



Signals

NEWSLETTER

NORTH 
SERVICE, STRENGTH, QUALITY

Welcome...

to the Summer 2015 edition of *Signals* which also happens to be the 100th edition. As *Signals* is a quarterly publication it has now been running for 25 years! A check of the archives has revealed that the Summer 1990 edition of *Signals* had, amongst other things, articles dealing with bunker quality disputes, the stowage and securing of steel cargo, and oil cargo shortage claims, all of which would be relevant today!

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Signals was launched as a loss prevention initiative to 'highlight developments of both a legal and commercial nature... with the emphasis squarely on the implications for the shipowner and the provision of practical advice to Members.'

We trust that over the years *Signals* has fulfilled this vision and that it will continue to do so going forward.

Looking to the future, we will be publishing individual articles on our website on a regular basis. These will be collated into our usual quarterly publication for distribution to Members and entered vessels. This will provide an additional service to readers who will now be able to view articles individually online. Please visit our website at www.nepia.com/loss-prevention.

Returning to the present, this edition contains a number of useful articles on our usual mix of subjects.

In the Cargo section you can read articles on the problems associated with overstowing bulk bags and on protecting containers against wet damage originating from the bilges or from tanks.

The Legal section has an article which discusses charterer's obligation to redeliver a vessel with sufficient notice and another which highlights the recent increases in limitation of liability.

The Ship section contains articles on the treatment of fuel oil, the legal obligation of a vessel to assist in search and rescue operations, a warning on wires covered in sheathing and a discussion centering on the correct usage of engine manufacturers service letters.

The People section reports on the success of our First Call initiative and discusses the contribution of human behaviour to incidents, particularly enclosed spaces incidents.

We hope that you enjoy the articles and the advice that they provide.



Issue 100: July 2015

LOSS PREVENTION NEWSLETTER
FOR NORTH'S MEMBERS

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ENGINE ROOM OPERATIONS

The United States Coast Guard (USCG) Safety Alert 4-15 describes an incident in which a fire started after the failure of a fuel line flange due to the loosening/failure of its bolts. Although the final root cause of the incident has not been determined, the USCG are suggesting that ships' engineers should be fully cognisant with and take action based on engine manufacturer technical bulletins and service letters.

Manufacturers assist in this process by making the numbering of the bulletins sequential, with the year of the bulletin clearly labelled so that it is easy to spot missing bulletins. In order to minimise cases where crew are not familiar with a particular bulletin, owners should put in place a system which is used to ensure all relevant engineering staff are familiar with all bulletins. This should include verification of bulletins being read and actioned. The system should ensure that bulletins requiring modifications are followed up.

Some engineers may assume that, because they have sailed on multiple vessels before and worked on many engines that they know all of the torque settings for bolts, and are familiar with all of the service bulletins. This can be dangerous and engineers should always familiarise themselves with any relevant technical bulletins on joining a vessel.

We suggest that the following points are taken into consideration to ensure the engineers are familiar with the technical and service bulletins for that vessel:

- Establish a procedure to record and store all bulletins in one place whilst ensuring that new joiners and old hands are aware of their location. This can be hard copy or electronic.
- Regular checks to be made to ensure that all bulletins have been updated and are correct in accordance with manufacturer's recommendations.

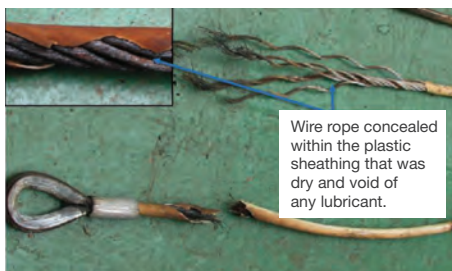
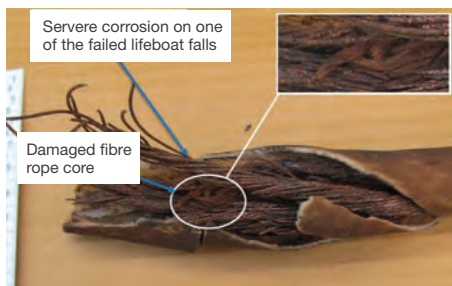
- New bulletins to be passed to the end users in a timely fashion.
- Positive recording and feedback used to ensure that all relevant crew have read, understood and are applying the bulletins applicable to their role on board.
- Undertake regular audits to check that bulletins and other relevant service information has been updated and are present and correct in manuals and storage locations alike.

It is important that this routine and sometimes time consuming task is undertaken by all relevant staff in order to ensure that operations run smoothly and incidents such as that described in the USCG bulletin may be avoided.

To read the USCG bulletin in full please visit: www.uscg.mil/hq/cg5/csncoe/alert.asp

LIFEBOAT WIRES – DO YOU HAVE A HIDDEN PROBLEM?

A recent report published by the New Zealand Transport Investigation Commission has once again highlighted the dangers associated with plastic coating or sheathing on wire ropes. During the recovery of a lifeboat, a wire sling parted and the lifeboat fell several meters back into the water from deck level. Fortunately, in this particular case, only one of the four crew members on board the boat during the recovery was injured.



Note discolouration of sheath

The subsequent investigation found that the lifting wire had been corroded by seawater penetrating and accumulating under the plastic sheathing. The condition of the plastic was such that it did not allow a robust examination or inspection to be completed as per manufacturer's instructions and the vessel's planned maintenance schedule. The existence of the plastic sheathing also prevented the application of anti-corrosive coating which is important to both protect, and prolong, a wire's working life.

It is important that critical safety equipment, such as lifeboat launching/recovery wires, is inspected and maintained to the standards required by the International Maritime Organization Convention for the Safety of Life at Sea (SOLAS) and the vessel's planned maintenance system.

The total encasement of steel wires in plastic sheathing when used in the marine environment has significant safety implications, especially when the wire must be regularly inspected and maintained to remain fit for purpose.

Encasing wire rope in plastic sheathing prevents the wire being lubricated, maintained and inspected and may accelerate the onset of corrosion through the retention of salt water within the core of the wire rope, ultimately resulting in the weakening and failure of a wire.

Seafarers and surveyors should not make assumptions on the condition of any wire that cannot be fully inspected, especially when used in critical safety equipment. Vessels should closely examine any wires found encased in plastic and due consideration should be given to removing and replacing this sheathing to allow a thorough inspection.

Further details on wire ropes and their uses can be found in North's Loss Prevention Briefing which may be read here: www.nepia.com/media/246286/LP-Briefing-Ships-Wire-Ropes-and-their-Usage-April-2015.PDF

A full copy of the New Zealand Transport Investigation Commission investigation report referred to above may be read here: [www.taic.org.nz/ReportsandSafetyRecs/MarineReports/tabid/87/cid/Detail/mid/484/InvNumber/2014-202/Page/0/language/en-US/Default.aspx?SkinSrc=\[G\]skins%2ftaicMarine%2fskin_marine](http://www.taic.org.nz/ReportsandSafetyRecs/MarineReports/tabid/87/cid/Detail/mid/484/InvNumber/2014-202/Page/0/language/en-US/Default.aspx?SkinSrc=[G]skins%2ftaicMarine%2fskin_marine)

This report may be reprinted in whole or in part without charge, providing acknowledgement is made to the Transport Accident Investigation Commission of New Zealand.



