

# Signals

NEWSLETTER

**NORTH**   
SERVICE, STRENGTH, QUALITY

## Happy New Year and Welcome...

to the January 2014 edition of *Signals*, which provides information relating to loss prevention and other topics of interest to ship operators and seafarers and examines their implications and consequences.

## IN THIS ISSUE

This edition of *Signals* addresses a wide variety of topics including cat fines, enclosed space entry, the dangers of methanol, the carriage of livestock, liquid cargo shortages, cargo delivery in Brazil and the latest news on the International Maritime Solid Bulk Cargoes (IMSBC) Code iron ore fines schedule.

Engine damage from cat fines is nothing new. However, evidence points to the problem increasing recently. The reasons behind this increase are explored and practical steps that may be taken to protect engines from cat fines damage are explained. We also look at the potential consequences of such an incident and the evidence required in the event of a dispute.

## Issue 94: January 2014

LOSS PREVENTION NEWSLETTER  
FOR NORTH'S MEMBERS

Enclosed space entry deaths and incidents are sadly still commonplace. Mines Rescue Marine has provided an article that looks at enclosed space entry deaths and introduces a 'box' concept to help seafarers and shore staff think about enclosed spaces in a way that keeps them safe.

Methanol can be fatal if ingested. A number of recent incidents involving seafarers have tragically lead to deaths. How is the methanol getting on board and how is it ingested? Find out by reading the article.

Carrying live animals on container vessels can bring unique challenges. In this article we provide some general advice on the carriage of live animals.

Liquid cargo shortages and customary allowances can sometimes give rise to confusion. This article explains North's position in respect of customary allowances.

A recent Brazilian regulation allows cargo to be delivered against a copy bill of lading. This is contrary to long standing practice both in Brazil and worldwide. The International Group of P&I Clubs (IG) is currently engaging with the Brazilian authorities in an effort to clarify the situation.

A new IMSBC iron ore fines schedule has been agreed at the International Maritime Organization (IMO) and will become voluntary as of 1 January 2016. The new schedule has passed following an intensive period of research into the properties of iron ore fines by the major exporters in dialogue with industry bodies. IMO member states are being asked to adopt the schedule early.

As a result, iron ore fines have been classified as a Group A cargo which is one that is liable to liquefy. The background to this new schedule is explained.

## PEOPLE CLAIMS – CONTROLLING THE COST

Illness and injuries are inevitable as are the associated costs of treatment. North believes that targeted loss prevention initiatives can deliver high quality treatment and at the same time help control the medical costs associated with illnesses and injuries. The enclosed information sheet brings together advice on North's initiatives in one easily accessible document.



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# BUNKERS: WATCH OUT FOR HICHER CAT FINES

Catalytic fines or 'Cat fines' – the abrasive residues of silicon and aluminium catalysts used to 'crack' oil have been present in fuel oil since the 1950s and engine manufacturers have been alerting customers to the problem since the 1970s.

However, the Joint Hull Committee and marine consultancy Braemar recently identified an increase in hull and machinery claims for engine damage as a result of excessive component wear. A significant number of failures were attributed to poor quality bunkers, particularly those with a high level of cat fines.

The recent rise in engine damage claims appears to be as a result of the sulphur content limits imposed in accordance with the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI and other local legislation. Quality analysis carried out by DNV Petroleum Services during 2011 identified that in most regions of the world, the levels of cat fines in low-sulphur fuel oils was greater than in high-sulphur fuel oils.

The reason for higher levels of cat fines in low-sulphur residual fuel oils seem to be due to the refining process, which has been adapted to meet rising demand. To reduce sulphur content, residual fuel oil is blended with higher levels of cutter stocks such as slurry oil, which is a by-product of the catalytic cracking process. This means that cat fines of aluminium and silicon oxides in the slurry oil find their way into the low-sulphur blend.

## A Grinding Issue

This high density of cat fines dramatically increases the rate of wear of the engine's main components such as the cylinder liners, piston grooves and piston rings. The fines become embedded and effectively act as an abrasive, rapidly wearing down moving parts.

Cat fines can range in size between 1 and 75 microns, which is smaller than a grain of sand. Marine diesel engine experts suggest that particles of size 10 to 25 microns are particularly harmful. However, the most important factor relating to damage is the concentration of cat fines, which is most commonly given in parts per million (ppm).

Analysis by DNV Petroleum Services has shown that the average levels of cat fines in residual fuel oils increased annually from 2007 to 2011. The region with the highest average levels of cat fines in recent years is the US Gulf, which has coincided with the introduction of the North American Emission Control Area.

Unfortunately there is a discrepancy between the maximum acceptable levels of cat fines as stated in the ISO 8217 marine fuel specification and those recommended by engine manufacturers.

