers must be allowed to move within certain limits, over the coaming, or, more correctly, they must be able to accommodate the changes in the shape of a vessel when this vessel is in a dynamic condition whilst on passage. As hatch covers are “fitted” to the ship’s deck/hatch coaming, and are not a part of the ship’s structure, we generally speak of hatch covers as “fittings”.

Keeping water out of the holds: the 3 safety barriers

According to the International Convention on Load Lines, 1968 (LL Convention), hatch covers must be able to keep water out/prevent ingress into the holds in any sea condition. It will be appreciated that this is almost an impossible task for manufacturers, but yet, rules have to be met with and it is worthwhile to understand how manufacturers achieve to get things right.

On a ship which is moving violently in a seaway, enormous stresses will be acting on the ship’s structure and hence, the relative movement, between the ship and the hatch covers will be significant.

Generally, most people will say that packing rubbers will do the job in keeping water out of the holds. However, it is important to know that packing rubbers alone will not always be in a position to keep water out. Packing rubbers, just as the hatch covers itself, are fine pieces of engineering which are developed to be, and remain, flexible in order to be able to compensate for the movements of the ship. It will be appreciated that developing a type of rubber which is able to withstand millions of movements throughout it's in-service life (both in the horizontal plane and vertical plane together with continuous vibrations), harsh climacteric conditions (hot, cold, wet/dry), exposure to sunlight, chlorides, cargo residues, etc. requires a lot of research and know how.

However, reducing the possibility of water to come in contact with the packing rubber/compression bar interface would be the first step in keeping water out. This is generally achieved by limiting the free space between hatch cover panels in way of the cross joints and between the panel side plating and coaming, to a strict operational minimum. Water which passes this first safety barrier will come in contact with the packing rubber/compression bar interface. It will be appreciated that even a slight physical contact between a packing rubber and a compression bar will prevent water to penetrate through the seal. However, and if this contact is superficial (generally referred to as "kissing of the compression bar") it will be understood that the sealing interface will easily open up on passage under the influence of ship's movements/distortions at sea and eventually allow water to penetrate.

As this has to be avoided by all means, it will be understood that the packing rubber will have to be compressed to a certain extent (referred to as the "design compression") in order to be able to "pump" and accommodate changes in the vessel's structure. Movements/distortion of the vessel will depend on the vessel's type and condition (Laker types v/s multi-purpose ships or reefer ships, ballast v/s loaded condition, type of cargo (steel coils or homogeneous cargo, etc.). As the expected movements of a ship in service will be specific for the type of ship involved, it is clear that the type of packing rubbers will also have to be specific for the type of ship to which they are fitted (sponge core box seals, sliding seals, …). In view of the wide variety of ships that are currently being built or already sailing, it will be understood that a wide variety of packing rubbers is available on the market and each type will have different specifications (compression, sliding, resistance to oils, etc.).

As mentioned above, and in order to perform well, i.e. to be able to accommodate for distortions in the ship's hull, packing rubbers will have to be compressed up to their design compression (for a normal sponge core packing rubber this will be in the range of 25% of it's nominal thickness, so a rubber of 40mm thick will have a design compression of about 10mm). In the case where the design compression is 10mm, the packing rubber/compression bar interface will open up once distortion at the sealing level exceeds 10mm. which will allow water to penetrate.

This will make it clear that maintaining a tight seal depends on the flexing and compression capacity of a packing rubber. Once the packing rubber's flexibility and compression force are reduced, the seal will open up under less demanding conditions and be slow in responding to any distortions. Therefore, the packing rubber's in-service life will be determined, to a large extent, by its compensating characteristics which are invariably linked to permanent deformation/ excessive set. It is normal for packing rubbers to develop a permanent imprint during their in-service life. However, there are limits and discard criteria to be observed and once these limits are exceeded, the packing rubber should be replaced. Normally, well maintained packing rubbers can last as long as 5 and even up to 7 years.

The chief reason for packing rubbers to develop a permanent imprint/set is generally not the time that they are in-service, but over-compression. Systematic over-compression of the packing rubber will result in distortion of the rubber structure of the seal, making it less flexible and preventing the rubber to take up it's original form again after being compressed.

It is clear that, if a packing rubber has a design compression of 10 mm, this means that it should be able to compensate for expected (design) distortions in the range of 10mm. If, as a result from permanent set, the packing rubber's pumping capacity is reduced

Excessive permanent imprint on packing rubber

Overcompressed packing rubber with cracks becoming apparent in the sealing surface of the rubber

from 10mm to 7mm, the packing rubber's ability to compensate for ship distortions will be reduced with 3mm and hence there will be an enhanced exposure to water ingress.

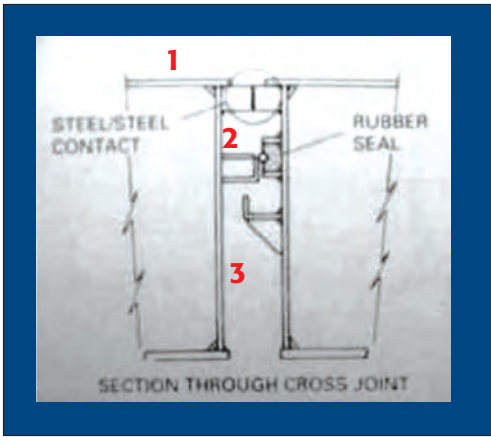
Furthermore, and as we now know that hatch cover panels will be moving relative to the compression bar, there will be a lot of friction between the packing rubber and compression bar (friction coefficients of 0.3-0.5 for rubber against steel), especially when the packing rubber is compressed to its design compression. Therefore, the packing rubber sealing surface should be very strong and able to resist these frictions and movements. As it is known that enormous forces will acting on the packing rubber's sealing surface it will be appreciated that making packing rubbers which are durable and able to perform well under the most demanding conditions requires craftsmanship and a lot of research and testing.

Thus far, we have talked only about known distortions, i.e. distortions which can be calculated and foreseen. But what if, under the influence of extreme weather conditions beyond the calculated design criteria (design compression), the seal would open up and allow water to penetrate into the ship's holds? We all know how unpredictable the marine environment may be and yet, under the terms of the loadline convention, water has to be kept out in any sea condition, which also includes unpredictable conditions. If there would not be a 3rd safety barrier, water would run into the holds directly after passing through the packing rubber/compression bar interface, which would not be in line with the Load Line criteria.

Therefore, and in an attempt to keep water out, manufacturers will generally fit a drain channel around the coamings and in way of the cross joints, in order to evacuate any water that might pass through the seal under exceptional weather conditions.

To summarize, keeping water out is achieved through a 3 – tier safety barrier system as is shown below:

As we know now that keeping water out largely depends on the compensating capacity of packing rubbers, which in itself depends on the design compression and is actually a matter of a few millimeters, it will be understood that it is important to treat the packing rubber compression with the respect it deserves. As we know that the pumping or compensating capacity of a packing rubber is governed by a few millimeters of compression, it is clear that the more compression we have the security against water ingress.



3-tier safety barrier system (minimum distance between top plate), packing rubber/compression bar interface and drain channel

It now becomes clear that the rubber's compensating capacity must be preserved and that over-compression should be avoided at all times. Therefore, as we will see under the next point, keeping the packing rubber in his correct sealing position is of utmost importance.

Once we know that the compression is reduced, the compensating capacity of the packing rubber is affected and hence the vessel, and cargo, may be at risk. It is important to remember that this design compression is determined by the manufacturers and that discard/renewal criteria will be specific for each type of rubber. To know more about issues such as design compression and renewal criteria, the hatch patentees' manual should be consulted.

Goal-Based Standards – A New Approach To The International Regulation Of Ship Construction

By Koji Sekimizu, Director Maritime Safety Division, International Maritime Organization

Goal-based regulation – What does it mean?

Whereas prescriptive regulations specify exactly what must be done to achieve compliance, goal-based standards, as the name suggests, define the objective to be achieved but not the means of doing so. There is a tendency to adopt a goal-based approach in maritime regulatory fields and there are technical reasons for adopting this approach to replace prescriptive regulations.

Prescriptive regulations in the maritime fields tend to be a distillation of past experience and, as such, may create unnecessary restrictions in industries that are technically innovative. They encode the best engineering practice at the time they were written and become out-dated where best practice is changing with evolving technologies and new demands for maritime transportation.

There are clear benefits in adopting a goal-based approach as it gives greater freedom in developing technical solutions and accommodating different standards. While it needs to be recognized that the intention is to set long-term goals to be achieved, it should, however, also always be kept in mind that the safety level achieved by the prescriptive regulations should be maintained and should not be compromised in order to give flexibility to designers who may opt for innovative solutions to meet newly emerging demands in the industry.

Goal-based standards (GBS) are not a completely new concept in the work of IMO. Over the last few years, the Organization has started to introduce goal-based standards for certain special subjects, albeit not in a systematic manner. Examples are the revised SOLAS chapter II-2 on Construction – Fire protection, fire detection and fire extinction, which was completed in 2000, and the recent work with regard to large passenger ship safety.

In a radically new approach to the preparation of amendments to SOLAS, regulation 2 of the revised chapter II-2 (Fire safety objectives and functional requirements) contains sections on fire safety

objectives, functional requirements and achievement of the objectives. Although the regulations still contain prescriptive requirements, each regulation now has a purpose statement and functional requirements to assist port and flag States in resolving matters which may not be fully addressed in the prescriptive requirements. Regulation II-2/17 allows deviation from the prescriptive requirements provided that any alternative design and arrangements meet the fire safety objectives and functional requirements and an engineering analysis, evaluation and approval of the alternative solutions is carried out.

In May 2000, IMO commenced a holistic consideration of safety issues pertaining to passenger ships, with particular emphasis on large cruise ships. This effort has resulted in an entirely new regulatory philosophy for the design, construction and operation of passenger ships that will better address the future needs of the cruise industry. The new structured approach includes a guiding philosophy, strategic goals and objectives, in effect a new way of viewing the regulatory development process which is holistic in nature and focuses on achieving goals such as "a ship should be designed for improved survivability so that, in the event of a casualty, persons can stay safely on board (in a safe haven) as the ship proceeds to port".

In the near future, IMO will start a comprehensive review of the requirements for life-saving appliances in SOLAS chapter III and the LSA Code, aiming at the establishment of a framework of requirements which are easy to understand and reflect the actual situation in use, training and maintenance of life-saving appliances and also correspond to today's and future technologies. This will include the analysis of emergency scenarios, ergonomics, functional requirements and evaluation methods for alternative design and arrangements.

Goal-based standards for ship construction

The notion of "goal-based ship construction standards" was introduced in IMO in 2002 through a proposal by the Bahamas and Greece, suggesting that IMO should play a larger role in determining the standards to which new ships are built, traditionally the responsibility of classification societies and shipyards. The Organization agreed to develop initial ship construction standards that would permit innovation in design but at the same time ensure that ships are constructed in such a manner that, if properly maintained, they would remain safe for their economic life.

Since then, IMO's Maritime Safety Committee (MSC) has diligently worked on the subject, following a deterministic approach for GBS for provisions for hull construction for bulk carriers and oil tankers, based on the vast practical experience gained with these ship types over the years and stressing the need for clearly quantified functional requirements; and a safety level approach, advocating the application of a holistic approach which would define a procedure for the risk-based evaluation of the current safety level of existing mandatory regulations related to ship safety and consider ways forward to establish future risk acceptance criteria using Formal Safety Assessment (FSA).

Basic principles of IMO goal-based standards for ship construction

The MSC agreed that the basic principles of IMO goal-based standards are:

1 broad, over-arching safety, environmental and/or security standards that ships are required to meet during their lifecycle;

2 the required level to be achieved by the requirements applied by classification societies and other recognized organizations, Administrations and IMO;

3 clear, demonstrable, verifiable, long standing, implementable and achievable, irrespective of ship design and technology; and

4 specific enough in order not to be open to differing interpretations.

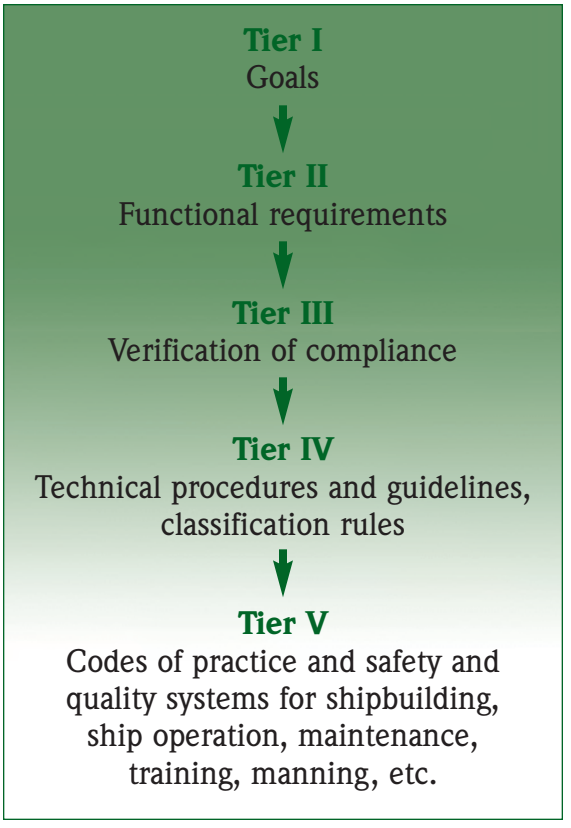
It is understood that these basic principles were developed to be applicable to all goal-based standards developed by IMO and not only goal-based new ship construction standards, in recognition that, in the future, IMO may develop goal-based standards for

other areas, e.g. machinery, equipment, fire-protection, etc. and that all goal-based standards developed by the Organization should follow the same basic principles.

GBS for bulk carriers and oil tankers

The five-tier system

Following a proposal by the Bahamas, Greece and IACS, the MSC agreed to use a five-tier system as set out below, whereby the first three tiers constitute the goal-based standards to be developed by IMO and Tiers IV and V contain provisions developed/to be developed by classification societies, other recognized organizations and industry organizations.