FUEL OIL – TREAT IT RIGHT

North continues to see incidents where engine damage has been caused or alleged to have been caused by the presence of excessive cat fines in the fuel. In a number of these cases, cat fine damage resulted from fuel that was tested and found to be within bunker specification.

The damage to an engine that can be caused by cat fines in the fuel oil is well documented. The aluminium and silicon fines, carried over into the fuel as a result of the catalytic cracking process during refining, act as an aggressive abrasive and, if in sufficient concentrations, can lead to rapid wear of engine components.



The allowable concentration of cat fines in marine fuels is limited by the international standard ISO 8217 "Specifications of Marine Fuels". The fifth, and current, edition was released in 2012 and sets the maximum concentration of combined aluminium and silicon fines at 60mg/kg for the most commonly used residual fuels RMG 180 and RMG 380.

A failure to properly operate and maintain the vessel's fuel treatment equipment and systems can lead to bunkers that were supplied "on-specification" in accordance with charterparties causing significant damage to engine components. If the fuel was provided by the charterer and was found to comply with ISO 8217, it would be very difficult for an owner to hold the charterer liable for the damage.

Fuel containing 60mg/kg of cat fines may be within specification but it is highly unlikely that such levels will be suitable for the engine. In fact, the concentration of cat fines may actually increase whilst in the vessel's storage tanks as they gravitate towards the bottom of the tanks.

The maximum allowable concentration at injection will be specified by the engine manufacturer and is usually around 15mg/kg. In most cases this will require some form of fuel treatment.

Ensuring the ship's engineers receive the bunker fuel laboratory analysis results as soon as they are available will help them take the prompt and proper action needed to treat the fuel and prevent damaging levels of cat fines reaching the engines. It is important to note that an absence of a caution or alert on the lab analysis report does not mean any less care can be taken when treating the fuel on board.

Fuel treatment on board a vessel broadly consists of three methods:

1. regular draining of water and sludge from the settling tank(s)
2. centrifugal separation between the settling and service tanks, and
3. fuel system in-line filtration.

Perhaps the most effective method of lowering the concentration of cat fines in the fuel is through the proper use of the ship's centrifugal separators. Different ships may have different equipment and arrangements, such as traditional purifiers in parallel, in a purifier-clarifier train or as a standalone "ALCAP" type unit. In all cases, it is essential that they are fully operational, set to the optimum temperature and the throughput set to an appropriate flow rate.

Treat your fuel right and you will have fewer problems.

ASSISTING PERSONS IN DISTRESS – OBLIGATIONS AND INDEMNITIES

2014 and 2015 have seen great movements of migrants by sea, primarily in Southeast Asia and across the Mediterranean. Providing necessary assistance to these people is no different to search and rescue operations following fire or shipwreck.

By the *immemorial custom of the sea*, mariners have always been obliged to assist anyone in distress. This obligation is now set out in the 1974 International Convention for the Safety of Life at Sea (SOLAS), which places the legal obligation upon the Master:

"The Master of a ship at sea which is in a position to be able to provide assistance, on receiving information from any source that persons are in distress at sea, is bound to proceed with all speed to their assistance, if possible informing them or the search and rescue service that the ship is doing so".

The 1982 International Convention on the Law of the Sea mirrors these obligations and also says that the Master should not endanger the assisting ship, its crew or passengers.

The 2006 amendments to SOLAS add: *"This obligation to provide assistance applies regardless of the nationality of or status of such persons or the circumstances in which they are found."*

Signatories of SOLAS are obliged to cooperate to ensure that masters of ships providing assistance are released from their obligation with minimum further deviation and to arrange disembarkation as soon as reasonably practicable.

Search and rescue is generally a "reasonable deviation" and should be permitted under any charterparty.

Following search and rescue operations, the assisting vessel sometimes claim against the owners or insurers of the distressed vessel but there is no legal basis for this. In the majority of cases the assisting vessel should make a claim on their own P&I policy.



A boatload of refugees rescued in the Mediterranean by the Italian Navy, June 2014. © UNHCR/A.D'Amato

North's **Rule 19(8) Persons in Distress** provides indemnity for additional expenses incurred by our Members in proceeding to the assistance or search for persons in distress and the reasonable expenses in helping and landing such persons. The indemnity is limited to Member's net loss, over and above expenses that would otherwise have been incurred.

North has recently published a Loss Prevention Briefing entitled *Migrants at Sea* which deals with this subject in more depth. This can be read at www.nepia.com/media/250364/LP-Briefing-Migrants-April-2015.PDF



INCIDENTS, ACCIDENTS AND CREW BEHAVIOUR

In this article we have asked Nick Wilcox of CAE to consider how human behaviour can cause incidents and accidents, using enclosed space incidents as a framework to discuss behaviour.

Enclosed space incidents involving crew who have received training and are aware of procedures continue to occur on a regular basis often with fatal consequences. Occasionally there may be weaknesses in training and procedures but it seems clear that other factors are influencing experienced and well trained crew to enter enclosed spaces in dangerous circumstances.

Safety as a Motivator

In typical enclosed space incidents crew members will enter a space to carry out work, in spite of the fact that it may be inherently dangerous, without complying, or fully complying, with established procedures. They are aware it may not be safe and should be de-motivated to enter an enclosed space, but still we see dangerous practices.

This suggests that safety or the absence of safety may not be a motivator or demotivator by itself; rather it is a hygiene factor, i.e. something that should just be there.

A definite motivator for crew is concern for their shipmates. This is apparent in many enclosed space incidents; too often we see that those who try to rescue the first victim become victims themselves. About two thirds of casualties are would-be rescuers.

So clearly crew are motivated by different things and motivating factors affect their behaviour. This is recognised in many incident reports.

However, the reasons behind accidents in enclosed spaces are often categorised as “inappropriate behaviour”, a label that is not sufficient to explain why it happened. Accident reports also often refer to deviations from established procedures. But what actually leads to procedures being violated and inappropriate behaviour?

About Procedures

Procedures are intended to be the best and safest way to do things. They have been developed and improved, preferably with input from the crew. They should be easy to understand, include all necessary technical information and should be designed from a practical perspective to complete the job safely. When used and there is sufficient time assigned for the work, work proceeds smoothly and without incident.

However procedures do not create safety by themselves; the people using them do – or don't.

When mistakes are made, we have a tendency to enhance procedures usually by making them more detailed.

This may be particularly the case on ships. Seafarers are practical people and the immediate response to an incident is to look at the practical issues surrounding procedures and training.

Surely if procedures and training are improved then all will be well?

Whilst this approach is suitable in most cases it can on occasion actually decrease safety, since procedures get more complex and the time taken to carry out a task is increased. More complex procedures may therefore lead to a position where more mistakes are made due to complexity, and where procedures are bypassed in order to save time. In effect the procedure leads to inappropriate behaviour.