The maximum levels of cat fines (described as 'aluminium plus silicon') in the 2012 specification have not changed from the widely used 2010 edition: for RMG grade residual fuel oil this is set at 60 ppm.

However, engine manufacturers recommend a maximum concentration of cat fines at the point of injection of 15 ppm. An effective system of on board fuel treatment is thus needed to reduce the levels of bunker cat fines to less than 15 ppm at the engine inlet.

It is generally accepted that correct on board pre-treatment of bunkers will reduce cat fine levels by 75%. The Joint Hull Committee is thus recommending bunker buyers stipulate a maximum concentration of cat fines of 50 ppm, thereby recognising the performance limits of on board treatment systems.

## Managing Fuel On Board

Braemar has identified a number of occasions that have led to serious engine damage where poor on board treatment and handling has contributed to the casualty. Effective on board fuel management is also critical in protecting a diesel engine from cat fines damage.

Failings in operation and maintenance of on board treatment equipment include the purifier throughput being too high, excessive sludge build up in the purifiers, temperatures not set at optimum, poor filter cleaning and maintenance, and setting of service tank drains not checked and recorded daily.

There is also evidence of lack of knowledge of the fuel on board: if the crew do not know the level of cat fines in the fuel then proper mitigation cannot take place. Drip samples should be taken at the time of bunkering and sent for testing as soon as possible, with the results sent to the vessel as soon as available.

Best efforts should be made by the crew to avoid using new fuel oil until they know the test results.

## Costly Consequences

The commercial consequences of not correctly managing fuel oil on board can have far-reaching implications. A bunker quality dispute could potentially result in:

- Loss of time
- Cost of de-bunkering and resupplying the ship with fuel oil of the correct grade
- Cost of replacing damaged machinery, parts and labour
- Cost of liability to third parties (such as cargo receivers) incurred solely as a result of the delays associated with the bunker dispute
- Indemnity against the consequences of receiving fuel oil that does not comply with the requirements of MARPOL Annex VI
- Crew overtime
- Incidents stemming from machinery failure.



## Good Evidence is Key in Disputes

The outcome of a bunker quality dispute depends largely on the quality of evidence collected in support of the claim. Routine evidence should be collected during bunkering operations and include the Chief Engineers' notebook, the loading plan, ullage reports and the routine sampling and analysis of fuel oil, as well as properly completed bunker checklists.

Once an issue with bunker quality is identified, non-routine evidence should be taken including further samples, the retention of any parts damaged as a result of using the fuel oil, taking statements from the engineers on board and also surveys by the representatives of the parties involved.

Sampling and analysis is the single most important piece of evidence in any bunker dispute. It is essential that 'truly representative' samples are obtained, as fuel oils are not homogeneous due to the usual process of blending, which can lead to tanks containing fuels of widely varying characteristics.

The IMO has published guidelines relating to sampling fuel oil in accordance with MARPOL Annex VI. Taking a sample by 'continuous drip' at the receiving vessel's manifold has long been recognised as being the most representative sample of the fuel supplied.

## To De-bunker or Not

Where there is a significant risk that a vessel cannot safely use the fuel oil supplied, the owner should request the charterer to arrange for the vessel to be de-bunkered and supplied with new fuel. The decision to de-bunker should not be taken lightly as only 'reasonable' losses can be claimed, although London arbitrators have consistently shown that they will support an owner's decision to de-bunker.

Where the fuel oil does not conform to the specification but may still be used by the vessel with little or no risk, it would be unreasonable to incur the cost and associated loss of time involved in de-bunkering. If it is unclear whether the off-specification fuel oil can still be used, the owner should carefully consider the risks if the vessel proceeds to burn the bunkers, particularly in relation to possible engine damage and loss of performance.

*Continued on page 3*



Some charterparties provide a fuel oil specification and an additional requirement that the fuel oil be fit for the vessel in question, with the possible result that fuel oil may still be deemed unsuitable for the vessel despite being within specification.

It may be necessary for an owner to arrange for de-bunkering and resupply of the vessel for its own account with a view to claiming it back from the charterer as part of a later claim.

## Conclusion

As the demand for low-sulphur fuel increases it is likely, at least in the short to medium term, that the problem with cat fines will persist or indeed intensify. A high standard of bunker testing and sampling and good operational practices can go a long way to protecting a vessel's engines and avoiding costly disputes.

## Further Information

North thanks Paul Hill of Braemar (inc The Salvage Association) and the Joint Hull Committee for allowing reproduction of the findings of their paper Marine Engine Damage due to Catalytic Fines in Fuel.