Goals (Tier I)

The MSC agreed in principle to the following Tier I goals, applicable to all types of new ships:

> Ships are to be designed and constructed for a specified design life to be safe and environmentally friendly, when properly operated and maintained under the specified operating and environmental conditions, in intact and specified damage conditions, throughout their life.

1 Safe and environmentally friendly means the ship shall have adequate strength, integrity and stability to minimize the risk of loss of the ship or pollution to the marine environment due to structural failure, including collapse, resulting in flooding or loss of watertight integrity.

2 Environmentally friendly also includes the ship being constructed of materials for environmentally acceptable dismantling and recycling.

3 Safety also includes the ship's structure being arranged to provide for safe access, escape, inspection and proper maintenance.

4 Specified operating and environmental conditions are defined by the operating area for the ship throughout its life and cover the conditions, including intermediate conditions, arising from cargo and ballast operations in port, waterways and at sea.

5 Specified design life is the nominal period that the ship is assumed to be exposed to operating and/or environmental conditions and/or the corrosive environment and is used for selecting appropriate ship design parameters. However, the ship's actual service life may be longer or shorter depending on the actual operating conditions and maintenance of the ship throughout its life cycle.

Functional requirements (Tier II)

The MSC agreed in principle on the following Tier II functional requirements, applicable to new oil tankers and bulk carriers in unrestricted navigation; however, these functional requirements are still under consideration in the Committee and may be subject to further changes/adjustments.

DESIGN

II.1 Design life
II.2 Environmental conditions
II.3 Structural strength
II.4 Fatigue life
II.5 Residual strength
II.6 Protection against corrosion
II.7 Structural redundancy

II.8 Watertight and weathertight integrity

II.9 Human element considerations

II.10 Design transparency

CONSTRUCTION

II.11 Construction quality procedures

II.12 Survey

IN-SERVICE CONSIDERATIONS

II.13 Survey and maintenance

II.14 Structural accessibility

RECYCLING CONSIDERATIONS

II.15 Recycling

Expectations

The MSC has made substantial progress in the matter, especially regarding the development of GBS for the construction of bulk carriers and oil tankers. During its future meetings, the MSC will be considering draft amendments to make these GBS mandatory under SOLAS chapter II-1, including draft International Goal-based New Ship Construction Standards for Bulk Carriers and Oil Tankers, prepared by an inter-sessional correspondence group. It is expected that the amendments can be approved and subsequently adopted in the near future, pending the finalization of Tier III (verification of compliance), work on which is currently on-going and progressing well.

As far as the safety level approach is concerned, another intersessional correspondence group is working on the determination of the current safety level inherent in IMO instruments in a holistic high-level manner, divided by ship types, in order to develop relevant Tier I goals for the approach. This includes distinguishing ship types in a clear manner, resulting in definitions of generic ship types for the purpose of statistical analysis, and the determination of time windows to be used for historical data when establishing statistics for risk categories, including a review of available statistical data.

The future work will also include consideration of the linkage between FSA and GBS, in particular the development of risk acceptance criteria, taking into account the previous work of the MSC with regard to FSA. In this approach, safety goals could be stated in terms of risk evaluation criteria and the current risk levels could be re-evaluated. It could then be decided whether current safety levels are adequate or whether the regulations need to be changed. For this process it is of paramount importance to establish, at IMO, a common universal set of criteria for the evaluation of risks and hazards in order to identify generic risk control options.

Dispute Resolution and PRC Shipbuilding Contracts

By Nicholas Poynder
Holman, Fenwick & Willan, Shanghai

Background

Disputes are an inherent feature of newbuilding contracts. This is as true in the PRC as anywhere else. Mostly these disputes are resolved through negotiation on the ground between Owners' superintendents and the yard people. Occasionally the disputes become more significant and sometimes the lawyers are called in. HFW Shanghai has handled a number of such disputes between Owners and PRC shipyards. Here we discuss some of the lessons we have learned along the way in assisting with their resolution.

The types of ship building dispute we have commonly encountered in recent years are very much the product of underlying market forces, which above all means the phenomenal bull run enjoyed by shipping and a record-breaking tonnage on the blocks. PRC shipyards have become increasingly active in this market and the PRC is now the world's third biggest shipyard. Pressure for newbuilding slots in PRC yards, as elsewhere, has become acute. Under these conditions, a number of types of dispute are typical, such as disputes over cancellation of orders by yards, delayed delivery and alleged defects in quality of workmanship. However, we have also advised in relation to a number of high-profile yard insolvencies in recent years, notwithstanding the strong demand for newbuildings.

Of paramount importance to the resolution of all these types of dispute are the law and jurisdiction provisions in shipbuilding contracts, and the terms of the refund guarantees that yards are commonly asked to arrange by buyers as security for serious defaults. We discuss these further below.

Choice of law and jurisdiction and enforcement

Given the ever present threat of disputes, the choice of law and jurisdiction in shipbuilding contracts is of critical importance. For foreign buyers, probably the most usual choice is English law and London Arbitration. As regards jurisdiction, arbitration is normally preferred to court jurisdiction by most parties to PRC shipbuilding contracts for a very simple reason: judgments from most foreign countries cannot be enforced in China, and Chinese judgments cannot be enforced in most foreign countries. China does have treaties for the mutual recognition of civil and commercial judgments with a number of ship owning countries However, no such treaties exist, for example, with Japan, the USA, England, Greece, Australia and the Scandinavian countries, to name just some of the major clients to Chinese yards. So, for example, if a Greek owner wins a High Court Judgment in London against a Chinese yard, that judgment would likely be worth no more than the paper it was written on in China.

Coupled with a mutual suspicion of home-turf bias, the unenforceability of judgments leads many owners and shipyards to agree to international arbitration rather than the jurisdiction of the owner's or yard's home state. The main advantage of agreeing international arbitration in PRC shipbuilding contracts is that China is party to the 1958 New York Convention. Under the New York Convention, arbitration awards in one signatory state will, in theory, be enforceable through the court system of another signatory state, using whatever enforcement mechanisms are locally available. An additional advantage, of considerable value in commercial disputes, is the confidentiality of arbitration proceedings. While London arbitration is often agreed upon, parties sometimes choose Singapore or Hong Kong arbitration as a compromise, sometimes combined with an agreement to use English law.

An international arbitration award is only useful if it can be recognised and enforced by one party in the jurisdiction where the assets of the other party are

located. In China the first thing to remember is that an international arbitration award will only be recognised and enforced by a Chinese court under the PRC Civil Procedure Law if it is filed for recognition within 6 months of the last date of the period during which the losing party was obliged to perform its obligations under the award.

Aside from the short timeframe for filing a recognition application, recognition and enforcement proceedings of international arbitration awards in the PRC should in theory be quite straightforward. The Court is supposed to decide clear-cut applications within 2 months. Fees for recognition are nominal and enforcement are meant to be calculated on a progressive basis as a percentage of the value of the assets targeted. However, we have recently found that a number of courts have demanded enforcement fees up front calculated on an apparently arbitrary basis. Further, applications for recognition and enforcement of international arbitration awards in the PRC can in our experience take up to 3 years to decide.

One way to try and avoid the problems of enforcement in China against a party that is unlikely to honour the award is to obtain security in advance of the award being granted. The most obvious high-value assets are hulls under construction. The Maritime Procedure Law of the PRC may allow vessels to be attached pursuant to a maritime claim before an award or judgment has been made in the applicant's favour. Alternatively, the hull can be attached under China's Civil Procedure Law. However the hull may well be registered in the name of the yard, but with the evidence of registration being held by the local MSA (the port authority), ownership may be difficult to prove. Another major drawback of pre-award/judgment attachments in PRC law is that like other civil law systems (i.e. Japan) substantial countersecurity is normally required. Rule "B" attachments in New York are sometimes also worth considering, especially where yards source equipment such as main engines abroad.

As enforcing and securing international arbitration awards in China is not as straightforward as it seems from reading the New York Convention, many owners are anxious to part-secure potential claims against yards in advance. The obvious mechanism for this is the refund guarantee.

Refund guarantees

Owners typically require yards to arrange for a 'refund guarantee' from a bank to guarantee repayment to the owner of its pre-paid instalments for the newbuilding in the event of rescission by the owner following a serious default by the yard, such as insolvency or failure to build according to specification.

In negotiating refund guarantees, it is advisable for buyers to ensure that the guarantees are 'on demand' from a first class bank. 'On demand' guarantees allow the beneficiary to obtain payment from the guarantor on first demand or against the beneficiary's simple presentation of a certificate alleging lawful rescission of the shipbuilding contract. The bank will likely have security for its guarantee and it is then for the party allegedly in default to try and reclaim from the beneficiary what it has lost under guarantee, i.e. by alleging wrongful rescission of the shipbuilding contract.

One thing however that owners should beware of is that as a matter of both English and Chinese law at least, guarantees are secondary obligations and are

not entirely independent of the underlying shipbuilding contract. Thus, any material changes in the underlying shipbuilding contract after the guarantee has been given (such as changes in price or vessel specifications or key milestones or delivery dates) may invalidate the guarantee, enabling the bank to wriggle out of paying up in the event of a major default by the guaranteed party. The remedy is to ensure that the guarantee includes agreement that the guarantee will remain valid whatever changes are made to the underlying shipbuilding contract. The other remedy, which we would recommend in any case, is that the guarantor be required to provide written affirmation of the continuing validity of the guarantee, whenever the parties make material changes to the underlying shipbuilding contract. In relation to refund guarantees, owners should also ensure that any extension of the delivery date of the vessel is reflected in an extension of the guarantee expiration date. Otherwise, payments by the owner falling due after the old delivery date may no longer be secured by the refund guarantee.

Normally, Chinese yards will only be prepared to offer a guarantee from a Chinese bank to owners, often from bank branches at the provincial or even city level. We have first-hand experience of obtaining repayment of pre-delivery instalments from Chinese banks where yards finances have collapsed. A number of issues also arise specifically with refund guarantees from Chinese banks, which owners should be alive to, such as:

(a) It is advisable to obtain the refund guarantee from a major state-owned bank as there have been some doubts in recent years over the solvency of parts of the Chinese banking system. Furthermore, not all Chinese banks are authorised to make foreign currency guarantees.

(b) Not all Chinese banks – even the major state-owned ones – have assets overseas that can be easily enforced against. Where yards issue refund guarantees through city level branches of Chinese banks the owner has to attempt to enforce any guarantee against that branch first before bringing procedures against head office, which is more likely to have overseas dealings. It is thus preferable to obtain refund guarantees from provincial level or head offices of Chinese banks where possible.

(c) Owners should ensure if at all possible that when a Chinese bank grants a refund guarantee that the guarantee is validly registered with the State Administration of Foreign Exchange (SAFE). Chinese courts will not enforce foreign currency guarantees that have not been so registered. Foreign buyers often ask us how to ensure that the refund guarantee has been validly registered, and there is no easy answer. The best solution is to obtain a letter of confirmation from SAFE confirming the registration of the guarantee. Sometimes it may be possible to obtain a copy of the relevant page from the local SAFE branch's register of refund guarantees, duly chopped by SAFE and the bank and even notarised. Failing both of these, the next best thing is to obtain the bank's own confirmation of SAFE registration.

Due diligence

Enforcement of arbitration awards and calling on refund guarantees are of course measures of last resort in disputes with yards. As this article highlights, both have their pitfalls. Above all, we would stress the importance of due diligence on prospective builders during contract negotiations, and we are often asked to assist buyers with this. There are now probably well in excess of 200 newbuilding yards in the PRC. While some are well-established and in competition with the best yards in the world, others have little or no track record or experience. With the latter type of yard, we would say caveat emptor – buyer beware. When it comes to shipbuilding in the PRC, dispute prevention in our experience is a far better option than dispute resolution.

Liabilities Under Crew Contracts – Understanding the Risks

By Jessie Carvalho, Claims Liaison (Solicitor)
Shipowners Claims Bureau (UK) Ltd

Risks to crew members are an ever-present problem, whether on board or ashore, and the Club duly works closely with members to ensure awareness of such risks. In addition, members corresponding liabilities take on greater significance when one considers the different types of crew contracts that are in force throughout the world, such as Philippine Overseas Employment Administration (POEA) contracts, collective bargaining agreements, etc.

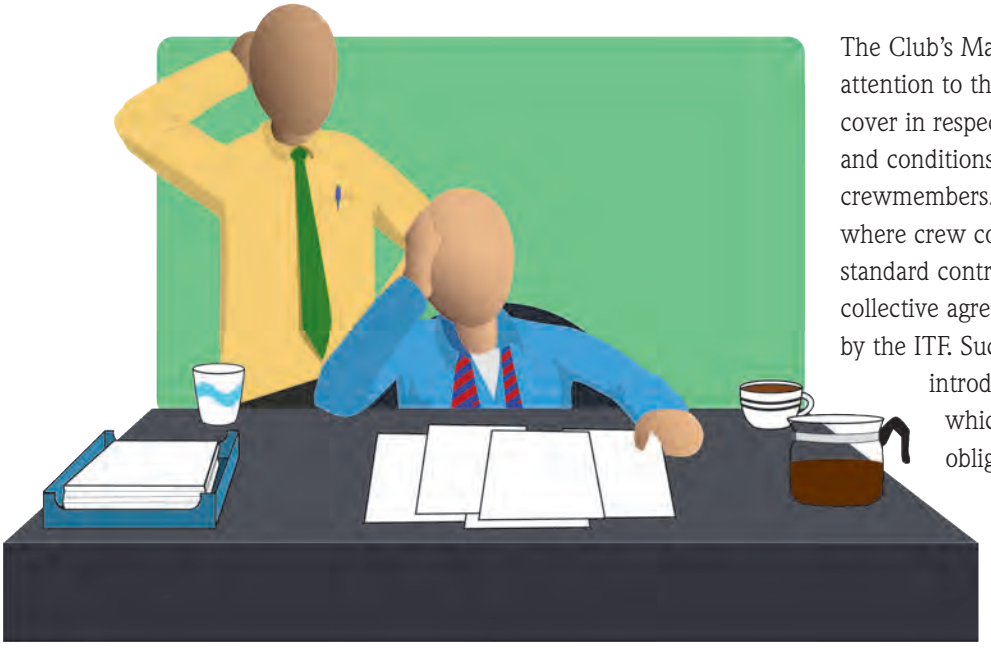
Claims arising from crew contracts of employment can entail substantial liabilities to the employer because all such contracts include a scale of no-fault contractual benefits in the event of illness, injury, or death. Consequently, Club policy seeks to ensure that members are covered for all risks implied by such contracts and that such contracts contain no unusual clauses. Nonetheless, some contracts are unhelpfully silent, in so far as they fail to specify maximum levels of compensation to be paid to aggrieved crew members and/or their dependants. In addition, other contracts offer insufficient protection against excessive claims, when compared to the acceptable levels of compensation that the crewmember would have secured in his country of domicile.