It follows that thought must always be given to the human factor – how people behave - when considering changes to procedures or training, and when considering the reaction to any incident.

Procedures – Why Do Crew Not Implement Them?

No normal person goes to work to do a bad job, or to expose themselves deliberately to unnecessary risks. Most people try to do as good a job as they can to fulfil the expectations of colleagues, managers and, not least, themselves.

If the time available is not sufficient, the procedure is not realistic, tools do not fit, parts and information are missing and so on, people will still do their best to carry out the tasks by improvising, making shortcuts, modifying or inventing procedures.

What happens thereafter is interesting. They will often see that it worked fine; there was no bad outcome. So the next time they will do the same, maybe expand the deviation slightly, and again there is no bad outcome. Until one day they have moved too far away from the prescribed procedure and there is an accident. This is sometimes called “drift to failure”.

Consequently, when people make mistakes in complex systems, like the operation of a modern commercial vessel, we must see it as a symptom of problems deeper in the system. There may be goal conflicts, such as commercial pressure versus safety, conflicts with other procedures, physically impossible tasks, etc.

When practitioners were asked why procedures are violated, the answers with the highest response rates were:

- The work gets done faster (56%)
- There are too many procedures (50%)
- The procedures do not work the way they are intended (38%)
- I have to do it because I have so much work to do (26%)

- I have no knowledge about the existing procedures (14%) (Antonsen, 2009)

It is of note that only a small percentage claim not to know about the procedures, and this raises questions about the appropriateness of training as a response to an incident.

Let us return to behaviour. It reflects our attitudes, such as “I know best, don't tell me how to do this” or “I don't dare to tell them that this is a bad procedure”. The sum of the attitudes in an organization can be said to make up the safety culture. If the negative attitudes mentioned above are dominant, there is an unsatisfactory safety culture that may contribute to accidents.

Finally, why is the number of enclosed space accidents not decreasing? The dangers are well known, training and procedures are in place so these incidents should be becoming increasingly rare.

Perhaps these incidents are a symptom of a failure to properly adopt and implement the idea of a safety culture. Is increased commercial pressure, neglect of behavioural issues during training and increased complexity in our systems contributing to procedural failure? Many individual companies are serious about safety and adopting the concept of safety culture and these companies are leading the way for the industry, but perhaps enclosed space incidents are a sign that having a safety culture is not yet the prevailing industry position or that safety culture is not well enough developed across the industry?

So What Can We Do About It?

Telling people to follow the procedures, punishing or firing them when they don't, does not work. Calling it “complacency” does not help; it's a fuzzy expression consisting of many factors. Telling them to adopt a safety culture will not work – it's a complex concept.

Management Commitment

Management must show in practice that safety has priority and needs investment in safety culture, equipment and training.

Involvement in Design

Involve the seafarer in the design of the procedures.

Monitor the Gaps

When deviations from procedures occur, monitor the gaps between procedures and practice and get an understanding of why there is a gap. A few examples of questions to raise:



- Was there sufficient time assigned to do the job?
- Were the procedures matched to the demands of the real work?
- Did the crewmember have the necessary technical knowledge to do the work?
- Ask the seafarer why he did the job in the way he did?

In hindsight we often have the tendency to see mistakes and errors. But we need to understand why the seafarer found the decision not to follow the procedure logical and correct there and then; not until then can we attack the problems deeper in the system.

The Safety Culture and MCRM Courses

Training in programs, such as Maritime Crew Resource Management (MCRM)*, aim at modifying attitudes and thereby improve the safety culture. Modifying attitudes takes time and requires that the messages are repeated over and over again. Refresher courses are therefore a critical success factor. MCRM courses emphasize the human factor and address the importance of topics such as speaking up when something seems to be wrong, effective communication, dangerous attitudes and decision making.

Traditionally, deck and engine officers attend these courses, but to counteract the increasing number of accidents in enclosed spaces, all seafarers involved in such work

should participate in MCRM training or corresponding, adapted to this category.

Safety Culture Analyses

A safety culture analysis can reveal hidden behaviour problems in the organization and allow an improved focus on relevant factors in an MCRM course.

Learning from Success

We also must learn from success, something we are not used to. When dangerous work goes well, what did we do to achieve that? Why did it work so well? Is this success highlighted to the people doing the work?

Enclosed Spaces – Practical Training and Drills

In general, practical training and drills seems to work well. The new SOLAS regulation “Mandatory Drills For Entry In To Enclosed Spaces” now makes enclosed space drills mandatory, which is a step forward and will hopefully reduce the number of accidents. However, unless behavioural issues are recognised and addressed by companies the training itself may have a lesser impact than would otherwise be the case.

Behaviour – Is it the Individual or is it the Company?

The next time you have to deal with an accident, incident, or near miss where ‘inappropriate behaviour’ has occurred

or procedures have been improperly implemented it may be an opportunity to think about the reasons for the behaviour displayed. Are you dealing with a rogue individual or is there something else happening that may be rooted within the organisation? If it’s an organisational problem how do you respond? Can behavioural change be treated in isolation or must it form part of a systematic, organisation wide, programme for change?

Dealing with behaviours is not easy and there is no silver bullet. Changing how organisations behave – adopting a safety culture for example – takes time, effort and money to achieve.

With business partners ever more demanding of a smooth service, ever increasing claims costs, and increased regulatory oversight it is clear that operating a ship is not going to get any easier going forward. Can the industry as a whole and your company in particular continue to afford the consequences of inappropriate behaviour?

* MCRM (Maritime Crew Resource Management) is designed to develop non-technical skills that address human error and unsafe performance. The training is provided by CAE, which has been at the forefront of CRM training for mariners since the origination of BRM.

Thanks to Nick Wilcox for this article.

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www.cae.com/mcrm/

FIRST CALL: BENEFITS ALL ROUND

Since the introduction of North’s First Call Scheme, which was set up in 2012, in collaboration with Hudson Tactix and Shuman Consulting Services in the United States, the number of calls made by Members, or more usually the Master of a vessel, continues to increase. Masters particularly appreciate the ease of access to First Call services which is available on a 24/7 basis. The majority of crew claims recorded by the Club in the United States are now notified through the First Call scheme.

Benefits to Members and Seafarers Alike

First Call provides benefits to both Members and seafarers alike, by reducing costs whilst at the same time ensuring that the seafarer receives the best possible medical treatment in the United States. First Call is now well established with many of our Members, a number of whom use our First Call partners to deal with claims on non-North entered vessels on the same basis as First Call.

Following an analysis to date of First Call claims, savings against medical invoices have ranged from 20% to as much as 85%.

Over 95% of crew seeking medical assistance through First Call are returned to the vessel with medication or reassurance. Where follow up consultations are recommended by a local doctor, our First Call partners are able to arrange for the seafarer to be re-examined at the vessel’s next port of call in the United States. In this way costs to the Member are greatly reduced and unnecessary hospital stays are minimised.