For further guidance please refer to North's loss prevention guide Bunker Claims Prevention – A Guide to Good Practice, which can be viewed on North's website: [www.nepia.com/lpguides](http://www.nepia.com/lpguides)

# ENCLOSED SPACES: THINKING INSIDE THE BOX

*The 'fire triangle' of heat, oxygen and fuel has long helped seafarers understand the contributing factors to the hazard of combustion. Adam Allan and Michael Lloyd of Mines Rescue Marine introduce an 'enclosed space box' to provide a similar reminder of the contributing factors to the hazard of enclosed spaces.*

## Fire Hazard

Many years ago, fire was the biggest cause of death and injury at sea. But eventually, through legislation, compulsory training and equipment and improvements to ship design, the casualties were drastically reduced.

The hazard has not changed. In fact on some ships such as large container vessels, it could be argued that, with the range of dangerous cargoes carried and the potential for misdeclaration of cargo, the risk of fire has increased. However changes in legislation have resulted in changes to training, equipment and ship design which have reduced and, crucially, raised awareness of the risk.



An enclosed space rescue drill

The awareness of fire risk is brought about by frequent exercises, use of equipment and the training required during a career at sea. No-one ever forgets their firefighting training or a shipboard fire. One very important element in this awareness is that you can see, feel and smell the effects of a fire.

## Unseen Danger

But what about enclosed spaces? The biggest killer in enclosed spaces is the lack of breathable oxygen.

This cannot be seen, is rarely detected by smell and never felt until it is too late. If the lack of oxygen is severe, one second you are alive, the next unconscious and then dead. Lack of oxygen is deadly and it can occur in any space, even those supposed to be 'safe'. There is no such thing as a safe enclosed space.

Everyone should always be aware of the situations they may have to face at work and take the necessary precautions to protect themselves. Enclosed spaces need special attention as they can be particularly dangerous, it is therefore very important that individuals personally risk-assess the space before entry. No-one should rely on the ship's generic risk assessment; they should make sure that each space is assessed and treated individually, as each space will have its own unique circumstances to deal with.

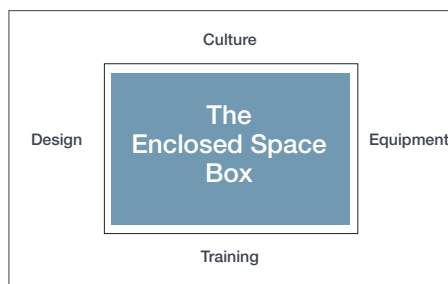
So what can be done? A similar concept to the 'fire triangle' of heat, oxygen, fuel can be adopted for enclosed spaces, called the 'enclosed space box' (see diagram). All sides of the box contribute equally to the hazard of enclosed spaces. While design can be a major cause of the hazard, it is the training, equipment and culture on a ship that will result in getting people safely in and out of enclosed spaces – or not.

## Safety Checklist

To go into an enclosed space, it is essential that a person is aware of the dangers, is adequately trained, has the correct equipment and is sure that emergency procedures are in place and immediately available. If any one of these is not in place, the person should not enter the space.

It is most important for their own safety that a person tests the air before going into the space and keeps testing the air while they are in there. A few minutes spent on this basic test can save their life.

Many people have died entering an enclosed space to assist a friend or colleague who they saw collapsed inside the space. Unfortunately this is still an all too common occurrence. If a person sees someone collapse inside the space, it is most important that they contact



The Enclosed Space Box

the officer in charge, who will then get the rescue team. Under these circumstances the space should not be entered without telling someone first and without wearing a full breathing apparatus (not an emergency escape breathing apparatus). This reaction is counterintuitive and can only be instilled through proper training leading to enhanced awareness.

## Management System

One of the new safety avenues currently being explored by the UK Mines Rescue Marine service in relation to enclosed spaces is the introduction of an enclosed space management system.

It involves preparing a comprehensive database of each individual shipboard enclosed space with associated procedures and relevant information. The information will be stored on the ship's main computer and should be regarded as a living document which can be readily updated and used as an information library for those people on board and ashore who plan enclosed space entries.

To summarise, using the enclosed space box is a simple but powerful tool to assist mariners, superintendents and health, safety, quality and environmental staff when considering enclosed space entry systems and procedures. It can be used and developed to identify weaknesses in current systems on each of the four sides and steps can then be taken to address these weaknesses.

This article was provided by Adam Allan and Michael Lloyd of Mines Rescue Marine, Website: [www.minesrescue.com](http://www.minesrescue.com)



# METHANOL POISONING

**Question:** what does a 23-year-old beauty therapist have in common with two crew members working on different vessels?

**Answer:** they all appear to have purchased contaminated alcohol in the belief that it was safe to drink if diluted with water. Sadly, all three died as a result of methanol poisoning.

Methanol is a toxic chemical used for fuel, solvents and antifreeze. Ingestion of methanol has very serious consequences and can easily lead to death. In recent years there have been a number of cases where alcoholic drinks, either locally made in the Asia Pacific region, or counterfeit brands, have been found to be contaminated with methanol.