The above problems highlight the importance of ensuring that the terms and conditions of the employment contract do not prejudice a member's cover with the Association in a ways that hinders the settlement of any claims.

The Club's aim in this article is to resolve any problems with a contract before claims arise so that compensation can be fairly and quickly awarded in the event of a proper claim, thereby avoiding any unnecessary additional stress to crew members or their families and the Member.

Mandatory Approval

In accordance with Rule 2 Section 1. B. 2. (d) (i.), the Club provides cover to its members for liabilities, costs, or expenses incurred under the terms of the crew articles or under other contracts of service or employment. Such cover is extended by the Club only to the extent that those contractual terms have already been approved by the Club's Managers in writing.



The Club's Managers pay particular attention to the impact on the Member's cover in respect of the contractual terms and conditions of the employment of crewmembers. This is particularly so cases where crew contracts are simple "one page" standard contracts that are supported by collective agreements, such as those forth by the ITF. Such Contracts can attempt to introduce additional terms, some of which may impose unreasonable obligations upon owners.

The Club's Managers also determine whether (a) there are caps on damage awards, and (b) whether there is a system that provides predetermined awards for claims relating to specific injuries or illnesses, or death.

Contracts are generally negotiable and it is therefore advisable that Members carefully review their crew contracts, irrespective of crewmembers' nationality, to ensure that relevant terms are acceptable to all parties. In doing so, Members should take into account the following guidelines as to what is and is not approved and covered by the Club.

"What are we taking a hard look at today?"

Levels of Compensation

As mentioned above, most contracts will make a Shipowner liable for a crewmember's injury, illness, or death, regardless of fault. Such non-fault compensation generally includes a lump sum, calculated in relation to victualling allowances and prospective lost earnings, as increases with length of time away from work or on the basis of the extent of permanent disability (where assessed).

Particular attention should therefore be given to the level of compensation payments for personal injury or illnesses where a certain degree of permanent disability is claimed, and also to the level of death benefits being claimed by the dependents of the crewmember.

Listed below are the types of liabilities Members' can incur together with the corresponding levels of compensation they entail:

1. Medical Expenses

Members should take great care with ill or injured crew who require medical treatment anywhere in the world. The Club's local correspondents are always available to take the necessary steps to contact the crew member in hospital and to help to minimize costs and also the exposure, if any, to the threat of legal action against the Member.

Where crewmembers have been discharged owing to illness or injury, they should be entitled to medical attention including hospitalisation at the Members' expense until they are cured or have reached 'maximum cure', i.e. the point beyond which further medical treatment would probably not improve their condition, or until the injury or illness takes on a permanent character, in which case the disability provision in the contract comes into play.

The Members' liability to pay medical expenses should be carefully monitored. Situations can arise in which agreements inadvertently compel Members to pay for protracted medical treatment, or even for open-ended medical care. Such uncontrolled medical expenses have become problematic for the Club. Hence, contracts of employment should cap the length of time an employer is responsible for providing medical care, either by specifying in advance a clear cut-off point, or by having a medical expert appointed by the Member subsequently determine levels of disability sustained.

2. Repatriating Sick Crewmembers

Members are frequently faced with crew who get injured or fall ill in inhospitable parts of the world. In most countries, as Shipowners, they have a duty to care for their employees until they are safely repatriated. This can be a challenging situation: for example, where crewmembers might be mentally disturbed

and in need of protection against themselves. The Club is often requested to assist in repatriating such crew to their home country as soon as possible; Club correspondents are often better qualified to deal with such situations than a ship's agents.

Repatriation expenses are recoverable from the Club if incurred under the Member's contractual or statutory obligation following illness or injury to crew or following the loss of the entered ship. The Club's local correspondent will have been involved in making the necessary arrangements and will be able to provide the necessary costing details. However, these costs are not covered if they arise from the termination of a crewmember's contract, the sale of the ship, dry docking, or the like.

3. Sick Pay

Members should also ensure that sick pay, in terms of how long crewmembers are entitled to basic wages, is capped.

In particular, the contract should specify a maximum number of sick days, and this maximum should apply in cases of both injury and illness. Some contracts provide for a maximum period of 112 days, but others may provide for a longer or shorter period.

In the case of a more serious illness or injury claim, the benefit of sick pay should terminate upon repatriation, or when a determination of the degree of permanent disability has been made.

4. Disability Benefits

Crew contracts should include a provision indicating how a degree of disability is to be assessed. The amount of benefit naturally depends upon the extent of the crewmember's disability, which is usually assessed by a doctor selected and appointed by the Member in accordance with the provisions of the contract of employment.

It is also necessary to ensure that only work-related illness or injury claims are eligible for compensation under the terms of the contract. Employers' responsibility should not extend to conditions not arising from work. In addition, the owner should take care not to be liable for injury or disability resulting from a crewmember's deliberate or reckless act.

5. Death Benefits:

Crew contracts should specify that death benefits are not payable if crewmembers commit suicide or if their death results from their own wilful misconduct. In other circumstances, crew contracts should make clear whether or not nominated legal beneficiaries still stand to benefit if crew were in transit to (or from) the ship on which they were to serve (or had served) when they died, as opposed to actually serving on that ship when they died.

The amount of death benefits payable to the dependants of a crewmember who dies during his period of employment will vary from one contract to another. Crewmembers are generally required to nominate a next of kin at the start of their contract. Unfortunately, without such a declaration, it can be difficult to identify the correct next of kin, and, where a dispute arises, a lengthy legal process can ensue. Such a complication has two potential drawbacks: additional expense for Members and additional stress for the next of kin.

Hence, contracts should clearly nominate the next of kin or whomever as legal beneficiaries of crew. In addition, a distinction must be drawn between the legal beneficiaries and those who should be contacted in the event of serious illness, injury, or death.

6. Ship Wreck Unemployment indemnity

The Club will also indemnify Members' in respect of their liability to compensate a crewmember for the loss of his unemployment caused in consequence of the loss or wreck

of the vessel and such claims are covered under Club Rule 2 Section 2. Indemnity by way of crew wages is recoverable only if deemed payable by the Shipowner under statutory obligation during unemployment.

The level of such an indemnity is normally one or two month's wages and is normally paid when the Contract of Employment is prematurely terminated, by the Shipowner. The relevant clause within the crew contract should therefore clearly indicate the compensation payable in the event of such "premature termination", and in particular refer to the applicable wage rate (e.g., basic or total, overtime, etc). However, these wages are not recoverable if they arise from the voluntary termination of a crewmember's contract.

7. Loss of and Damage to the Effects of Crew

This loss is covered under Club Rule 2 Section 2. (a). The Employment contract should detail a specific limit in respect of the employer's obligations to pay compensation for loss of or damage to Crew's personal effects. The typical figure is between US $ 2, 000 and US $ 3,000. It would be advisable if the contract specifically excludes the recovery of certain items, most importantly cash, negotiable instruments or valuables, in order to mirror the exclusions under the Club cover. This thereby ensures that Members do not face a liability to crew for which they do not have Club cover.

Jurisdiction

In many countries, the relationship of the crewmember with his employer is governed primarily by contract, or by a scheduled compensation system. Some flag states have a statutory framework setting out the rights and benefits of crewmembers. As operations become more complex, jurisdictions more restrictive and contracts more demanding, so may the Members become exposed to new, unforeseen risks. Awareness of the compensation available to seafarers in the United States, Asia, Australia and the European Union has spread to most maritime countries. So has the practice of the courts superseding established liability limits with higher compensation awards.

In choosing the governing law, an employer should therefore investigate the governing remedies and damage awards in the relevant nations under consideration. Before selection of a foreign jurisdiction, a Shipowner must determine whether there may be some legislation which may interfere or prohibit the enforcement of the award.

Where no governing contract of employment exists between the member and the crew, statutory and/or

common law terms and conditions are deemed to apply while on board the member's vessel and these terms may afford little or no protection to Members against excessive claims.

The Club therefore strongly recommends that the Contract of Employment should include a jurisdictional clause or a choice of law clause and a clear indication of its application. The Member should be aware of the obligation to ensure that the terms and conditions of the Contract of Employment are in fact available to the crewmembers to whom they apply. Basic reference to ancillary, extensive, crew contracts in simple "one page" crew contracts must be supported with the availability of the full document to the crewmembers that are recruited. Members are also required to ensure that this obligation is followed through even by their local manning agencies. Failure to do so run the risk that the contract will note be upheld as in some cases, it has been considered that the crewmember did not agree to be bound by its terms as the terms were not properly communicated to him. It is a standard principle in many countries that any ambiguity in the application of such contracts will be construed in favour of the crewmember as if they were the less powerful party in such a contractual arrangement.

We Will Tow You Away

By Michael Heads. P&I Associates (Pty) Ltd
Durban, South Africa

In June 2005, a vessel passing north on the South African east coast experienced main engine problems. The vessel stopped and anchored off the coast whilst the crew attempted to carry out repairs.

Whilst the vessel was at anchor, the South African Maritime Safety Authority (SAMSA) maintained a close watch on the situation. The crew was unable to effect repairs and the Owners entered into LOF with a team of international salvors.

The weather on the South African coast is notoriously unpredictable and the weather conditions changed and the vessel began to drag her anchor. The salvors in all likelihood already dispatched a tug in anticipation of the LOF agreement.

The weather conditions grew increasingly worse and the vessel was in danger of running aground. SAMSA ordered that a harbor tug from a nearby port tow the vessel into deeper water.

The master of the casualty declined to take the line for he had been advised that LOF had been signed and was concerned that by taking it he would, perhaps be contravening the LOF.

The vessel subsequently grounded prior to the salvage tug arriving.

As a result of this incident, SAMSA came under political pressure and were accused of failing to take action sufficiently quickly, the local view being that SAMSA has the power to order any vessel anchored "illegally" along our coast to either leave immediately or take a tow.

Section 5 of the Marine Traffic Act, Act 2 of 1981 provides the following:

Immobilizing, laying-up, stopping or anchoring outside harbours or fishing harbours

(1) Except with the permission of the Minister and in accordance with any condition prescribed by regulation or imposed by the Minister in a particular case, no person shall within the territorial waters or internal waters immobilize or lay-up a ship outside a harbour or fishing harbour.

(2) The Authority may require the master or owner of a ship immobilized or laid-up or to be immobilized or laid-up to find security to the satisfaction of the Authority in an amount determined by the it for the recovery of any

costs incurred by the Authority in enforcing any condition applicable to the immobilizing or laying-up of the ship, or in the exercise of its powers under this Act.

(3) No person shall stop or anchor a ship for repairs within the territorial waters or internal waters outside a harbour or fishing harbour except with the main engine thereof kept in readiness for immediate use and in accordance with any condition prescribed by regulation or imposed by the Minister in a particular case.

(4) Any person who contravenes the provisions of subsection (1) or (3) shall be guilty of an offence.

Section 11 of the Act provides the penalties for contravention of the Act as follows:

Penalties

(1) Any person shall be liable on conviction of –
(a) any offence in terms of section 3 (2), to a fine or to imprisonment for a period not exceeding twelve months;
(b) any offence in terms of section 4 (2) or 5 (4), to a fine or to imprisonment for a period not exceeding two years;
(c) any offence in terms of section 6 (2) or 7 (3), to a fine or to imprisonment for a period not exceeding three months;
(d) any offence in terms of section 8B (1), to a fine not exceeding R200 000, or to imprisonment for a period not exceeding five years or to both such fine and such imprisonment.

(2) f any person –
(a) admits to the Authority that he has contravened or failed to comply with any provision of this Act, which contravention or failure constitutes an offence;
(b) agrees to abide by the decision of the Authority; and
(c) deposits with the Authority such sum as may be required of him, but not exceeding the maximum fine which may be imposed upon a conviction for the contravention or failure in question, the Authority may, after such enquiry as it deems necessary, determine the matter summarily and may, without legal proceedings, order by way of penalty the whole or any part of the said deposit to be forfeited.

(3) here shall be a right of appeal to the Minister from a determination or order by the Authority under subsection (2) whereby a penalty exceeding R2 000 is imposed, provided such right is exercised within a period of three months from the date of such determination or order.

(4) The imposition of a fine under subsection (2) shall be deemed not to be a conviction for an offence, but no prosecution in respect of the offence in question may thereafter be instituted.

Accordingly, should any vessel decide to anchor on the South African coastline without permission, which permission needed to be obtained from the Minister of Transport who is responsible for SAMSA, then that Minister (for which read SAMSA) has the powers to order the vessel to leave the area, or, demand that the vessel accepts a tow so that the vessel is taken away from the coast.

One of the main reasons for SAMSA exercising these powers, is to protect our coastline from the risk of pollution should a vessel run aground. The powers of SAMSA to protect the coastline are included in section 4 of the Marine Pollution (Control and Civil Liability) Act 6 of 1981 and section 18 of the Wreck and Salvage Act 94 of 1996.

Further, SAMSA, are quite quick to point out that in terms of our Merchant Shipping (Maritime Security) Regulations 2004, which incorporate Regulation XI-2/9 of Solas 74 Convention no vessel can anchor without first obtaining security clearance.

The position therefore, is that no vessel can anchor along the South African coast to effect repairs without first obtaining permission from SAMSA, who may order that various preventative measures are to be taken first, for example, by having a tug of sufficient

bollard pull standing by to render assistance should assistance be required in an emergency.
SAMSA have confirmed that they have exercised these powers and they have already used a tug to escort a vessel to a port. They indicated that they were quite prepared to arrest the vessel in order to obtain security for costs however; the owners settled the claim before an arrest was made.