Advantages of Early Notification

The focus of First Call has always been to ensure that the seafarer receives not only prompt treatment but also receives appropriate medical care from local facilities which are usually experienced in dealing with seafarers.

As Masters have become more familiar with First Call, we are also finding that requests for assistance are received in advance of a vessel’s arrival at the port. The advantage of early notification of requests for medical treatment ensures that our First Call partners are able to arrange transportation for the seafarer and that the local medical facility can be made aware of the crew member’s symptoms prior to his arrival so that the correct services are available at the medical facility and thus cut down waiting times.

Apart from the co-ordinated arrangements made between the agents, our First Call partners and the treating clinic, which a seafarer can expect from our First Call Scheme, seafarers who are returned to the vessel fit for duty are able to complete their contract and so continue to earn their full salary. Delays obtaining treatment can sometimes mean a seafarer who is fit for duty may have to be repatriated because the vessel has left port. This may be particularly important for officers working towards higher certification which requires them to evidence their sea-time. An officer repatriated who is otherwise fit for duty must arrange further sea time in order to gain his certificates.

In a small number of cases it will be necessary for further tests to be carried out in order to determine a diagnosis. In such cases, the treating doctor will usually recommend that the seafarer is admitted to a local hospital and in these cases, First Call will continue to monitor the case to ensure that following discharge from hospital, expenses are negotiated and invoice reductions are maximised.

Continued overleaf...

FIRST CALL

Continued...

Once a diagnosis has been provided, the crew member will either re-join the vessel if appropriate and where he is fit to do so, or alternatively the usual arrangements will be made for his treatment or repatriation.

First Call has been of benefit to both Members and seafarers so if you are calling to the USA, please make your Masters and crew aware of the service. To assist North has produced a First Call map, which is also available as a magnetic A5 mat for the bridge. To request a map or for any other information regarding First Call, please contact John Webb (john.webb@nepia.com) or David Rearden (david.rearden@nepia.com).

Information on First Call is also available on our website at www.nepia.com/correspondents/first-call/

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WET DAMAGE TO CONTAINERS – MANHOLES AND BILGES

The Club has experienced a number of wet damage claims on container vessels recently and in this article we will examine some common causes of this and look at ways to reduce the risk of similar claims occurring.

There are many ways in which water could enter the cargo hold of a container vessel. Ballast tanks can be damaged, water can enter the hold via manhole covers, via the bilge system or through the hatch covers. In recent cases we have seen particular problems with manhole covers and water entering the holds via the bilge system.

Obviously water (or indeed oil) ingress from tanks, or via the bilge system, presents a considerable risk as the entire bottom tier of cargo may be damaged. On some of the latest ultra large container vessels this means that perhaps as many as 80 – 100 containers may be affected in one hold, depending on the design of the vessel. Obviously this type of incident can lead to very costly claims.

Often these claims occur due to routine procedures being overlooked by ships' staff and it is important that company procedures in relation to bilge wells and manhole covers are followed.

Bilges

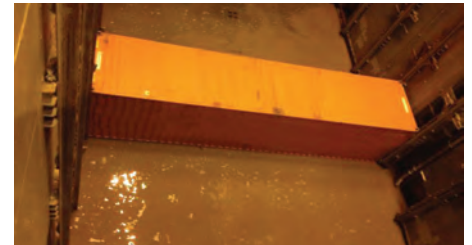
Bilge related claims occur for a number of reasons. Common causes of incidents are outlined below along with some suggestions for risk reduction:

- Heavy rain fall in port – prudent bilge water management on board vessel including regular use of oily water separator when applicable and viable, ensuring that bilge holding tank has enough remaining capacity for cargo hold bilge wells during potential heavy rain in port.
- Failure of bilge well alarms – regular physical testing of cargo hold bilge well float alarms will ensure that an alarm will be activated once the bilge well is full. As long as the alarm is acted on quickly then the water level in the cargo hold should not rise above the level of the bottom of the containers.
- Non-return valve failure – planned maintenance of bilge and emergency ballast system to be followed closely and procedures to be in place to ensure that all tests are carried out effectively, as well as checking of non-return valves and their correct fitting and function.
- Bilge strainers and valves blocked by debris – a good standard of housekeeping including cleaning of cargo holds to prevent dirt ingress into hold bilge strainers.

Manhole Covers

Manhole cover related claims occur for a number of reasons. Suggestions for risk reduction are outlined below:

- Regular inspections of manhole covers in cargo holds for fuel and ballast tanks as well as ensuring that manhole cover nuts are regularly checked for tightness. Gaskets to be replaced when necessary.



- Manhole covers to be checked by crew after shore side tank repairs. The same crew member to witness removal and refitting of covers to reduce the chance of errors. Any system should involve final checks by a responsible officer to ensure the manhole is correctly fitted. A similar system should be in place for on board work being carried out by the crew
- Manhole cover locations to be checked on plans to ensure correct manhole cover is opened/ closed. This operation should be supervised by a responsible officer.

Obviously there are other causes of ingress and proper maintenance and inspection of hatch covers and tank tops is necessary to protect cargo from ingress. None of the suggestions above are new and the vessel you are sailing on is likely to have procedures in place dealing with these matters. Make sure you are aware of and follow the procedures.

LOADING OF BREAK BULK CARGOES OVER BULK BAGS

North continues to see claims arising from damage to break bulk, and/or project cargoes, as well as bagged bulk cargoes which have been loaded in the same holds.

The damage to both bagged and break bulk cargo typically occurs when break bulk cargoes are loaded on top of flexible intermediate bulk containers (FIBC), more commonly referred to as bulk bags, resulting in the stow collapsing.

The loading of project and break bulk cargo on top of bulk bags is not considered to be best practice.

Some of the reasons attributed to the collapse of stows have been identified as:

- The FIBCs suffering a structural failure due to their maximum loading limits being exceeded,
- Damage during loading or handling,
- Poor stowage of the bags allowing movement within the stow, and
- Insufficient or ineffective lashing and securing. In a number of cases the break bulk/project cargo has been lashed to either the lashings used to secure the bags or to the bags themselves.

Are FIBCS Suitable for the Intended Use?

FIBCs are required to conform to ISO standards which define, amongst other factors, the construction, the Safe Working Load (SWL), the safety factor and the class of FIBC i.e. either heavy duty re-usable, standard duty re-usable or single use. These factors determine the maximum compressive load each type of bulk bag is designed to withstand. The FIBC manufacturers will specify the maximum height that the bags can be stacked so as to avoid excessive compressive loading, this is a factor based on the SWL, normally resulting in a stow with a maximum of three tiers high. The bags are not designed to be over-stowed with break bulk cargo.

Bulk bags cannot be considered to be a solid, strong or secure base on which to load other items of cargo, no matter how well the bulk bags have been loaded, stowed and secured. Loading break bulk cargo on top of bulk bags can also create significant problems with regards to locating suitable lashing points, as the vessel may not be fitted with suitable securing points at higher locations on the bulkheads.