## Killer Contaminant

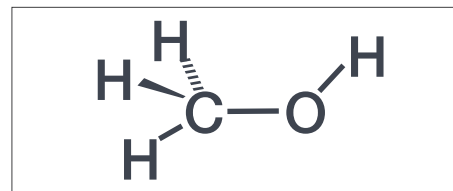
In the case of the 23 year old beauty therapist, she purchased a bottle of gin from a local store while backpacking in the Asia Pacific region. The gin had been contaminated with methanol. In another case, a crew member died as a result of methanol poisoning on board a vessel. A search of his cabin revealed several bottles of local 'whisky' which were thought to have been the source of methanol.

The Club has also been advised of a third case involving three crew members, two of whom were approaching the end of their contracts. Investigations revealed that the Chief Engineer and Second Engineer requested a total of three 125ml bottles of what they thought was 70% ethyl alcohol from the ship's store, apparently for cleaning purposes. However, it seems that the real intention was to consume the alcohol by way of celebrating the end of their contracts along with the Third Engineer.

The following morning as the vessel was berthing the Chief Engineer appeared on the bridge struggling to breathe and advising the Master that the Second Engineer was already dead. The Master immediately summoned an ambulance and doctors to the vessel. The Chief Engineer and Third Engineer received medical attention and fortunately survived. The bottles of ethyl alcohol were taken away for analysis and were found to contain methanol and not ethyl alcohol as stated on the labels.

## Protecting Crews

What can shipowners do to protect their crew?



*Methanol's bond is converted to Formaldehyde and then Formic Acid in the body and can cause blindness, organ failure and death.*

A good drug and alcohol policy is a starting point but unfortunately this did not prevent one crew member smuggling contaminated bottles of whisky on board the vessel.

In addition to a drug and alcohol policy North recommends shipowners to raise awareness among crew regarding the dangers of buying alcohol, especially in underdeveloped regions of the world where there is a greater risk that the alcohol may have been contaminated with methanol.

Shipowners should also ensure that ships' supplies of ethyl alcohol are purchased only from reliable sources and that all labelling is in English or a language understood by the crew and if possible keep to the same brand. Ensure that the supplies of ethyl alcohol are strictly controlled and kept securely in a locker with restricted access.

Source: [www.dailymail.co.uk/news](http://www.dailymail.co.uk/news)

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# LOOKING AFTER THE DEAD AND DYING

Seafarers are, from time to time, faced with that most tragic of shipboard occurrences, the death of a shipmate.

While it may not be possible to prevent a death on board, crew members can ensure their dead or dying shipmates are treated respectfully. This means ensuring they are protected from unnecessary suffering, that their dignity is maintained, that the people around them offer comfort and compassion, and that they remain free from pain.

## Make Sure and Investigate

No-one should ever be considered dead unless it is agreed that breathing has stopped, the heart has stopped beating, and the person looks dead (skin is pale, eyes are dull and pupils are un-reactive to bright light). Taken together these signs are ordinarily sufficient to confirm that the person has died.

Once death is established, it is valuable to attempt to confirm the reason for death. The death should be categorised as being from natural causes, illness or from injury. Examining the scene of death can assist in recognising the cause and whether death is from illness or injury.

The circumstances of the death should be investigated by interviewing crew and reviewing ship and equipment records. Photographs should also be taken of the untouched scene to assist with any investigation by authorities at the next port. A note should be maintained of all the deceased person's personal equipment, clothing and belongings.

## Preparing the Body

If it is apparent that there will be some delay in arriving at a port, efforts should be made to retain the body for examination by a pathologist. As far as practical, preparation should be in line with the wishes and religious beliefs of the individual and his or her family. The family should be consulted and kept informed of developments throughout the entire procedure, right until the body is delivered to the next of kin.

All clothing should be removed, dried if necessary (but not laundered) and placed into sealable plastic bags. A description of all items removed from the body should be maintained and a duplicate list made for the authorities at the next port, which should be checked and signed for when handed over.

A record of the body's condition should be completed which should include, age, height, build, tattoos, any other distinguishing features, wounds or signs of illness.

The deceased should be washed and dried all over, combing through the hair and paying attention to finger nails. Arms and legs should be straightened out and fingers should be interlocked over the thighs. Empty the bladder by applying pressure to the lower abdomen. Ankles should be tied together using cotton bandages.

The body should then be placed into a body bag and kept in a refrigerator or cold store set aside for the purpose. The aim is to store the remains at approximately 4°C. The body should not be frozen as this damages it.

## Comfort to Relatives

Undertaking the process described above not only assists in dealing with the authorities at the next port of call, but more importantly should also give some comfort to the relatives of the deceased. They will want to know the circumstances of the death and that proper respect was shown to their loved one.