The question which begs to be answered, is what form of towage contract would be forced on a vessel should a vessel be ordered by SAMSA to take a tow. This has not been tested and neither has the question whether the tug or vessel rendering the tow has the right to proceed with a salvage claim under South African common law.

The National Port Authority who operate the ports of South Africa, have rendered assistance to vessel's and have, after having rendered assistance successfully claimed for salvage under our common law. In this regard, the South African common law closely mirrors English Law on this point.

We shall have to watch closely has future events unfold however, Owners should be made aware, that they cannot simply, as they may have done in the past simply stop and anchor on the South African coastline to effect repairs.

Owners need to immediately contact the local authorities and obtain permission for the anchorage and will need to disclose the problem facing the vessel. SAMSA, will then study the application and either agree to the anchorage perhaps subject to various requirements. If the application is denied, then one can safely assume that SAMSA will issue an order that the vessel leave the anchorage and if the vessel fails to comply with the order, then SAMSA have the powers to order that the vessel to take a tow. As stated, Owners can expect, in my view to face a common law salvage claim once the vessel is brought safely into port for I believe, that even if the vessel were say brought to the Durban anchorage, SAMSA may feel that the vessel is still a risk to other vessels and the environment and therefore the tow should only end in port.

Counting the Cost of Bagged Rice in Southern African Ports

By Michael Heads
P&I Associates (Pty) Ltd, Durban, South Africa

I have noted in the last year that there has been a steady increase in the number of bagged rice shortage claims in Durban and from Nacala, Beira and Maputo in Mozambique. I was always used to receiving the odd claim from time to time for a few bags missing from an entire shipment but I have now recorded a marked increase in claims especially from certain quarters of the market. It appears to me that claims were arising far too frequently and felt it was important that members were made aware of the situation.

In Mozambique, I used to receive the odd claim but I never used to receive demands for security. I have now noted the strong presence of French cargo underwriters in the Mozambique market who are insuring rice cargoes into Mozambique and they have become quite forceful with their demands for security in respect of shortage and damaged cargo claims.

About a year ago, I was first introduced to the phrase "extrapolation". I had never heard the phrase being used in a shipping context. I had studied mathematics to A levels. I immediately reached for the dictionary in order to confirm my understanding of the term since the term is generally used in a mathematics environment. For the benefit of those who have not encountered the word, the word "extrapolation" means according to the dictionary "extend (a graph) by inferring unknown values from trends in the known data". In layman's terms, this means that a surveyor, can stand at the hatch coaming and looking down into a cargo hold, he can estimate that there will be a shortage. He is able to do so because there is "always" a shortage on every bagged rice shipment and the extrapolation, is the term for the number of bags, which the surveyor estimates will be short.

This is, in my view, is an incredible surveying technique, which has really left me in awe as to how a surveyor can achieve this amazing feat.

I have taken up this extrapolation survey technique with the French cargo underwriters, who are a strong supporter of the method, and I have even proven to them on many occasions that the extrapolation methodology is not based on any sound surveying

principles. Unfortunately, this method of surveying does not appear to be on the decline and therefore members need to be prepared that should they be carrying bagged rice to East Africa, they can expect to receive shortage claims based on the "extrapolation" methodology. In order to defeat the claim, I recommend that the members appoint their own surveyor to be in attendance throughout the discharge, and that the members arrange for a private tally to be carried out on their own behalf in order to have evidence to reflect that the full consignment was landed. Further, if members have a surveyor present at the start and during the discharge in order to gather evidence then this will protect the members in respect of damage/shortage claims.

The "extrapolation" methodology has yet to arrive in South Africa but I am sure, since I understand that it is very common in West Africa, and now in East Africa, that its migration south cannot be to far off.

In South Africa, I have noted the increase in shortage claims on those vessel's where the members did not have a surveyor present during the discharge and especially when members did not have their own tally. It would appear to me, that as soon as the receiver is aware that the vessel is not carrying out their own tally, that the receiver will then lodge a claim for a shortage.

The port used to carry out a tally on bagged cargo but most vessels are now discharging rice cargoes at leasehold berths and therefore, the port no longer carries out such tallies. This means that the cargo is palletized on board the vessel and landed directly on to road transport and taken to a private warehouse for distribution. The claims that I have seen, seem to be, and not surprising, equivalent to a truckload or two. I therefore recommend that members have a surveyor in attendance at the start and during the discharge and carry out a tally in order to defend any claims for shortages.

I am hopeful that South African surveyors, are experienced enough to realize that "extrapolation" is "guestimation". It is a surveying technique not based on any sound marine surveying principles.

It is a methodology based on fear of loss rather than actual loss and as we all know, shortages in bag cargo are generally a paper loss, which can be attributed to the cargo being incorrectly tallied at the load port or the discharge port. I have never seen a crew eat 400 bags (20mt) of rice between India and Durban.

It is interesting to note, that when all the holds of a vessel have been sealed, following loading, the "extrapolation" surveying technique appears not to work.

The question, which begs to be answered, is whether the "extrapolated" surveyor, is a surveyor for his own account, or a surveyor who is essentially a puppet, in the hands of a dictator.

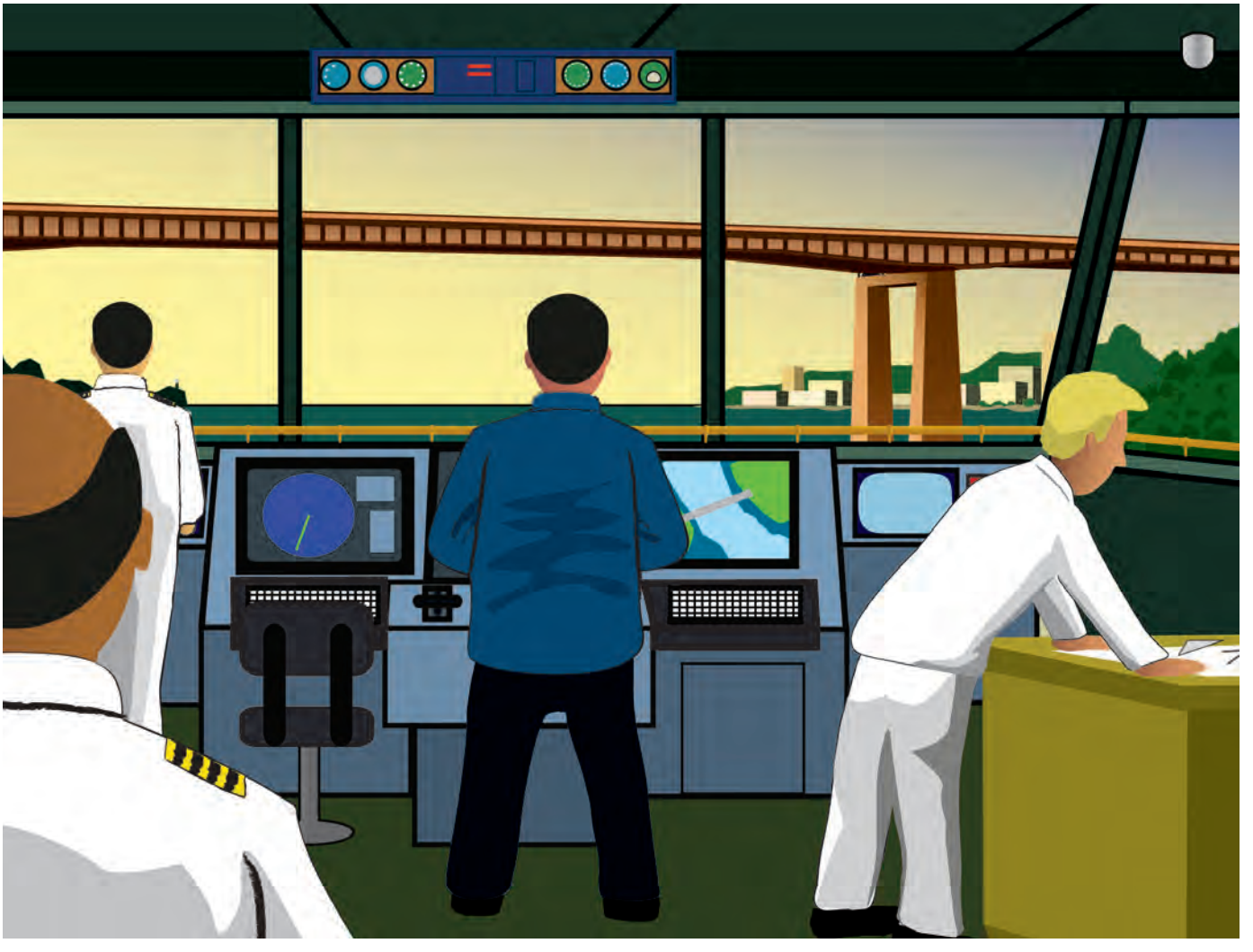
Club Cooperates With IDESS, I.T., Inc. to Develop Training DVD, "Stranger on the Bridge"

By Dr. William Moore, Senior Vice President Shipowners Claims Bureau, Inc.

In cooperation with the International Development and Environmental Shipping School Interactive Technologies, Inc. (IDESS IT, Inc.) in Subic Bay, Philippines, the American Club have developed a training DVD to enhance the knowledge of seafarers in bridge resource management while the pilot is aboard.

The Club has experienced more than US$ 63.9 million in claims since 2001 related to incidents that have involved marine pilots. The new DVD, *Stranger on the Bridge*, will be useful in enhancing the awareness of the responsibilities of the deck crew and the limitations of marine pilots to prevent such accidents from occurring in the future.

The DVD is useful in enhancing the awareness of the responsibilities of the deck crew and the limitations of marine pilots to prevent such accidents from occurring in the future through the presentation of three case studies representing the challenges to bridge crews in ensuring proper command and communication between the pilot and crew. In addition, the DVD is presented in three languages, English, Chinese and Russian.



Stranger on the Bridge will be available free of charge for all Members with owner entries. Sufficient copies will be distributed to Members for each ship entered with the American Club.

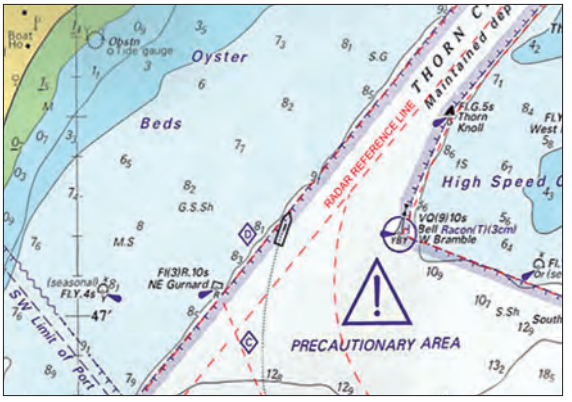
IDESS was established in Sweden and Norway in 1989. The idea, born out of concern over the consequences of tanker casualties, was to give seafarers access to specialised training that would help to reduce the number of incidents (and minimize their effects) that cause loss of life or damage to the environment.

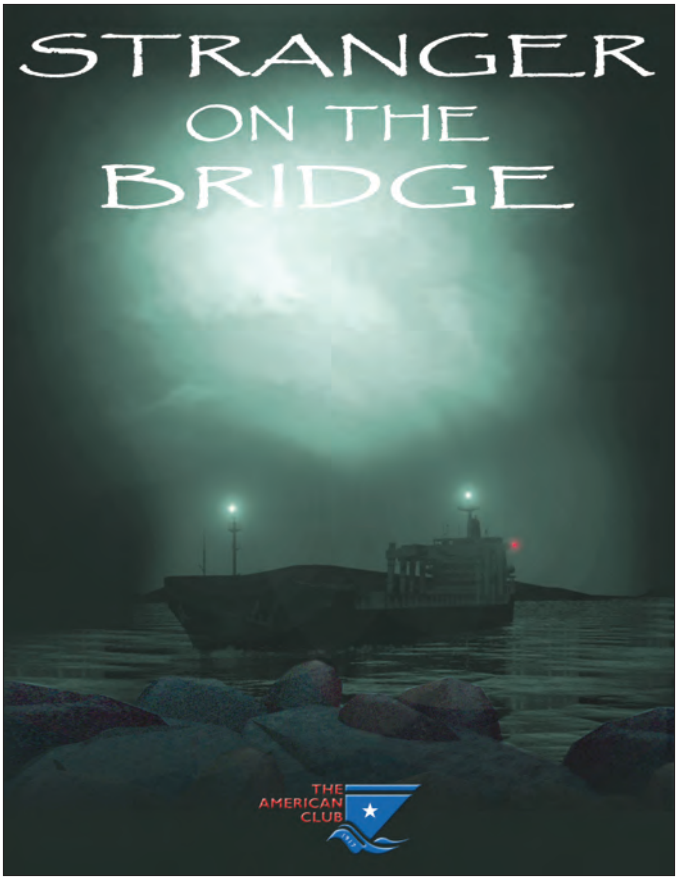
In October 1995 opened its new, purpose built training centre in Subic Bay. This has proved to be an ideal location providing an excellent environment in which students can acquire skills and knowledge. The new centre represents a considerable investment in modern equipment, teaching aids, and competent instructors focusing on training for tanker operations, safety, simulation, navigation and GMDSS.

A software development department was established at IDESS in 1997 which has carried out extensive research into computer-based learning systems. This led to the creation of IDESS I.T., Inc. in 2001, a significant and long-term commitment to the development and production of e-learning tools, and other computer based instruments.

The American Club is involved in further initiatives with IDESS, I.T., Inc. to develop more computer based training tools for Members. The Managers will update Members on any new developments in this area.

For further information, please contact Dr. William Moore, Senior Vice President, Risk Control, Shipowners Claims Bureau, Inc. at william.moore@american-club.com.





Treating Crew Illnesses Onboard: A Nightmare for Masters and Chief Officers

By Andreas Nassikas
N. Goyios & A. Nassikas Law Offices, Piraeus, Greece

How Masters and Chief Officers can reduce considerably or eliminate the possibility of being prosecuted for failure to provide appropriate medical attendance to crew who get ill.

How the problem arose

The officer on board who is assigned, by law, with the duty to offer medical attendance to those of the crew who encounter medical problems on board, is the Chief Officer, whilst the Master's general duty to this effect is also not excluded.