Preparing a Detailed Loading Plan

Prior to loading any break bulk cargo or project cargo, particularly where bulk bags are also to be loaded, a detailed loading plan should be prepared based on the requirements of the Code of Safe Practice for Cargo Stowage and Securing (CSS Code) and the ship's cargo securing manual (CSM). This must include lashing and stability calculations.

Completing the loading plan and securing and stability calculations becomes even more critical when the vessel is scheduled to load at multiple ports.

It is vital that accurate information on all cargo to be loaded is provided well in advance of loading, to ensure the loading plan is effective. This includes dimensions, weight, centre of gravity, location(s) of securing points, and whether the unit is fragile and must be positioned on the top of the stow, whether the cargo is bagged and must not be over-stowed or is rigid and is suitable for other items of cargo to be loaded on top.

If loading has been planned with the intention of having bulk bags over-stowed with other cargoes, then the plan should be adjusted to ensure that all cargoes can be properly and securely loaded and stowed. Adjusting the plan ensures that suitable measures are being taken to protect the cargo from damage and ensures that the vessel's stability will not be adversely affected during the voyage as a result of the stow collapsing.

It is much easier and far more effective to adjust the plan at an early stage prior to cargo arriving alongside the vessel.

It is not unusual for requests to load additional cargo to be made whilst the vessel is loading, however, any additional cargo loading must be properly planned taking into account the nature of cargo already loaded, the integrity of the stow, means of lashing and securing and the stability of the vessel.

Irrespective of charterers' instructions to load additional cargo, the Master is obliged to ensure the safety of the vessel, crew and cargo and if the intended load may jeopardise the safety of the vessel, then under Chapter V, Regulation 34-1, of the International Convention for the Safety of Life at Sea (SOLAS), the Master has the authority to take any action deemed necessary to ensure the safety of the vessel.



In situations where the Master has concerns over the safety of the vessel and or cargo, they should exercise their authority and stop further loading until satisfied that safety has not been compromised.

It is worth involving charterers as soon as any problems are discovered to minimise disruption. If concerns are not appropriately addressed, a written note of protest stating the concerns and deficiencies should be issued.

Further information

North's *Cargo Wise* poster *Stowage & Securing*, highlights problems resulting from the poor stowage of break bulk cargoes. It can be viewed at www.nepia.com/media/73280/Posters-Cargo-Wise-Stowage-Securing.PDF

North has also produced a loss prevention guide on the subject of *Cargo Stowage & Securing (Second Edition)* which is available for Members in electronic format. Members requiring an electronic or hard copy of the guide should contact loss.prevention@nepia.com

LIMITATION OF LIABILITY – 1996 PROTOCOL LIMITS INCREASING

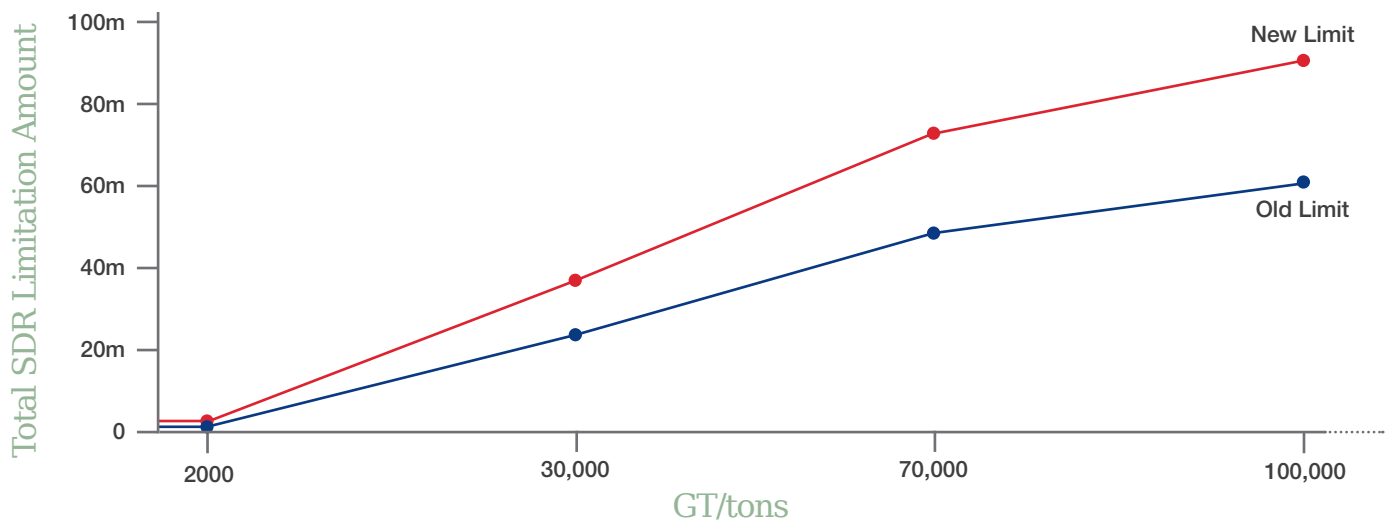
8 June 2015 saw a significant increase in the limits of liability under the 1996 Protocol to the Convention on Limitation of Liability for Maritime Claims 1976. These increases in tonnage limitation levels will apply in states where the 1996 Protocol is already in force. The increases reflect changes in monetary values, i.e. inflation, since the 1996 Protocol limits were agreed.

The new limits are:

Loss of Life or Personal Injury

On ships not exceeding 2,000 GT is 3.02 million Special Drawing Rights (SDR) (up from 2 million SDR).

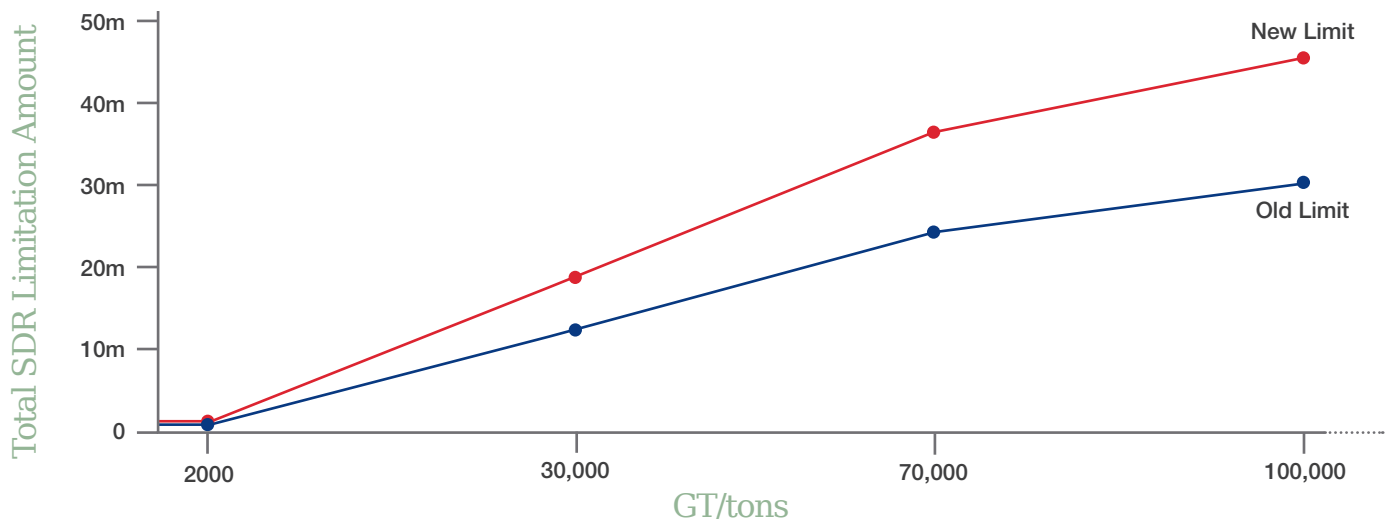
For each ton from 2,001 to 30,000 tons	1,208 SDR (up from 800 SDR)
For each ton from 30,001 to 70,000 tons	906 SDR (up from 600 SDR)
For each ton in excess of 70,000 tons	604 SDR (up from 400 SDR)