Source: "The Ship Captain's Medical Guide" [http://www.dft.gov.uk/mca/mcga07-home/workingatsea/mcga-medicalcertandadvice/mcga-dqs\\_st\\_shs\\_ships\\_capt\\_medical\\_guide.htm](http://www.dft.gov.uk/mca/mcga07-home/workingatsea/mcga-medicalcertandadvice/mcga-dqs_st_shs_ships_capt_medical_guide.htm)



# MARITIME LABOUR CONVENTION – CHECK CREW CONTACTS

The Maritime Labour Convention 2006 (MLC) is the new International Labour Organisation (ILO) code to protect the rights and welfare of seafarers. The Convention came into force on 20 August 2013 and at the time of writing had been ratified by 53 ILO member states.

North recommends that shipowners review their current crew contracts to ensure that the terms included are compatible with the entitlements of seafarers, as detailed in the Maritime Labour Convention 2006.

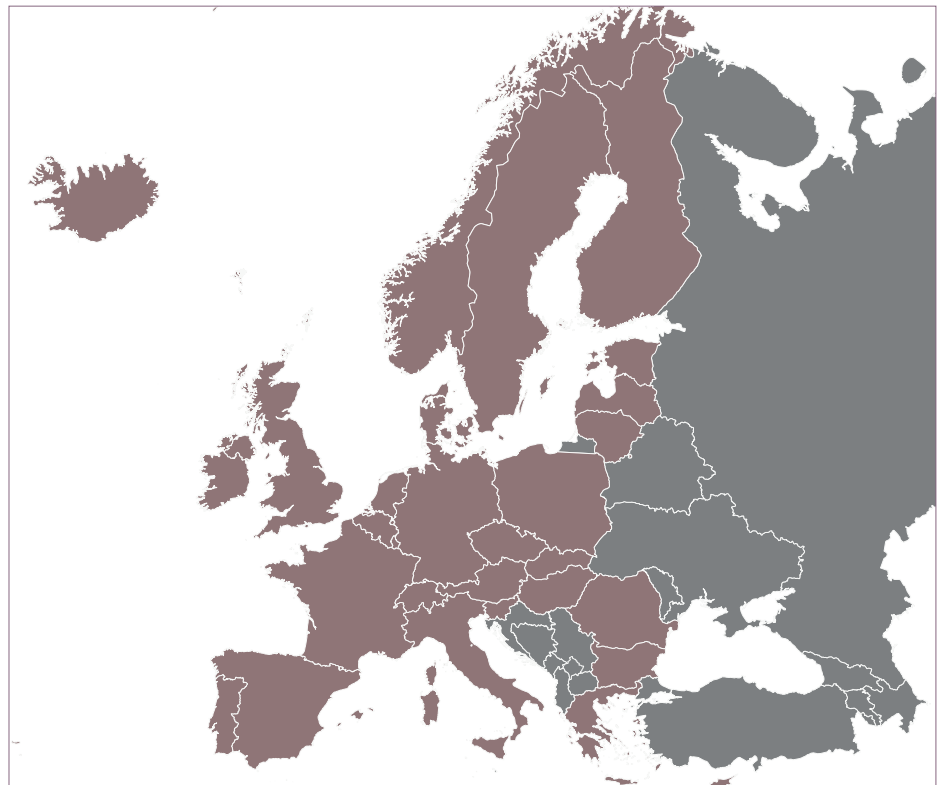
The Convention requires certain information to be included in the crew contract, including, but not limited to, the seafarer's full name, their date of birth or age, the capacity in which the seafarer is employed along with wage and annual leave information.

In addition, the Convention also details requirements of the seafarers' entitlement in respect of wages, hours of work, medical care, the seafarer's property and repatriation.

There are certain circumstances where the shipowner may be able to exclude their liabilities, for example, when an injury to a crew member is not suffered during service on the ship, when an injury or illness is caused by the wilful misconduct of the crew or in circumstances when a crew member's illness was intentionally concealed and not disclosed at the time the contract of employment was entered into, by the crew member in question.

The relevant Flag State should be able to provide any guidance to shipowners regarding any queries they have in respect of their crew contracts and compliance with the Convention. In addition, the Club would remind Members of their obligations under its Rules, Rule 19(1)(f) and would request that any revised or new crew contract terms are submitted to the Club for approval prior to implementation.

# ENSURE EU CREWS HAVE HEALTH CARDS



**EHC Countries**

European Union (EU) law gives European citizens rights to safe, good quality healthcare, free of charge while abroad within the EU. This applies to seafarers so, by ensuring European crew members have a European Health Insurance Card (EHIC) while on board, significant savings may be made on medical costs within the EU.