In recent cases brought before the Greek courts, Masters and Chief Officers were prosecuted for failure to offer appropriate medical attendance in situations where it is possible that, even if the seamen were to be admitted immediately to a hospital, their symptoms could have fooled even qualified Doctors with regard to the accurate diagnosis.

I shall mention only two instances where indeed the Master and the Chief Officer could not diagnose appropriately the magnitude of the problem and, as a result, the seamen were lost.

A case of malaria

In the first instance, a 3rd officer died as he was infected by malaria in spite of the fact that he was taking the anti-malaria pill for three weeks before his demise. Whilst the ship, bound from Nigeria to Argentina, was about four days away from her next port of call, the 3rd officer woke up one morning with typical symptoms of a common flu (i.e. obstructed nasal cavities, aches in all joints, headache, etc.). By coincidence, the same morning the 1st Engineer got up from bed with the same symptoms. When they met in the mess room, both attributed their illness to the fact that during the previous afternoon they stayed for a long time at the ship's stern chatting, whilst the weather was warm and humid. Immediately thereafter, they went inside the air-conditioned mess room.

The Master pronounced them immediately unfit for duty, and ordered that they stay in their cabins where the steward was to serve their meals. The Chief Officer attended regularly at the cabins of the said crew and was taking their temperature. Due to bad luck, the 3rd officer did not develop any significant temperature which would have alerted the Chief Officer and/or the Master.

The second day the 1st Engineer, although he had not recovered fully, returned to his duty, whilst the 3rd officer was feeling catatonic and remained in his cabin, although, from time to time, he was going to the mess room for variety purposes and to chat with his fellow seamen.

On the fourth day after he took ill, the 3rd officer advised the Chief Officer who visited him in his cabin that he was feeling better and would resume his duties later on that afternoon. Alas, he was found in his cabin later on the same afternoon in a semi-unconscious state and, as the vessel was approaching the roads of an Argentinean Port, an emergency rescue evacuation was sought by the Master, who, at that time, and only at that time contacted Radio Medico in Greece, and was advised something self-explanatory, i.e. that he should refer the seaman immediately to the nearest hospital.

Even the Argentinean doctors, upon the seaman's admission to the Hospital, could not diagnose immediately what the seaman was suffering from and, initially, they treated the case as a cardiac episode. Thereafter, their diagnosis was yellow fever, and only after the results of some laboratory tests were made known a couple of hours later, did they make the correct diagnosis, i.e. that the seaman was hit by a particular type of malaria which is resistant to the malaria pills, which cannot offer 100% immunity to those who take them.

It is apparent that the Chief Officer and the Master were fooled by the fact that:

(a) all the crew were taking anti-malaria pills,
(b) none of the crew developed any typical symptoms of malaria, and
(c) the symptoms of the 3rd officer were symptoms compatible with common flu which, unfortunately, the 1st Engineer also exhibited at the same time, something which added to the confusion.

It seems that the local district attorney (D.A.) was not convinced by the above arguments and referred both the Master and the Chief Officer to trial, which shall take place sometime in 2008, on charges that they have caused, by negligence, the death of the 3rd officer, since they failed to contact timely the Radio Medico. It is very probable that even if the Radio Medico were to be contacted immediately after the symptoms appeared (i.e. in the first day), the Chief Officer could not have described to those at the

Radio Medico anything else than symptoms of a common flu. However, the argument of the D.A. is that the mind of a qualified Doctor, might have gone further than the mind of the Chief Officer, something which might have saved the seaman. I doubt very much whether this would have been the case, but this is the prevailing perception.

A case of acute abdominal pain

In the second instance, the symptoms which a seaman was suffering from were acute pains in the abdomen. Again the Chief Officer thought that the symptoms were attributable to gastroenteritis and attempted to relieve the seaman with the relevant medicines without even thinking to bother Radio Medico for such a common and ordinary event. Alas, this was the beginning of an acute cardiac episode, from which the unfortunate seaman died some hours later. Again, charges were brought by the D.A. against the Chief Officer for the same reasons described above.

Conclusion

Modern technology allows the Master of the vessel with a satellite phone to speak with the Radio Medico of his own country from which he can take medical advice conversing with the Doctors in his own language.

Masters should be encouraged to make such a call even for things that they consider of minor importance. Once they contact Radio Medico, they should make an entry in the log book as to the medical instructions and advice they got. By doing this, they are not protecting their Owners and/or the P&I clubs, but they mainly protect their own interests from unpleasant developments as the ones described above. Even if the advice provided by Radio Medico proves to have been completely wrong, nobody can take the seamen to task for having failed to second-guess the medical advice they will have obtained.

FD&D CORNER

By George J. Tsimis, Esq., Senior Vice President, Claims Shipowners Claims Bureau (HELLAS), Inc.

Rule B Developments: "WINTER STORM" Watch In Effect

Throughout the past four years of our CURRENTS editions, we heralded the Second Circuit's decision in *Winter Storm Shipping Ltd. v.* TPI, 310 F.2d 263 (2d Cir. 2002) and tracked the development of the use of Rule B attachments to freeze monies passing through intermediary banks in New York in the form of electronic funds transfers (EFTs). From a practical standpoint, we have used this mechanism quite effectively in assisting our Members to recover monies owed to them in their charterparty and other contractual disputes, as well as secure any cargo indemnity claims available to our Member or the Association after exercising our subrogation rights. While we have lauded the developments of Rule B as a means for maritime creditors to obtain proper security from their contract partners in a manner which had never before been so effective or readily accessible, there have been several persistent challenges to EFT attachments. From the banking lobby to certain District Court judges who disagreed with the *Winter Storm* decision, the viability of Rule B attachments of EFTs is once again under attack. Less than a year following its *Aqua Stoli* decision, the Second Circuit is hearing two appeals regarding Rule B, and the future of EFT attachments hangs in the balance.

The first appeal involves the case of *Seamar Shipping Corp. v. Kremikovtzi Trade Ltd.*, 461 F. Supp. 2d 222 (S.D.N.Y. 2006), a demurrage claim subject to London arbitration where the vessel owner had attached funds that had already been previously attached at an intermediary bank account in New York pursuant to other pending cases in New York. A third party intervened to claim that the attached funds belonged to it and argued that the monies were not the property of either party while in transit. Judge Rakoff – the author of the district court decision which created the "need" requirement in the *Aqua Stoli* case which was subsequently reversed – vacated the attachment on this basis. In his decision, Judge Rakoff commented that "the Second Circuit has not spoken with one voice" on whether an EFT in the hands of an intermediary bank constitute a defendant's property, when the defendant is either the originator or the intended beneficiary. Judge Rakoff then narrowly construed the *Winter Storm* holding as applying only to situations where the defendant is the originator of the EFT. In Seamar, the defendant was the intended beneficiary, not the originator of the EFT in question. Concluding that there was no applicable Federal rule on this issue of whether an EFT is the property of an intended beneficiary while in transit, Judge Rakoff referred to N.Y. UCC Sec. 4-A-503 which provides that until the funds transfer is completed, the beneficiary has no property interest in the funds transfer. Under this reasoning, because the defendant in Seamar was the intended beneficiary of the EFT, he vacated the attachment. Seamar appealed this ruling, but the appeal was stayed for a period of time and then rescheduled to be heard by the Second Circuit in conjunction with the Rule B case below.

In *Consub Delaware LLC v. Schahin Engenharia Ltda.*, 476 F. Supp. 2d 305 (S.D.N.Y. 2007), the Southern District addressed the very same issue that *Winter Storm* had decided over three years ago. In *Consub Delaware,* Judge Scheindlin – the very same District Court Judge whose decision was reversed by the Second Circuit in the *Winter Storm* matter back in 2002 – denied a motion to vacate an attachment of EFTs at an intermediary bank, but she also granted leave for an interlocutory appeal on the very same issue. In her decision, Judge Scheindlin noted that there is certainly substantial ground for a difference of opinion as to whether EFTs are property subject to attachment because there are conflicting Second Circuit statements on this very issue. The dicta in

Aqua Stoli that "[t]he correctness of our decision in *Winter Storm* seems open to question" appears to finally be coming home to roost.

Within the next couple of months, the Second Circuit is expected to hear the *Consub Delaware* and Seamar appeals in tandem, and we understand that the banking industry and the Federal Reserve Bank of New York have submitted briefs *amicus curiae* wherein they have requested the Second Circuit to reverse its holding in Winter Storm. If this were to happen, the usefulness and effectiveness of the Rule B mechanism will be severely undermined and maritime debtors will have a much easier time to elude their creditors. We are hopeful that the Second Circuit will properly interpret the express language of Rule B as applying to both tangible and intangible property and that the inclusion of this last word "intangible" must encompass EFTs. We will keep the Membership updated as soon as we receive any news regarding the Second Circuit's resolution of these two appeals.

SAFE PORT WARRANTY REVISITED – ICE, ICE BABY

In *STX Pan Ocean Co. Ltd. v. Ugland Bulk Transport A.S. (The LIVANITA),* [2007] EWHC 1317 (Comm), the Hon. Mr. Justice Langley of the Commercial Court in London addressed an appeal of a London arbitration award on an issue which – whether an owner is entitled to rely on the safe port warranty when the charterparty provided for specifically named ports. The charterparty in question provided for "one time charter trip via St. Petersburg, Baltic/Conti to the Far East," and contained a Rider Clause which stated "trading to be worldwide between safe ports, safe berths and safe anchorages and places." The vessel loaded a cargo of steel coils at St. Petersburg and sailed for Dunkirk on January 23, 2003 as part of an outbound convoy led by ice breakers. During the outbound convoy, the hull of the vessel was damaged by the big blocks of ice left behind by the ice breakers, even though the vessel was proceeding at very slow speeds. Owners claimed that the safe port warranty had been breached, while charterer argued that, because St. Petersburg was specifically named in the charterparty and the prospect of ice was a known and anticipated likelihood, owners had to satisfy themselves as to the safety of the port and the general safe port warranty founding the Rider Clause would only apply to other possible or unnamed ports referenced in the charterparty. The Tribunal rejected the charterer's arguments and ruled in favor of owners. Charterers were thereafter granted leave to appeal this safe port warranty issue to the Commercial Court. Justice Langley affirmed the Tribunal's result and concluded that owners were entitled to rely on a safe port warranty in the charterparty even when it contains a named port. Justice Langley further noted that it was not the existence of ice at St. Petersburg and its approaches that made the port unsafe, but rather it was the ice blocks created by the ice breakers and the worsening conditions experienced in the area.

The import of this decision is that, even when fixing a vessel to named ports, a charterer must ensure that every such named port is safe for the particular vessel, and that the vessel can safely reach, use and return from these designated ports without being exposed to dangers which cannot be avoided by good navigation and seamanship. To ensure that this standard apply, owners should make sure that safe port warranties are not deleted when agreeing to list specific ports in their fixtures.

DUE DILIGENCE – JUST DO IT

In *Golden Fleece Maritime Inc. v. ST Shipping & Transport Inc. (The ELLI & the FRIXOS) [2007] EWHC 1890 (Comm)*, the Commercial Court, on August 2, 2007, issued a significant decision concerning a vessel owner's requirement to exercise due diligence to maintain its vessel's condition throughout the entire charter period. The case involved two tankers, the ELLI and the FRIXOS, and two long-term time charters. The key issue was whether the owner or charterer should bear the commercial risk of a change in MARPOL 73/78 regulations coming into effect during the middle of the charter period. More specifically, MARPOL 73/78, Annex I, regulations 13F, 13G and 13H, which became effective on April 5, 2005, required that vessels carrying fuel oil cargoes had to be double-sided and needed letters of authorization from their respective flag states to carry fuel oil cargoes. The MARPOL 73/78 regulations became

effective approximately 20 months before the expiry of the two charters. The effect of the MARPOL 73/78 regulations on the ELLI and the FRIXOS, which were sister vessels, was that neither vessel would be permitted to carry fuel oils after April 5, 2005 because there was a 2.6 meter section of the vessel's sides that were not double-sided. As such, both vessels were unable to obtain letters of authorization for their flag states to carry fuel oils. In order to make the vessels compliant with the double-sided requirements, the owners would have had to expend repair costs of approximately US$600,000 per vessel. Owners argued that they were not obligated to convert the vessels. Charterers asserted that they had chartered the vessels to carry crude oil and fuel oil cargoes and that the effect of Clauses 1 and 3 of the Shelltime 4 charterparty placed an ongoing obligation upon the owners to keep the vessels "in every way fit to carry" the cargoes enumerated in the charterparty, which included crude and fuel oil. The charterparty also contained an express provision that the owners warranted compliance with MARPOL 73/78 "as amended and extended."

Justice Cooke rejected the owners' arguments and ruled in favor of charterers. He concluded that the charterparties contained a warranty that the vessels, from the beginning of the fixture and thereafter, had to be fit for the ordinary service for which they had been chartered, and such service was to carry, *inter alia,* the fuel oil cargoes enumerated in the charterparty. He added that this obligation included a broader requirement to comply with applicable laws and regulations, including MARPOL 73/78. This ongoing obligation under Clause 3 of the Shelltime 4 form required the owners to maintain the vessels' compliance with MARPOL 73/78 throughout the entire charter period and, absent any issues of frustration, which did not arise in this case, the financial considerations for the owners to bring their vessels within the ambits of MARPOL's double-sided regulations were simply irrelevant. Accordingly, in the present climate where the shipping industry is constantly striving to promote and implement increased safety standards and environmental protections, this decision is a good indication of how such regulatory changes will be applied to a vessel owner's ongoing responsibilities to meet its due diligence requirements to maintain a vessel's condition in long-term charterparties.

NEW US TAX LAWS EASE DISCLOSURE REQUIREMENTS

The U.S. Internal Revenue Service (IRS) recently amended its foreign-flag shipping tax exemptions, which have significantly relaxed the controversial disclosure requirements that had been enacted back in 2004. These revisions have been in effect since June 25, 2007. Shipping companies are charged a 4% tax on 50% of all transportation income from voyages that begin or end in the U.S. Foreign companies can claim an exemption from this tax, but only if they actually file a tax return. Before the recent amendments to the disclosure requirements, the 2004 rules required that the names and addresses of certain shareholders must be disclosed to claim exemptions. Many shipowners wanted to remain anonymous and, rather than file a tax return with the IRS, many owners opted to pay the full tax to avoid complying with the identity disclosure requirements. The new rules enacted on June 25th address this concern. Now, the rules only require that the tax exemption seeker list aggregate ownership percentages by country of residence and agree to disclose individual owners only upon special request.