Property Claims

For ships not exceeding 2,000 gross tonnage is 1.51 million SDR (up from 1 million SDR).

For each ton from 2,001 to 30,000 tons	604 SDR (up from 400 SDR)
For each ton from 30,001 to 70,000 tons	453 SDR (up from 300 SDR)
For each ton in excess of 70,000 tons	302 SDR (up from 200 SDR)





The levels of limitation under the revised 96 Protocol are illustrated by these examples showing approximate limits in US\$ terms:

	2,000 GT	Death/PI* US\$ 4.2 million	Property US\$ 2.1 million
	30,000 GT	Death/PI US\$ 51.6 million	Property US\$ 25.8 million
	70,000 GT	Death/PI US\$ 102.3 million	Property US\$ 51.2 million
	100,000 GT	Death/PI US\$ 127.7 million	Property US\$ 63.8 million

(at 1 SDR = US\$ 1.4)

*PI = Personal Injury

Members are reminded that there are a number of different tonnage limitation regimes in force across various maritime jurisdictions. In the event of a claim where limitation of liability may be an issue, North's claims handlers will work with the Member to determine how best to protect their interests.

CHARTERERS BEWARE...

The English High Court Confirms That There Are Consequences of Re-Delivering A Vessel with Insufficient Notice.

In order to give shipowners a measure of control over their commercial operations, a time charterparty will usually contain a provision whereby the charterer is to give approximate notice followed by definite notice of the ship's re-delivery.

In a recent case called *Maestro Bulk Ltd v Cosco Bulk Carrier Ltd* (The "Great Creation") [2014], the English High Court was asked to consider the following question:

"Where a time charterparty provides for charterers to give notice of redelivery, what is the correct approach to damages when redelivery takes place with insufficient notice(s)?"

The relevant charterparty was for a period of 4 (maximum 5) months, plus 15 days at charterers' option) and the vessel was due to be redelivered between 29 March and 14 May 2010. The charterparty contained a fairly standard provision regarding notices of redelivery as follows: "On redelivery charterers to tender 20/15/10/7 days approximate and 5/3/2/1 days definite notice."

Charterers had given what they said was an approximate 20 day notice of redelivery on 13 April but then proceeded to redeliver the vessel on 19 April, just six days later.

Whilst the vessel was redelivered within the redelivery window allowed (i.e. between 29 March and 14 May 2010), charterers were still in breach of the charterparty, because they redelivered before the proper notice period had expired.

Various issues were determined in arbitration between the parties but one question was then appealed to the English High Court. That question was how to calculate the damages to be awarded to owners for charterers' breach in redelivering the vessel before the notice period expired.

Owners argued that in order to calculate their damages, the proper notice period (approximately 20 days) should be deducted from the actual date of redelivery, 19 April, to determine the day when the notice should have been given. They argued that if notice had been given accordingly on or around 31 March, they would have been able to fix more profitably than they were able to on 19 April and that the loss of a more profitable fixture should form the basis of the assessment of damages.

Charterers argued that damages should be calculated by looking at when they should have redelivered the vessel based on the notice actually given. As the notice was given on 13 April, the vessel should have redelivered around 1-3 May. As such, charterers said the damages should be calculated on the basis of hire at the charterparty rate for the period 19 April to 1-3 May, less any sums received in mitigation.

In answer to this question, the Court held that owners were entitled to receive hire for the balance of the redelivery notice period remaining. The arbitrators had concluded that a 2 day allowance would be given for the word "approximate" and so the balance of the redelivery notice period remaining was 12 days. As such, owners were entitled to receive an additional 12 days hire from charterers (subject to owners giving credit for any earnings that owners had been able to achieve in mitigation during this period).

Members should be aware, however, that whilst this case appears to confirm that these situations will be treated as early redelivery scenarios, a different result might be reached in circumstances where charterers always intended to redeliver the vessel on a particular date, but simply forgot to send one or more of the requisite notices.

YEMEN – KEY POINTS INFORMATION SHEET

North has produced a quick reference information sheet on the situation in Yemen, the blockade of its ports by the Saudi Arabian led coalition, and its potential impact on Members.

The information sheet aims to address Members' primary concerns about trading to the area and can be accessed via the following link: www.nepia.com/publications/loss-prevention-publications/information-sheets/

The situation in the region is monitored regularly and any new developments will be added to future versions of the information sheet.

North's Industry News and Maritime Threats and Incidents pages on our website also contain additional information on Yemen and can be accessed at www.nepia.com/





AMENDMENTS TO SOLAS – INERT GAS SYSTEM REQUIREMENTS ON BOARD NEW BUILD TANKERS FROM 1 JANUARY 2016

The IMO Sub-Committee on Fire Protection (FP) met for its 56th session between 7 to 11 January 2013.

The FP then submitted a package of draft SOLAS amendments to the Maritime Safety Committee (MSC 92), for approval and adoption of measures to prevent explosions on oil and chemical tankers transporting low-flashpoint (less than 60°C) cargoes. The amendments to SOLAS come into force on 1 January 2016.

The development of the draft amendments followed many years of work aimed at preventing explosions on oil and chemical tankers that transport low-flashpoint cargoes and follow recommendations made by an Inter-Industry Working Group (IIWG) that was established to study incidents of fires and explosions on chemical and product tankers.



The IIWG included the European Chemical Industry Council (CEFIC), the International Association of Classification Societies (IACS), the International Association of Ports and Harbors (IAPH), the International Chamber of Shipping Limited (ICS), the International Association of Independent Tanker Owners (INTERTANKO), the International Parcel Tankers Association (IPTA), the Oil Companies International Marine Forum (OCIMF) and the International Group of P&I Clubs.

The requirements will impact on the design and operation of small oil and chemical tankers due to the costs involved in providing suitable type-approved inert gas systems (IGS) onboard, although this is dependent on the type of vessel.