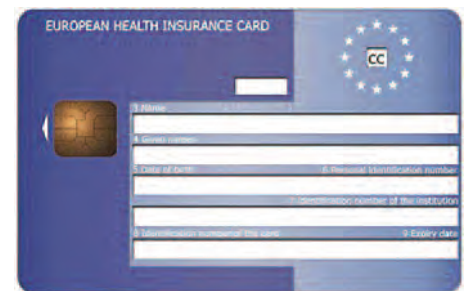
North has had two claims recently involving Polish crew members who were disembarked in EU countries where free state treatment was available for their condition under the EHIC scheme. Unfortunately, neither of the crew members possessed an EHIC and this resulted in significant unnecessary treatment costs being charged to the Member.

## Significant Savings

The EHIC will not cover all medical cases, for example treatment in private hospitals. Free treatment is also limited to the same level as available for local nationals. However, ensuring European seafarers possess an EHIC and bring it with them when they join a ship, can save a lot of paperwork, time and money.

The EHIC is obtained free of charge and is valid for five years. To find out how to apply for an EHIC in an EU member state, visit:

**<http://ec.europa.eu/social/main.jsp?catId=563&langId=en#nationalinfo>**





# CARRIAGE OF LIVE ANIMALS ON CONTAINER VESSELS

As the Hague or Hague-Visby Rules do not apply to the carriage of live animals, the Club requires Members to take steps, when carrying such cargoes, to ensure they do not incur liabilities over and above the Hague or Hague-Visby limits; such steps will ensure that P&I cover remains in place in the usual way.

A contract of carriage for livestock should ideally exclude all liability, however caused, arising from the carriage of live animals.

In addition to the contractual considerations required for Club cover, the carriage of live animals can bring unique challenges.

Livestock specific and detailed advice on the carriage requirements should be requested from the shippers. General advice on the carriage of livestock includes:

## Container(s)

- These should be suitably equipped with stalls where necessary depending on the type of animal carried.
- Consideration should be given to the provision of ventilation, lighting, shelter, drainage and exercise space and shade.

## Stowage of containers

- Units should be stowed on deck and sheltered from the weather (where possible by use of adjacent containers).
- The position of the container should be such so as to minimise ship movement.

- Consider use of flat-racks stowed adjacent to provide an exercise area and adjacent containers to provide storage of feedstuff.
- Remember that animal waste is pungent stuff and could damage cargo by taint, don't stow the animals next to reefer containers.
- If stowed on the hatch covers, consider sealing the cross joints with tape as a temporary measure to protect both ingress and damage to the seals.

## The attendant

- Consider provision of accommodation and his position as a supernumerary on board the vessel.
- Provide familiarisation training on the ship according to the Safety Management System and that it may be necessary to have a crew member accompany the attendant during aspects of their work.
- Provide familiarisation training on the particular practical requirements (e.g. waste disposal) and the need for regular inspections at the end of each watch.

## Practical considerations

- Availability of power and water.
- Disposal and storage of waste products; both the method and disposal of waste products should be considered and carried out in compliance with the disposal of garbage regulations under MARPOL Annex V.



- Take account of any quarantine regulations as well as national guidance on the transport and welfare of animals' applicable at the country of destination and any transshipment ports.
- A humane killer will be required on board – this is normally considered to be a firearm and as such the authorities in the vessel's ports of call should be notified. It should also be stored in a secure location on board.
- The attendant must be trained and certified in the use of the humane killer.
- Passage planning is important, some animals cannot take prolonged exposure to heat and/or cold and alterations to a passage plan may have to be made.
- If an animal dies, disposal of the corpse may be a problem. How can it be lifted to the vessel's side? Is disposal at sea even allowed?
- Heavy weather may cause the animal's condition to deteriorate or it could slip and break a leg. The vessel may wish to route to avoid heavy weather.
- Veterinary medicines may be controlled and will have to be declared to port authorities.

Taking the necessary precautions when carrying live animals should ensure that the animals arrive at their destination in good health and without any incident.



# BEST PRACTICE FOR LIQUID CARGO SHIP/ SHORE DISCREPANCIES AT LOADING

North's P&I cover assumes that all Members will carry cargo according to the terms of the Hague or Hague-Visby Rules and will follow best practice in their handling of bills of lading. This includes the way in which Masters decide on the figure to insert on the bills of lading when there is a discrepancy between ship and shore loading figures.

When faced with such a discrepancy, Masters should first decide whether it is within an acceptable margin. This may vary from case to case although 0.3% is, in North's view, the acceptable margin to apply for liquid cargoes. If the discrepancy is more than 0.3%, it needs to be investigated.

While some shippers and pool operators regard 0.5% as the industry standard, this may not be accepted in difficult jurisdictions such as China when shortage claims arise.

## Master's Role

In terms of what figure should be inserted on the bills of lading, the fundamental question is what Masters regard as acceptable based on their experience and the information available at the time, not what an operator decides is commercially acceptable.