Since 2004, when the shipping tax regulations were revised, the IRS has stepped up its audits of shipping companies. While the disclosure requirements have been loosened, the obvious corollary will now be that the IRS will take a stricter stance on offenders of the tax regulations. It will ignore excuses for any failure to file a tax return. Non-compliance will also likely result in the promulgation of stiffer penalties and new tax regulations on the shipping industry in general, a prospect which the shipping industry would undoubtedly wish to avoid. Given these trends and considerations, Members are encouraged to avoid scrutiny and file tax returns in connection with the performance of any voyages involving U.S. ports.

International Safety Management Code – 10 Years On

By Dr. Edmund Hughes, ISM Policy Manager & Keith Tatman, Head of Risk, Analysis and Prevention Maritime & Coastguard Agency, Southampton, UK

Introduction

The 1 July 2008 will mark the tenth anniversary for implementation of the International Management Code for Safe Operations and Pollution Prevention, or as it is more commonly referred to, the ISM Code. The anniversary comes at a time when changes to the Code are being proposed at IMO which, if not undertaken with care, could lead to a diminution of the Code's value to the shipping industry. That value is discussed in this paper which seeks to explain why the shipping industry should fully embrace the Code not least because it is facing challenges at a time when political, economic, social, technological and environmental risks are increasingly complex.

The implementation of the Code marked for many an important stage in the development of safety and pollution prevention regulation in the shipping industry as it formally recognised the critical role that the ship management Company has in the development and support of the on board safety culture. In doing so it challenged Companies to recognise that flag States consider them equally, if not more so, responsible for the safety of their ship.

The role of flag State

UK policy for ISM is not to delegate audit for the Code to recognised organizations. Occasionally we do have to delegate, however, this is done very much on a case by case basis and where we consider the risk of doing so to be broadly acceptable. This policy may seem rigid; however, we view the ISM Code as a cornerstone to improving the safety and pollution prevention performance of the UK flag. This is because the provisions of the Code enable us to audit Companies with ships on our flag thus providing the ideal opportunity for us to review with each Company the effectiveness of the shore to ship relationship from the side of the Company. We can consider the effectiveness of that relationship and, because we audit the ships when undertaking Safety Management Certificate audits, we can bring forward issues and concerns from the ship audits for discussion with those who make the key operational and financial decisions.

We are adamant that quality should not be compromised as the UK flag grows, and so our approach enables the use of our understanding and knowledge of ISM implementation to ensure several important objectives are met including:

i) maintaining our awareness of the effectiveness of implementation of the ISM Code both on UK flagged ships and in their management Companies thus providing an opportunity for us to determine what improvements to enhance the implementation of the Code, if any, we should consider proposing;

ii) ensure that our surveyors retain and update their knowledge and understanding of the Code to help both Companies and ships on our flag to continuously improve their safety and pollution prevention performance;

iii) add value to the development of risk models used by the UK administration to focus resources and activities where risk is greatest.

ISM as a risk management tool

As required by the Code, the safety management objectives of the Company should establish safeguards against all identified risks. Companies and their ships are required to comply to a minimum standard but in the world today where scrutiny and governance are developing issues for the industry it is how you comply rather than whether you have that is becoming more important. In many respects implementation of the ISM Code suffers from a compliance culture still prevalent in many areas of the industry, that is, a culture where people are prepared only to do the minimum to comply.

However, when the ISM Code is implemented fully and effectively, it provides an excellent framework for both Companies and those on board ship to demonstrate that they have applied due diligence to the task of risk identification and mitigation. As such when incidents happen there should be a reasonable defence that what could have been done to prevent the incident was done.

Increasingly, incidents result in significant economic losses without the loss of life. In many respects this is a positive result as it demonstrates that the industry has mitigated effectively against some of the many risks that seafarers face on a daily basis. What it suggests is that risks, because they are primarily economic, may become more acceptable as the consequences are less tangible. This is dangerous as what such data indicates is the industry is too often being pushed to perform at the boundary of what is and what is not acceptable to society. This is in part due to the massive expansion of trade in the past few years but also as a consequence of technology permitting systems to operate more efficiently thus reducing scope for error. The danger is that when something goes wrong, which it inevitably does, the resulting consequence can be more significant. Systems like this are often referred to as "closely coupled" systems, a term coined by Charles Perrow in 1984 in his book *Normal Accidents.*

Such systems are increasingly prevalent in society. For example, a 'Just-In-Time' philosophy in manufacturing and delivery leads to a global supply chain that is closely coupled, the failure of which results in problems for those dependent upon the goods being carried arriving at a certain time. The MSC NAPOLI incident demonstrated this. To ensure that risk is being managed both effectively and, importantly, efficiently, there is a need to take a proactive approach to risk management. Failure to proactively manage risk means that a response can only be made to a changing set of circumstances and wider environment when the risk is realised. By then it will be too late to consider the most appropriate and, importantly, cost effective action with the consequence that inefficiencies grow and costs increase for business.

Improving the role of the Company

Critics would have us believe that compliance mania has driven us to a point where the procedures to be followed in the fleet are simply not practicable. They say that attempts to transfer risk from the Company to the ship through the vehicles of process and procedure are endemic. But they also feel that, when this is tested in court, and by that we mean an unfortunate case where an accident or loss is heard in court, where an alleged ISM failure is at the root of the loss, and where the Company claims that the ship did not follow its own procedures, the outcome may not be so clearly to exonerate the Company and blame the vessel.

So the challenge for ship operating companies emerges as follows. The Safety Management System needs to be clear, concise, bespoke, practicable, implementable, operable, recordable, auditable, and above all understandable by the people who use it and test its compliance. This reeks of quality rather than quantity, and that message emerges from the IMO's work as well.

What does this mean for safety culture? Well, if a second message is allowed it means start with the ship operating company's safety culture, and work outwards from there. As a flag who has not delegated ISM audit responsibility, we hear both sides of the same story from time to time. The Master will tell us 'Well, if the Company gave me the people or the time to do procedure X then I would, but they don't.' The Designated Person will tell us 'The crews rush around thinking they are doing us a favour and then losses occur.' How can this be when these views are from 2 integral elements of the same organisation?

Companies are asked to consider the following set of questions, the answers to which may assist Companies from preventing the situation described above from occurring:

- Has the Executive Board studied the organisation's structure to ensure that safety information can and does flow freely throughout the organisation? Have they identified barriers to that flow and worked to remove them, and enablers and incentives to help them?

- Have Board members undertaken safety leadership awareness training? Has the Board made a conscious effort to put 'blame' firmly aside when considering incidents and accidents? Has the Board ensured that those who investigate incidents are properly trained? Has the Board actively engaged the Unions in helping to address safety matters in a constructive way?

- Does the Executive Board meet once per year on board a ship in their Fleet? Does the Board pester the Designated Person to sit in on DOC audits? When did the Board last have an 'away day' with the Designated Person?

- Does the Executive Board have safety performance, including incidents, accidents, near misses, hazardous occurrences and claims as a standing agenda item? Does the Executive Board realise that on the day that they record the 300th near miss incident, and where the learning from the previous 299 has been derived and applied effectively, they have probably saved a fatality or major loss and the enormous financial impact that has on the organisation?

- Is the Designated Person a Board Member? How does he communicate with the Board, and how does the Board communicate with him? How has the Board designed the relationships between the Designated Person and the Fleet Superintendents, and are the Superintendents widely experienced in the operation of the relevant ship types?

- How has the Board assured itself that the Designated Person has the relevant competences?

- What was the result of the Board's most recent review of Fleet manning, and the balance of Company employees and Agency seagoing and shore-based staff?

- Do Board members attend the Safety Table Top Exercises from time to time?

- Does the Executive Board receive a monthly report of the outstanding items of maintenance items, spare gear and stores which are related to the ISM-identified critical systems aboard their ships, and any items of safety equipment outstanding?

- Does the Executive Board receive a monthly report of any outstanding training and certification issues affecting their Fleet?

- How does the Finance Director respond when the subject of expenditure on safety arises during the DOC audit? Wouldn't it be nice if he/she knew the price of safety, how much he/she spends, and how much he/she has saved in terms of losses avoided through that safety investment? What rate of return is required for safety investments? Is that figure in keeping with the company culture and regulatory advice? Is it lower than for all other investments? Is safety performance a key tender assessment criterion for all sub-contracts?

- Who actually gives out the company's monthly safety award – is it presented in person, is it communicated in the Fleet newsletter – is there a safety suggestion scheme and are the results published and adopted?

- What are the safety signals coming from company staff ashore? Is there a deliberate attempt to capture them and act accordingly?

- What is the Board's attitude to benchmarking with other ship operating companies to share safety experiences and good safety practices? Does the Board ask the Designated Person to meet with his counterparts in other similar companies periodically?

- How has the company engaged with its Classification Societies and Insurers to be certain that they have a shared view of safety performance?

- Does company induction and continuation training include strong safety messages from the Executive Board, and are they delivered in person?

- Is the largest, clearest and most colourful notice board in the canteen about company safety performance or the forthcoming barbecue? And is it next to the company's safety policy statement?

- When a good example of ship shore safety partnership within the company emerges, is it given quick and broad visibility both ashore and afloat?

- Where the owning company differs from the ship operating company, do the owners have a clear corporate governance policy and strategy that captures and manages the risk posed by its maritime operations, especially with regard to safety and environmental protection?

Finally we just wanted to say something about the quality of audits and the designated person.

Quality of Audits

It is apparent that for some time now that the time required to complete an SMC audit of a ship is coming under pressure for a variety of reasons. No doubt this is often the result of circumstances such as time available in port, time of arrival in port, time of departure from port, etc., Whatever the reason, by reducing the time available for the SMC audit the likely consequence is that auditors will focus on those elements of the Code that can be audited quickly e.g., paperwork, and avoid those that take time to perform e.g., test of emergency procedures.

This will affect the quality of the audit and, as at the best of times the audit samples the SMS only, may lead to potential serious non-conformities being missed. It is in the interests of all in the shipping industry to ensure that adequate time is provided for these important audits.

Designated Person

The IMO has for sometime been considering the effectiveness of implementation of the ISM Code. Evidence suggests that whilst some Companies and ships have embraced the Code and are reaping tangible benefits from doing so there is still a disappointing number of Companies and ships that view the matter as no more than a bureaucratic exercise in which the order of the day is to tick the boxes to the meet the minimum standard required by the auditor.

Evidence from the UK's own audits and Port State Control inspections supports this and suggests that the role of Designated Person (DP), which the UK consider to be critical to the success of the Safety Management System (SMS), was not being undertaken by individuals with the necessary knowledge and understanding to perform the task as envisaged. Whilst the ISM Code specifically identifies this individual and, importantly, requires them to have "direct access to the highest level of management" the Code does not provide any guidance on what qualifications, training and experience the individual should have if they are to perform the role satisfactorily.

The UK, with the support of the other members of the European Union, Norway, Marshall Islands and the European Commission, sought the development of IMO guidance on what qualifications, training and experience the individual tasked with the responsibilities of Designated Person should have. At the meeting of IMO's Marine Environment Protection Committee in July the proposals were worked into a draft circular which was approved by the Committee, and has been forwarded for approval to IMO's Maritime Safety Committee in October. This circular formally outlines to Companies the IMO's expectations of the individual given the responsibility for this role. It is hoped that the provision of guidance will ensure that the standard of DP ashore across the industry is raised to meet those expectations.

Indeed to emphasise the importance of the role of the Company a draft circular on implementation of the ISM by Companies was also developed to provide additional guidance.

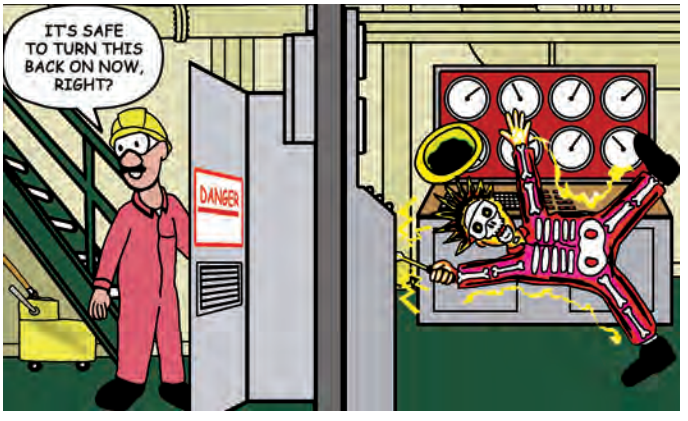
The Way Ahead

Tore Forsmo in his article *Nothing Ventured, Nothing Gained* in issue number 24 of Currents (May 2007) states that "Our development and constant progress is fundamentally based on our ability to understand and properly handle risk". In our industry today those responsible for making key decisions need fully understand the risks faced because as if we don't we cannot reasonably expert those tasked with its management on a day to day basis to handle risk effectively and efficiently. The key instrument for enabling us to develop and improve our understanding of the risks being faced and, importantly, the appropriate mitigation measures, is the ISM Code. Ten years on the industry needs to embrace this Code if it is to truly manage risk.

The Nautical Institute's International Marine Accident Reporting Scheme (MARS)

By Captain Harry Gale, Technical Manager, Nautical Institute

Safety of life at sea has improved over many decades, usually when legislation has been brought about by the result of an accident. However, until relatively recently, there was no practical way for mariners to share experiences they had learned as a result of a hazard or near miss. In 1992 the Council of the Nautical Institute (NI) instigated a programme of confidential reporting to help guide the maritime profession – the international marine accident reporting scheme (MARS). The NI believed that the experience of others was probably one of the most effective ways of preventing accidents.



MARS is now recognised throughout the world as an international distribution of confidential reporting of incidents and is the standard for exchange of information between mariners.