Oil and Chemical Tankers

The amendments to SOLAS regulations II-2/4.5.5 and II 2/16.3.3 require an inert gas system to be fitted on *all new oil and chemical tankers of 8,000 dwt and above*, (when transporting low-flash point cargoes of <60°C). Oil tankers above 20,000 dwt were already required to install such systems.

For tankers fitted with exhaust gas inerting systems, inerting must be carried out during loading, on passage, discharging, tanks cleaning and purging prior to gas freeing.

However, for chemical tankers, inerting with nitrogen need only be carried out prior to loading, discharging, during tank cleaning and purging prior to gas freeing.

The oxygen limit for inert gas supplied to cargo tanks has also been lowered from 8% to 5% for new systems.

Chemical Tankers

The exemption for existing chemical tankers with tank volumes not exceeding 3,000 m³, fitted with tank cleaning machines with a throughput not exceeding 17.5 m³/h (per nozzle) and a total combined throughput not exceeding 110 m³/h, does not apply to chemical tankers delivered after 1st January 2016.

Related draft amendments to the International Code for Fire Safety Systems (FSS Code) were also agreed, resulting in a complete replacement of chapter 15 (Inert Gas Systems).

CANADIAN CARRIER CODE

A carrier code is a unique four character code used by the Canada Border Services Agency (CBSA) to identify marine carriers, regardless of how often they cross the Canadian border with commercial goods.

There are two main types of carrier code, bonded and non-bonded. Carriers issued with a non-bonded carrier code must have freight coming into Canada released at the border or first port of arrival (FPOA), whereas bonded carriers have the option of moving unreleased goods into a bonded warehouse where it sits awaiting release, or to transship the goods through Canada. To apply for a bonded carrier code the carrier must first post security with the CBSA.

For the purpose of assessing carrier code eligibility, “a carrier is a person involved in international commercial transportation who operates a conveyance used to transport specified goods to or from Canada”.

To operate a conveyance means to have legal custody and control of the conveyance:

- (a) To have legal custody means to be:
 - 1) An owner
 - 2) A lessee under a lease or agreement of hire
 - 3) A charterer under an agreement of hire

- 4) A purchaser under a conditional sale or hire purchase agreement that reserves to the vendor the title to the conveyance until the purchase price is paid or certain conditions are performed, or

- 5) A mortgagor
- (b) Control is defined as the person responsible for the decisions concerning the employment of the conveyance, and therefore the person who decides how and where that conveyance is employed.

- (c) It must be the lowest legal entity who has legal custody and control of the conveyance that must obtain and use their carrier code.

- (d) Specified goods means commercial goods, goods that are or will be imported to Canada for a fee or empty cargo containers that are not for sale.

Clients who do not meet the criteria outlined above are not eligible to receive or hold a carrier code and these include, but are not limited to:

- 1) Marine agents.
- 2) Subsidiaries of foreign companies who represent their shipping lines in Canada.
- 3) Management companies responsible for the day to day running of a vessel.

- 4) Vessel owners who do not play a role in the employment of the vessel (e.g. banks).

The CBSA strongly recommends that marine carriers apply for a bonded carrier code, as a bond is required anytime unreleased goods move beyond the FPOA. This includes scenarios such as emergency stops and Canadian Food Inspection Agency’s gypsy moth inspections when the FPOA is changed. Carriers, who do not have bonded status, may be subjected to lengthy delays.

Upon receipt of a properly completed application (including proof of ownership documents if required), Members should expect to receive a new carrier code within 10 business days.

In order to avoid any potential delays when calling at Canadian ports, Members should consider applying for a bonded carrier code well in advance.

The CBSA Customs Notice 14-029 provides clarification on carrier code eligibility and this can be accessed on the CBSA website at: www.cbsa-asfc.gc.ca/publications/cn-ad/cn14-029-eng.html

A full set of guidelines on the Marine Carrier Code Application process have been produced by the CBSA and this can be accessed www.cbsa-asfc.gc.ca/services/carrier-transporteur/mccap-ppctm-eng.html

EU AGREES TO MONITORING OF CO₂ EMISSIONS FROM SHIPS

The European Parliament voted on 28 April 2015 to adopt the Regulation on the Monitoring, Reporting and Verification (MRV) of CO₂ emissions from ships. This follows the agreement reached in December 2014 by EU environment ministers.

The agreement relates to the European Commission document drafted in June 2013 titled "Proposal for a Regulation of the European Parliament and of the Council on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport and amending Regulation (EU) No. 525/2013".

Until recently, maritime shipping was the only method of transport not included in the EU's program to reduce greenhouse gas (GHG) emissions as detailed in EU Regulation 525/2013.

Consideration at IMO

Concerns have been raised by some parties within the shipping industry, such as INTERCARGO, BIMCO and the International Chamber of Shipping, regarding the EU's decision to pre-empt the ongoing IMO negotiations and how this scheme will be compatible with whatever might be agreed by IMO for global application.

Application of the Regulation

The Regulation includes a means of establishing a monitoring, reporting and verification (MRV) scheme for CO₂ emissions from ships:

This MRV scheme will initially provide the EU with information to create a GHG emissions inventory and this data will be used to form any future emissions reduction scheme which in turn may influence future EU environmental policy and legislation.

The Regulation will apply to vessels 5,000 GT and above and the obligation to monitor CO₂ of voyage regardless of flag:

- Intra-EU voyages – voyages between EU ports.
- Incoming voyages – voyages from the last non-EU port to the first EU port of call.
- Outgoing voyages – voyages from a EU port to the next non-EU port of call.

It is also expected that monitoring will apply whilst at an EU berth or moving within a port.

To ensure compliance with the proposed Regulation, the first step for a shipowner (or any other person who has assumed the responsibility for a vessel's operation) is to produce a monitoring plan for each vessel. This plan will include details on the method of monitoring and allow for emission data to be collected for all voyages conducted into, out of and between EU ports on both a 'per voyage' and annual basis.

When the Regulation comes into effect, the deadline for the submission and verification of monitoring plans is understood to be 31 August 2017, with actual monitoring and recording commencing 1 January 2018.

We understand the EU's intention is that there should be no need to fit new or additional equipment or systems on ships in order to meet the monitoring and recording requirements. The Regulation would be based on information already accessible on board the vessel.

The emissions will be calculated by one or more of the following methods:

- I. Use of bunker delivery notes and periodic measurement of remains on board (ROB).
- II. Daily monitoring of fuel tanks contents – remains on board (ROB).



- III. Flow meters for fuel oil consumers.
- IV. Direct CO₂ measurement of emissions.

The following includes examples of what will be recorded on both a 'per voyage' and annual basis:

- a) Departure and arrival ports including times and dates.
- b) Emissions for each type of fuel consumed, differentiating between fuels burnt inside and outside any emission control areas (ECAs) and at berth.
- c) CO₂ emitted.
- d) Distance travelled.
- e) Time spent at sea.
- f) Cargo carried.
- g) Transport work.
- h) Average energy efficiency (annual only).

As well as the ship's monitoring plan, the annual reports will be required to undergo a verification process by a third party. It is expected that this will be undertaken by most classification societies.