In deciding how to proceed, Masters should always bear the following points in mind:

- They are not obliged to sign a bill of lading which they know to be untrue, think is probably untrue or the accuracy of which has not been checked by an independent survey.
- They must act reasonably. It is a question of the Master's experience as to whether or not the difference between the shore figure and the ship figure is such that they should refuse to sign the bill of lading because they genuinely believe that the cargo represented by the 'difference' has not been loaded.
- In relation to the question of what is an 'acceptable' margin, that is a question of fact for Masters in each case. North's loss prevention publications indicate that a margin of 0.3% in respect of tanker cargoes is thought to be acceptable by the industry.

The question therefore in each case is whether or not the difference between the ship figure and the shore figure is such that the Master could be said to know the shore figure is inaccurate. That is a question of fact in each case.

As such, a ship/shore difference which falls outside the 0.3% margin should act as a trigger to Masters and/or surveyors to recheck all measurements. If the figures are within the 0.3% margin, it is likely that Masters will not be able to say positively that the shippers' figures are wrong. In North's experience therefore, the margin of 0.3% is the correct point at which to take further action. The discrepancy needs to be investigated further by Masters, and a surveyor should be appointed.

## Effects on Club Cover

Issuing a bill of lading where there is a discrepancy between the ship and shore figures which falls within the acceptable margin of 0.3% should not generally prejudice Club cover.

Issuing a bill of lading where there is a discrepancy between the ship and shore figures in excess of 0.3% will not necessarily prejudice Club cover. Cover for claims arising in those circumstances is likely to be considered on a case-by-case basis and, as noted above, much will depend upon whether the Master acted reasonably.

Masters should never agree to issue a bill of lading with a figure which they know to be false or where they have no reasonable belief in its truth, or where they have made no effort to check the accuracy of the figures as this may prejudice a Member's cover.

Where Members are in any doubt over a ship/shore discrepancy they should contact North for assistance.

# FRAUDULENT BILLS SPOTTED IN CHINA



A recent incident in China has highlighted the importance of keeping a look-out for fraudulent bills of lading and for ships' agents to check the documentation presented very carefully.

One of North's Members was recently discharging a cargo in the Chinese port of Caofeidian when, through vigilance, it was discovered that the bills of lading presented for the cargo were fraudulent.

Discharge was ceased until the issue was clarified, and all the original bills were located and returned to the owner and agent.

## Vigilance Avoided Costly Dispute

The fraudulent bills had already made their way into the banking system and were being used as a means for the end receiver to receive the goods without paying for them under the sale contract. A potentially very costly dispute was avoided by the vigilance of those concerned.

Members should be even more vigilant when being asked to deliver without production of an original bill of lading and against a letter of indemnity.

## Further Information

For further guidance please refer to North's loss prevention guides Bills of Lading and Letters of Indemnity, both of which can be viewed on North's website: [www.nepia.com/lpguides](http://www.nepia.com/lpguides)

# COURT OF APPEAL CONFIRMS OFF-HIRE CALCULATION

Everyone thought they understood how off-hire under Clause 15 of a New York Produce Exchange (NYPE) time charter was to be calculated until the 2012 decision of the UK High Court in the case of *Minerva Navigation Inc v. Oceana Shipping AG, the Athena*. That understanding has now been restored by the Court of Appeal, which recently overturned the High Court decision.

The *Athena* proceeded on an amended NYPE charter on a voyage from Russia to Syria. The Syrian authorities prevented the cargo being imported so the charterer ordered the vessel to proceed to Libya and anchor 'at road port Benghazi' to await further orders.

The Master stopped the vessel in international waters outside Libya while new bills of lading were being issued. The vessel continued to drift in international waters for almost 11 days, until it resumed its voyage to Benghazi to discharge its cargo.

## Owner Challenged Charterer

The charterer put the vessel off-hire for the period it drifted, which was challenged by the owner through arbitration. The majority of the arbitrators held that the charterer's order was valid and that the owner should have complied with it. The result was that the vessel was off-hire during the period when it was drifting.

The arbitrators also held unanimously that had the vessel proceeded directly to Benghazi it would have berthed no earlier than it in fact did. The result was that there was no actual loss of time to the charterer when considered from a wider perspective.

The owner appealed to the High Court. The appeal was allowed on the basis that it was not sufficient for the charterer to show that there was a net loss of time in performing the service immediately required of the vessel.

The High Court decided that the charterer was only permitted to deduct hire to the extent that it could show that there was in fact a 'net loss of time to the chartered service'. There was no net loss of time in that sense in this case, so that the vessel was not off-hire.