Emphasis is on passing information from mariner to mariner enabling members and others to identify problems and hazards at a professional level, without going through government agencies.

Its only purpose is to facilitate learning from others – mariners are encouraged to think about and identify the potential risk of a hazard and to share the experience so that others can become aware of dangerous practices and hazardous occurrences.

MARS Reports

Mariners are encouraged to send in confidential reports on incidents, no matter how small. A confidential report provides the opportunity to alert colleagues in the industry to potentially dangerous situations without fear of incrimination. The reporting scheme can also create awareness of trends and potentially dangerous minor occurrences leading up to major accidents.

Incidents reported include malfunction of equipment, near miss situations, preventable personal accidents, fire hazards, security risks, pilotage area experiences, piracy, anchorages which are dangerous for one reason or another, in short any incident which mariners think could be of benefit to others. The most important step may be to pass on what they have done to prevent occurrence of the incident.

MARS is open to mariners of all nationalities and differs from accident reports to flag state authorities and international organisations in that it is set up to provide an information service, whereas an official report may be investigated by the authorities. These authorities are perceived to be enforcers and prosecutors by mariners and there is reluctance to submit reports where they may be incriminated.

To avoid reports being manipulated by persons with issues, or a series of reports being generated by one individual purporting to come from several reporters, mariners are asked to report confidentially but not anonymously. Anonymous reports would make the scheme unreliable and generate grave doubts about its credibility.

Over 700 MARS reports have been published and they are now translated locally into languages such as Dutch, French, Polish, Russian and Turkish for further publication. Incident reporting is the cornerstone of quality management which has been adopted by shipping in the form of the ISM Code, and is famed for its effectiveness in improving safety in other industries.

In 1998 all reports were incorporated into a publicly accessible Internet database for which the Nautical Institute was honoured by a certificate at the 1999 Seatrade awards.

Building further on this infrastructure, The International Sail Training Association has selected MARS as the primary vehicle for its near miss accident reports and other organisations have expressed a similar interest

Using MARS

Reports are submitted by serving seafarers and company executives on a wide range of incidents with safety implications. They can be submitted online to the Nautical Institute's website – www.nautinst.org, or e-mailed direct to mars@nautinst.org. Confidentiality is maintained at all times. Reports are received by the editor who may contact the reporter if he requires further details. Ship and personal names are then removed from the report before publication as a supplement in the Nautical Institute monthly journal Seaways.

The original report is then either returned to the reporter or destroyed. The only information kept by the Nautical Institute is the published report.

Research can be conducted on all MARS reports through the website and the reports on various incidents can be analysed and linked to other reporting systems to create reports of meaningful data for use in understanding causes and trends of marine accidents.

The MARS database is fully accessible to the general public. The search facility on the website allows MARS reports to be searched by words or phrases, by subject, by year and by the report number. Official reports from accident investigations are also included, with reports from UK Marine Accident Investigation Branch (MAIB), Australian Transport Safety Bureau (ATSB), Finland AIB, Swedish Maritime Authority, NZ MSA, USCG and P&I Clubs. It now also includes reports from sail training vessels.

MARS reports are used by a number of organisations throughout the shipping industry, P&I Clubs, shipping companies and shipping journals all regularly publish MARS reports as a matter of routine.

The system has now been going for long enough that it is recognised by most seafarers as a forum to raise awareness of hazards and to bring this to the attention of others without fear of reprisal. These reports are read by seafarers and used in discussions at safety meetings on board ships. Companies study

MARS reports to see if there is a requirement to alert ships in their fleet and an increasing number of companies are now submitting safety management system reports to MARS with the added advantage of a 'lessons learnt' section within them MARS reports are published monthly within the Nautical Institute's journal SEAWAYS and are provided free of copyright so that they can be copied and distributed without incurring any costs.

The Nautical Institute is also grateful to a number of industrial sponsors (mainly P&I Clubs) who share the same ethos and contribute sponsorship to help defray costs.

MARS reports are confidential, open to all to contribute and access, are seen as being from mariner to mariner, provide material for discussion, prevent further incidents and available for research.

All sectors of the marine industry are invited to make the best use of this resource, to promote the contribution of reports to the scheme, and to use the published reports to improve safety.

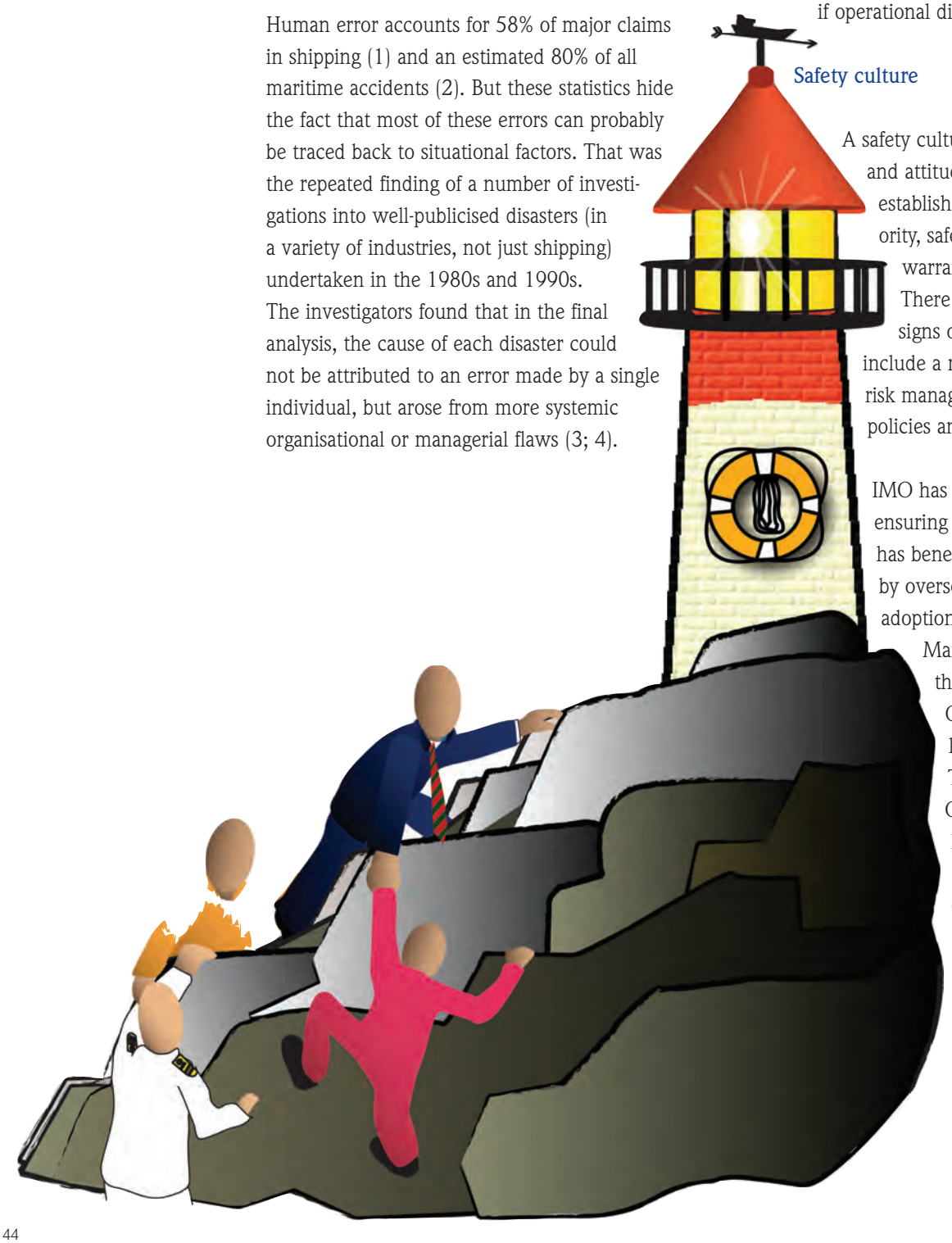
New Directions in Safety Culture

By Dr Christine Tomlinson
Human Element Consultant & Advisor to Liberia at the International Maritime Organization

Introduction

Human error accounts for 58% of major claims in shipping (1) and an estimated 80% of all maritime accidents (2). But these statistics hide the fact that most of these errors can probably be traced back to situational factors. That was the repeated finding of a number of investigations into well-publicised disasters (in a variety of industries, not just shipping) undertaken in the 1980s and 1990s. The investigators found that in the final analysis, the cause of each disaster could not be attributed to an error made by a single individual, but arose from more systemic organisational or managerial flaws (3; 4).

During the 1990s, findings such as these served to widen the focus of attention from individuals' behaviour to the working environment, and beyond that to organisational practices and philosophy. As a result, in all hazardous industries it is now accepted good practice to have in place a safety management system, and to institutionalise safe working practices through the development of a safety culture. The central premise behind these concepts is that ongoing vigilance is necessary in all parts of the organisation if operational disasters are to be averted.



Safety culture

A safety culture is the set of characteristics and attitudes in an organisation which establishes that, as an overriding priority, safety issues receive the attention warranted by their significance. There are a number of identifying signs of a safety culture, which include a management safety policy, risk management, and fault prevention policies and procedures (5).

IMO has played a central role in ensuring that the marine industry has benefitted from these insights by overseeing the development and adoption of the International Safety Management (ISM) Code and the Standards of Training Certification and Watch-keeping (STCW) Convention. The UK Maritime and Coastguard Agency (MCA) has progressed this further by identifying the core leadership qualities that have a positive influence on safety culture in the shipping industry (6), and the production of an associated guide (7).

Recently, a proposal was submitted to IMO that the STCW Convention competencies tables be updated to include five key elements of safety culture, which they identified as: understanding, behaviour, compliance, risk management and leadership (8). Assessing behaviour, however, can be difficult. People naturally want to be seen in their best light, so there is a temptation to modify behaviour when it comes under scrutiny. This means that self-report on its own is inadequate and observation is unreliable. Observation is also time-consuming and open to interpretation. The acquisition of a culture (or subculture) has three stages: 1) imitation; 2) compliance with others' expectations; and 3) full acquisition. Potentially, the same behaviour occurs at all stages, so the results of an observation need to be checked with probing questions about the reasons for the behaviour, to find out which stage has been reached. Without those checks, little can be learnt from behavioural assessments about the effectiveness of a safety culture.

Elsewhere, it has been suggested that some aspects of safety culture can be improved via behaviour modification programmes (9). External pressure is certainly capable of forcing compliance to stage 2, but it cannot go beyond that, because stage 3 denotes a change of attitude and understanding – not behaviour. Proponents of this approach argue that the change in behaviour will of itself give rise to a change in attitude. This is questionable, and even if true it seems a dubious way of winning hearts and minds, which is central to the safety culture ethos. The alternative, the assessment of safety attitudes which underpin desired behaviour, is less onerous and a more robust indicator of safety culture maturity as safety attitudes develop with it.

Undoubtedly, the most promising approach of late seems to be the one taken by the American Bureau of Shipping (ABS) Risk and Human Factors department. Based on work with clients, ABS has developed a method for identifying leading indicators for improving 1) organisational safety culture, 2) shipboard safety culture, and 3) individuals' safety attitudes. Leading indicators show areas of weakness in advance of actual adverse events, unlike lagging indicators such as numbers of accidents or incidents which give indications of past performance. Guidance notes for self-assessment using the method with case study examples for different ship types are being prepared. In the meantime, details of the approach will be presented in November 2007 at the annual meeting of the Society of Naval Architects and Marine Engineers (10).

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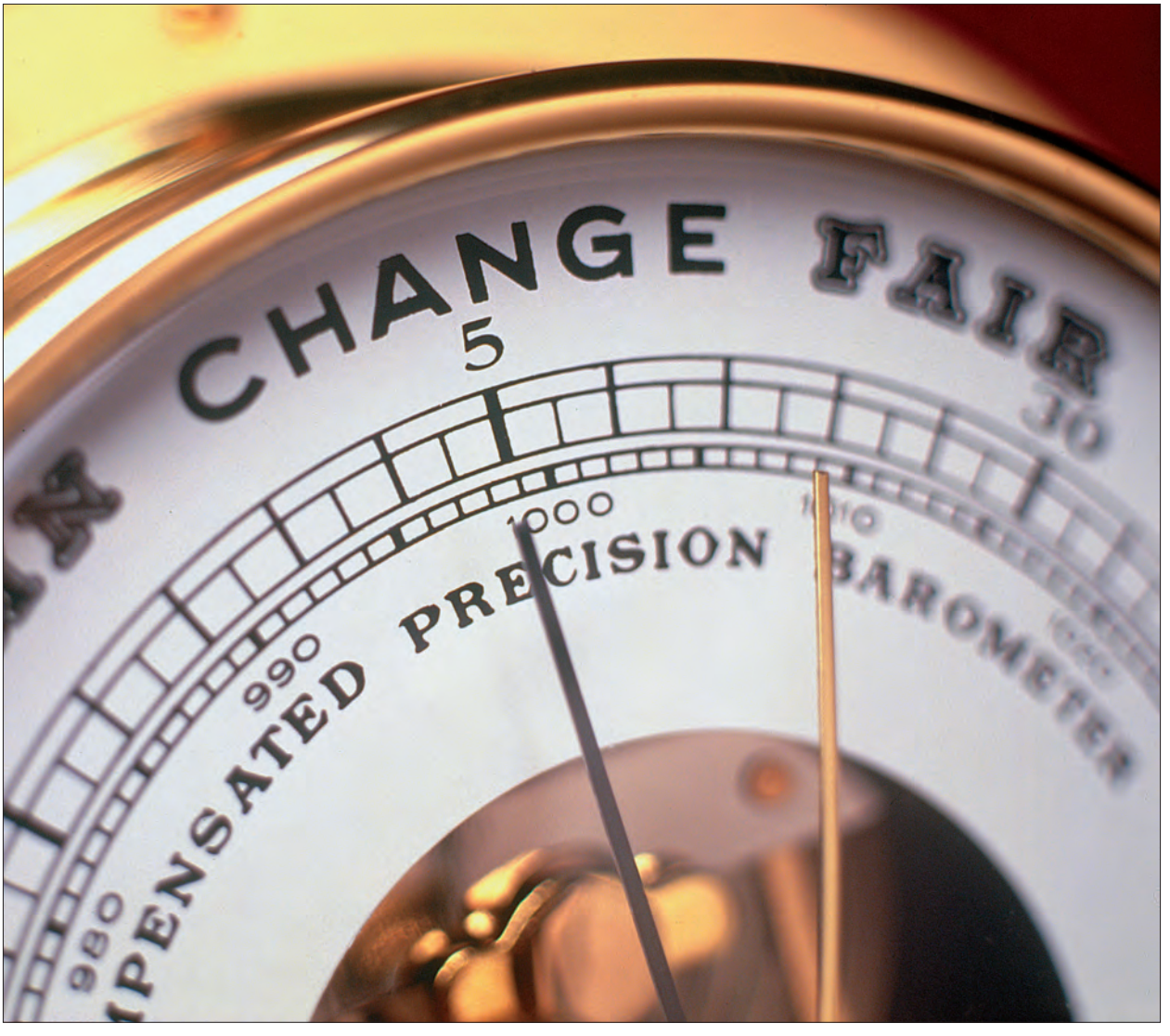
Shipping Sustainability – A Future Focus of the Industry With A World Focused On Climate Change?