From 30 June 2019, vessels will be required to carry on board a valid Document of Compliance issued by the verifying authority which will be valid for 18 months from the end of the previous reporting period.

RESIDENTIAL TRAINING COURSES 2015



North's 23rd UK Residential Training Course in P&I Insurance and Loss Prevention held during June 2015 was a great success, with over 45 delegates from many sectors of the maritime industry enjoying a valuable training and networking experience.

Highlights included ship visits, a simulated collision exercise, an emergency exercise in an environmental pool complete with wind, waves and rain, and most importantly the valuable learning experience provided by the expert guided workshops.

The course runs every June at Lumley Castle and South Shields Marine School in north east England.

Also this year, North will be hosting the third Singapore Residential Training Course in P&I Insurance and Loss Prevention during November 2015. For further information please contact elizabeth.er@nepia.com; or visit our website at www.nepia.com/rtc



COLLISION CASE STUDY

Introduction

To mark Signals' 100th issue we have trawled the archives to identify a collision that occurred 100 years ago (even though Signals is not that old.....yet!) and which involved two of the world's most famous ships.

North's loss prevention guide *Collisions: How to Avoid Them* includes a series of collision case studies intended to generate discussion about the International Regulations for preventing Collisions at Sea (COLREGs) and further case studies are published in *Signals* from time to time. Each case study is set out as simply as possible, with the minimum information necessary to describe a developing situation. The case studies are intended to promote wide-ranging discussions about collision avoidance.

In 1911 the SS *Olympic* (sister ship of *Titanic*) collided with the battle cruiser *HMS Hawke*. The collision took place in the Solent as *Olympic* was leaving Southampton and *HMS Hawke* was inbound for Portsmouth. The incident attracted massive publicity and the case went from the Admiralty Court, through the Court of Appeal and on to the House of Lords for a final decision on liability.

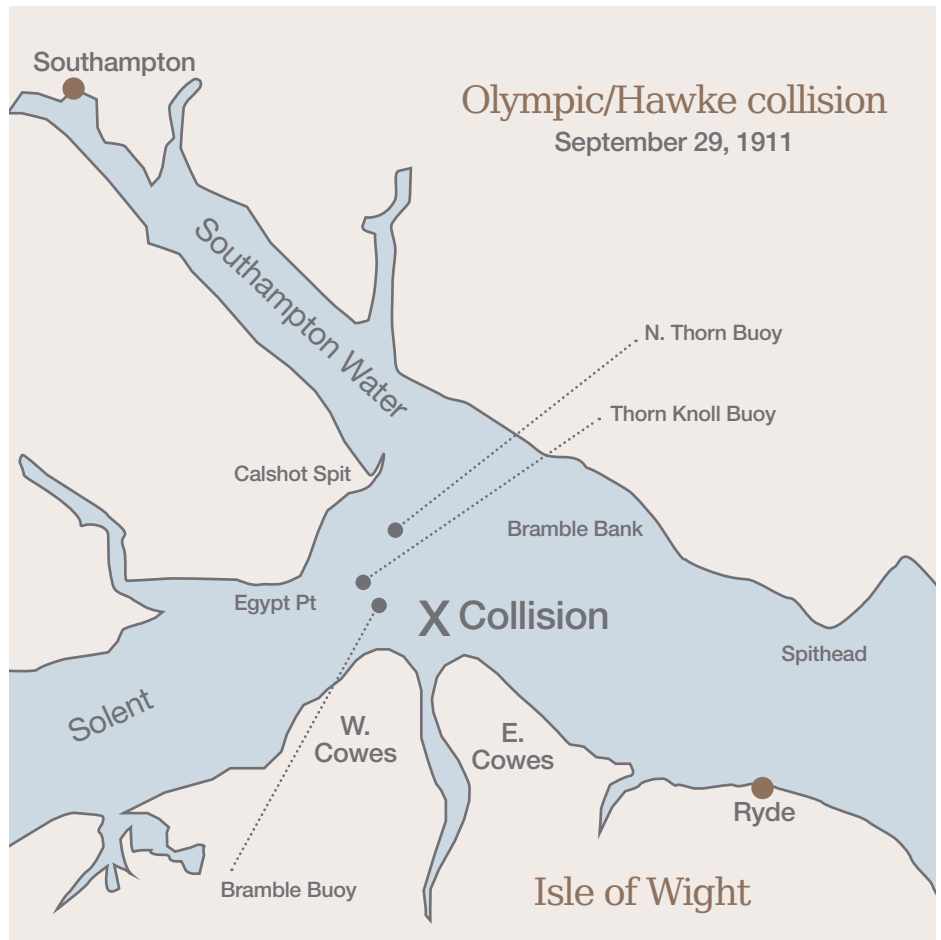
Scenario

The SS *Olympic* came down Southampton Water, leaving all buoys to port.

As she approached Bramble Buoy she turned hard to port, toward Spithead and the east. *HMS Hawke* was coming up the Solent and saw SS *Olympic* on her port bow. Off Egypt Point *Hawke* made a small alteration to starboard to give *Olympic* more room but neither ship reduced speed.

As SS *Olympic* made her turn to port she came parallel to *HMS Hawke*. The ships grew closer and closer and *Hawke* was drawn into collision with *Olympic* by interaction between the two vessels.

SS *Olympic* claimed that *HMS Hawke* was an overtaking vessel. *HMS Hawke* claimed that this was a crossing situation.



Questions

1. Is this an 'Overtaking Situation' (Rule 13) or a 'Crossing Situation' (Rule 15)?
2. As the ships approached Bramble Buoy, what action should each ship have taken?

Further Information

Members can obtain electronic versions of North's loss prevention guide *Collisions: How to Avoid Them* by emailing loss.prevention@nepia.com

Olympic/Hawke collision
September 29, 1911

To obtain hard copies of the Guides, please download the Loss Prevention Order Form from our website www.nepia.com/lp-publications

Your Copy of Signals

Copies of this issue of *Signals* should contain the following enclosures:

- Our Loss Prevention Publications Index.



Disclaimer

In this publication all references to the masculine gender are for convenience only and are also intended as a reference to the female gender. Unless the contrary is indicated, all articles are written with reference to English Law. However it should be noted that the content of this publication does not constitute legal advice and should not be construed as such. Members with appropriate cover should contact the North's FD&D department for legal advice on particular matters.

The purpose of this publication is to provide information which is additional to that available to the maritime industry from regulatory, advisory, and consultative organisations. Whilst care is taken to ensure the accuracy of any information made available (whether orally or in writing and whether in the nature of guidance, advice, or direction) no warranty of accuracy is given and users of the information contained herein are expected to satisfy themselves that it is relevant and suitable for the purposes to which it is applied or intended to be applied. No responsibility is accepted by North or by any person, firm, corporation or organisation who or which has been in any way concerned with the furnishing of data, the development, compilation or publication thereof, for the accuracy of any information or advice given herein or for any omission herefrom, or for any consequences whatsoever resulting directly or indirectly from, reliance upon or adoption of guidance contained herein.

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