Prof. Richard Birmingham and Melanie Landamore, Newcastle University

Introduction

The increased concern at the impacts of industrial activity on the environment, and the widespread acceptance of the reality of climate change, is forcing the concept of sustainability to be considered in all aspects of human activity. Although consideration of the sustainability of shipping is only just emerging as an area of concern, it will clearly become a significant issue in the months and years ahead. Before discussing the lessons learnt from early studies in this area it is worth clarifying what is meant by sustainability. Sustainable activities are those that fulfil society's present needs without impacting on the ability of future generations to provide for their needs. It should also be recognised that although sustainability is now considered to refer to the environment, sustainable



activity must also be sustainable in economic and social terms. In other words actions designed to improve environmental sustainability must also be affordable and acceptable.

Transportation is the foundation of the world's economy, and it is the shipping industry that dominates in the transportation of goods with 90% of world trade being waterborne. Of the many modes of transportation it is also shipping that is the most efficient in the use of energy, as evidenced in the updated External Cost of Transport report (from IWW/INFRAS, Zurich/Karlsruhe, October 2004) which suggests that the industry can claim it is the least in need of improvement in sustainability performance. However the sheer magnitude of the industry necessitates that in the years ahead it moves to increasingly sustainable ways of operating. The difficulty is that although the concept of sustainability is easily understood in theory, it is not easy to identify practical actions that will make a significant impact. This is because little work has been done to identify just what a more sustainable shipping industry would look like.

Current work on Ship Sustainability

At Newcastle University in the UK, one group of researchers have been working in this area for several years. They have been examining both detailed elements that can contribute to the sustainability of shipping operations, such as the use of ballast water (as reported by Cabezas-Basurko et al in "Holistic Analysis of Ship's Sustainability", *Proc. of MARSTRUCT 2007, the 1st International Conference on Marine Structures, Glasgow, UK),* and more wide ranging studies on how to reduce the global impact of specific marine activities, such as recreational boating (Landamore et al, Establishing the Economic and Environmental Life-Cycle Costs of Marine Systems: A Case Study From the Recreational Craft Sector. *Marine Technology 2007*). The results of these studies are leading to efforts to improve the sustainability performance of specific activities, but they can also provide insights that can be generalised more widely, and these will be briefly discussed here.

Firstly the scale of environmental impact assessments has to be recognised. Sustainability studies should take account of the entire life cycle of the operation being considered, so when considering shipping it is not just the operational phase that is of concern, but the material sourcing, the construction, the operation and the decommissioning of ships that has to be considered. Risk assessment has for many years considered the impact of rare catastrophic events, such as oil spills. However, of principal interest in sustainability studies are the inevitable impacts of the full life cycle of shipping activities, including such things as: fossil fuel usage and depletion of other natural resources; emissions affecting climate change and those that are classed as respiratory organics and inorganics; land use and degradation; and eutrophication and acidification of waterways.

The effort involved in one study can be immense, but if the study is intended not just to validate an existing design or operation, but to guide the designer and operator to improved solutions, then a series of such studies need to be undertaken. As there are numerous alternatives to almost every aspect of a design or operation the number of variants that could be studied is virtually infinite. A significant challenge in attempting to improve sustainability performance is to identify a small set of alternatives that can be usefully studied within a given budget and timescale, and that will provide real answers, not just more questions. Developing methodologies to identify this 'useful' set of alternatives is an interesting research problem in its own right, and one the research group at Newcastle University hope to advance.

Focus of other industries

Other industries are further advanced in the art and science of undertaking sustainability studies, for example, within the chemical industry the Society of Environmental Toxicology and Chemistry has an advisory board dedicated to such work and regular symposia to explore the issues (http://www.setac.org/htdocs/what_intgrp_lca.html). In addition proprietary software has been developed to facilitate such work.

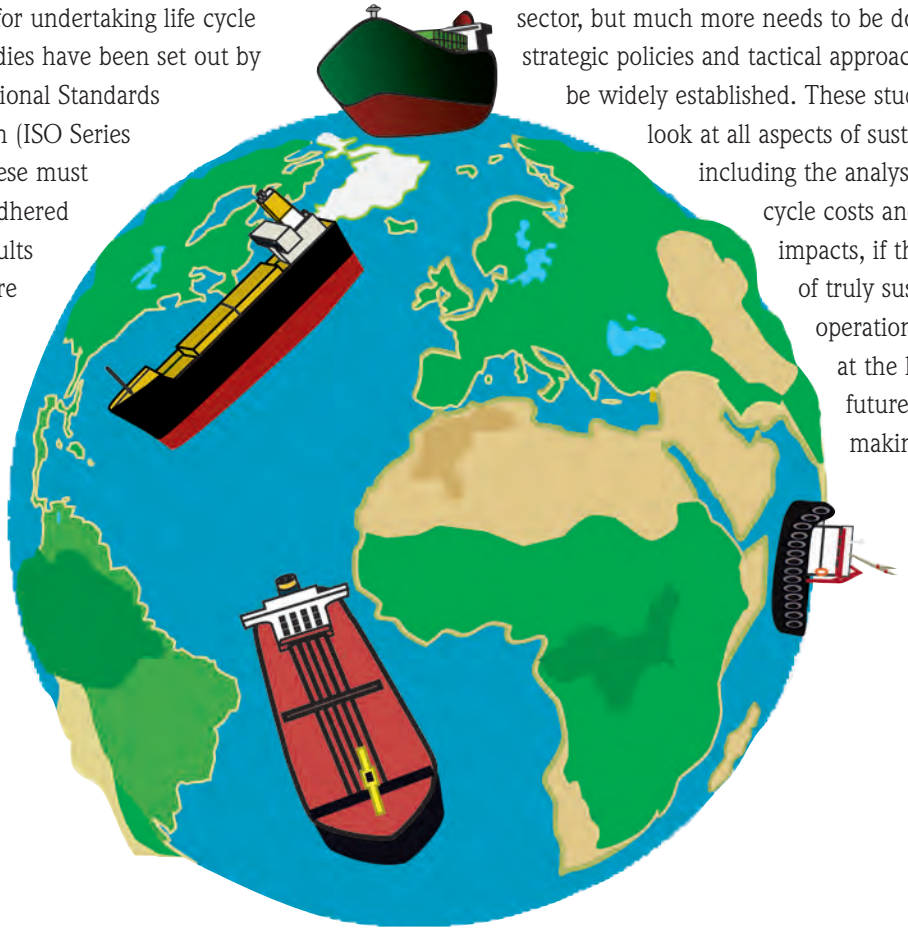
This is of great benefit, especially as other studies have provided much data that is generic, and applicable to many industries (and which is available at a price) which can be used in conjunction with the software. However there is still much shipping specific data that has to be sought out in order to complete studies in the marine industries.

The final lesson to be learned from the work already undertaken by Newcastle University is that the results of any such study are highly dependant on the assumptions that are used in the study. For example, where do the required materials, (such as steel, oil, or timber) originate? If locally sourced the impact can be considerably less than if it has been transported from the other side of the world. Similarly, the scope of the study can affect the results. Sustainability studies are in nature recursive, as the sustainability of the processes used to derive every material are a study in themselves. A boundary has to be drawn to enable conclusions to be reached.

Guidelines for undertaking life cycle analysis studies have been set out by the International Standards Organisation (ISO Series 14040). These must be strictly adhered to if the results of a study are not just for internal use, but are to be placed in the public domain and published as a life cycle analysis of an item, system, or industry. There is more freedom to investigate the impact of a system on a particular area of concern (for example land use or climate change) if the study is a comparative analysis or a private internal report. In such studies the focus may deliberately be on local rather than global impacts, and so reflecting the priorities of the those affected. However, it must not be forgotten that a system which meets local sustainability criteria at the expense of overall impact is not in fact a sustainable solution.

Summary

In the years ahead all industrial activity is going to be expected to develop in directions that increase sustainability. Despite the shipping industry's indispensable contribution to he global economy, and the relatively efficiency of transportation by sea, this sector will not be immune from these pressures. Sustainability studies are beginning to be undertaken in the marine sector, but much more needs to be done before strategic policies and tactical approaches can be widely established. These studies must look at all aspects of sustainability, including the analysis of life cycle costs and societal impacts, if the pursuit of truly sustainable operations is to be at the heart of future decision making.



American Club Managers Appoint Exclusive Correspondent in the People's Republic of China

The Club's Managers are pleased to announce that they have appointed an exclusive correspondent in the People's Republic of China (PRC).

This company, SCB Management Consulting Services, Limited (SCBMCS), has established a representative office in Shanghai aimed at enhancing claims and other service provision to American Club Members trading to and from the PRC and elsewhere in East Asia.

SCBMCS is expected to be fully operational in Shanghai at the beginning of November, 2007 and will have the following contact details:

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Mr. Raymond Sun Li Hua has been engaged as Chief Representative of SCBMCS in the PRC. He and his staff look forward to being of service to American Club Members through this new connection over the months and years to come.

The Managers' initiative reflects the growing importance of the PRC in particular, and East Asia in general, not only by reference to a growing membership from that area but also in regard to the Club's ability to service its Members from other parts of the world who trade to and from this increasingly important region in global economic terms.

It is expected that the new correspondent office will be kept very busy as it develops its capabilities in the future. Members are encouraged to avail themselves of its services and – even more to the point! – make sure to pay a visit to its premises should an opportunity arise to do so!

2007 BROKER REVIEW

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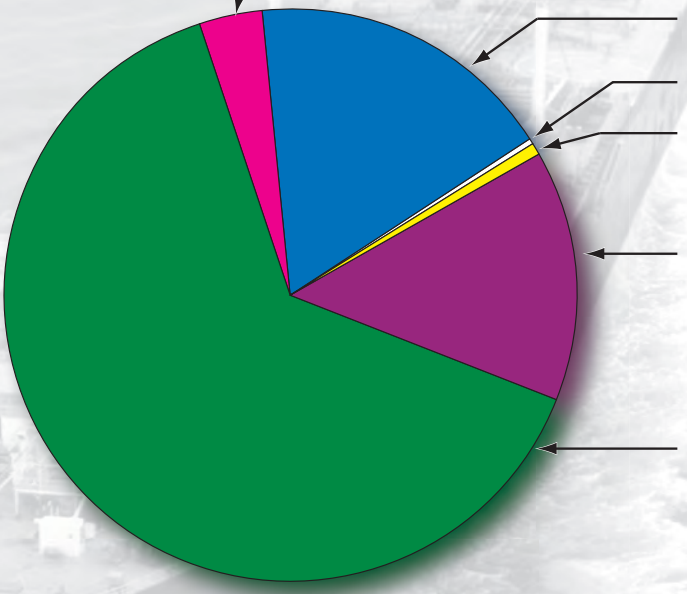

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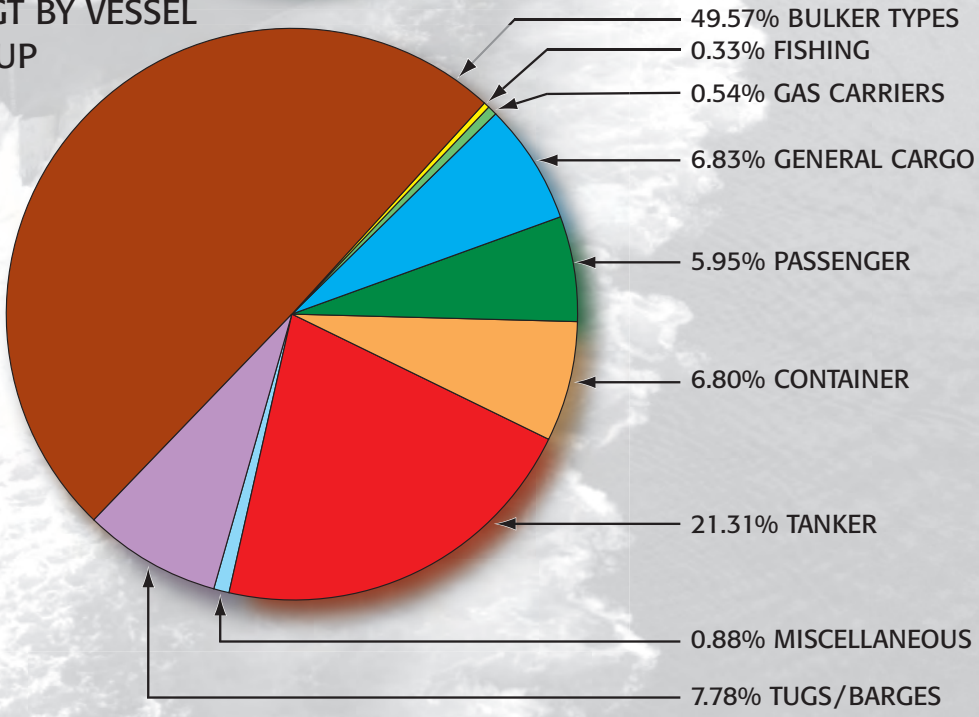

THE AMERICAN CLUB

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