## Court of Appeal Reverses Decision

The charterer appealed to the Court of Appeal. The appeal was allowed. The off-hire clause was triggered by a cause preventing the full working of the vessel. That referred to the vessel's ability to do that which it was immediately required to do.

The focus was not on the wider concept of the 'chartered service' as a whole or the entire maritime adventure which might be undertaken during the chartered service. The correct question is to ask, what time had been lost during the period when the full working of the vessel was prevented?

The fact that the same amount of time would have been lost for other reasons at another stage in the chartered service was not a relevant consideration. The service immediately required of the vessel while drifting in international waters was to proceed to the roads at Benghazi. The vessel was, accordingly, off-hire while it was not complying with the charterer's orders.

## Benefits for Owners and Charterers

The Court of Appeal decision represents, and affirms, the common understanding of the way in which off-hire is assessed. The decision is to be welcomed by owners and charterers from a practical standpoint. Part of the rationale for the decision is that applying a wider test would deprive charterers and owners of the ability readily to assess whether or not a vessel is off-hire.

For charterers, they need to know whether or not they are entitled to deduct from hire and/or are required to pay hire at the time of the event in question. For owners, they need to know whether or not they are entitled to withhold performance of and/or withdraw the vessel if hire is not paid at the time that such a decision is made and acted on.

A wider-ranging test would have created undesirable uncertainties to both owners and charterers. The test as it stands, and has been confirmed, requires only that the full working of the vessel is not available to comply immediately with a charterer's orders in order for off-hire to arise. No wider-ranging factual enquiries need to be made.

There is no need to wait on events subsequent to the period of inefficiency to determine (retrospectively) whether or not there was an off-hire event.

It is understood the charterers have applied to the Supreme Court for leave to appeal this decision but it is unlikely to be known before early in the New Year whether permission is granted. If there is a further appeal and if the decision changes again we will report in a future issue of *Signals*.

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# CONFUSION CAUSED BY BRAZIL'S GREEN LIGHT FOR COPY BILLS

A new Brazilian customs regulation is causing concern and confusion for Members unloading in Brazil. Customs Normative Instruction 1356 allows cargo to be discharged against a copy bill of lading rather than the original bill.

The new rule differs greatly from the previous position in Brazil and the long-established worldwide practice for importers and consignees to present an original bill of lading in exchange for delivery of cargo. Typically a ship's P&I cover is dependent on this contractual obligation being fulfilled.

## Carriers Exposed Either Way

The removal of the need for an original bill of lading could potentially expose carriers to non-delivery claims. On the other hand, if carriers now refuse to discharge against copy bills in Brazil, they may be held in breach of the new regulation resulting in possible fines and delays to their vessels.

The International Group of P&I Clubs is currently engaged in correspondence with the authorities in Brazil and is making efforts to find a solution to the problem. In the meantime, Members trading to Brazil should be aware of the situation and should contact North for further guidance and the International Group's latest position.





# IRON ORE FINES CATEGORISED AS GROUP A CARGO UNDER IMSBC CODE



Iron Ore fines being loaded by grab

The bulk carriers *Asian Forest* and *Black Rose* both capsized and sank in 2009 while carrying iron ore fines cargoes that are believed to have liquefied. These incidents and several others led to recognition in the international shipping community that there was a need for a specific schedule in the International Maritime Solid Bulk Cargoes Code (IMSBC) covering the carriage of this potentially dangerous cargo.

## New Schedule Agreed

Four years later, at the September 2013 session of the IMO Dangerous Goods, Solid Bulk Cargoes and Containers Sub-Committee (DSC), a new draft schedule for iron ore fines was finally agreed. It is intended that this schedule will be included in the 2017 edition of the IMSBC Code.

Voluntary application of the new IMSBC Code schedule is due to commence on 1 January 2016 and will become mandatory on 1 January 2017. Members can expect the new Code and test to be adopted by shippers from January 2016.

The new schedule was developed with input from major iron ore producers Vale, BHP Billiton and Rio Tinto as well as Flag States, the International Group of P&I Clubs, Intercargo and the International Chamber of Shipping. The level of research and data gathered during the process was unprecedented for an IMSBC Code cargo and it advanced the knowledge of how iron ore fines, and cargoes that may liquefy, may behave when at sea.

## Iron Ore Fines Defined

The new 'iron ore fines' schedule categorises the material as a Group A cargo, meaning that it is liable to liquefy if carried with a moisture content in excess of the transportable moisture limit (TML).

This applies to iron ore cargoes containing 10% or more of fine particles less than 1mm and 50% or more of particles less than 10mm.

However, if the total goethite (iron bearing oxide mineral) content is 35% or more by mass regardless of presence of fine particles, the cargo may be carried in accordance with the individual schedule for 'iron ore' and carried as a Group C cargo, which is not liable to liquefy or possess chemical hazards. This is conditional on the Master receiving from the shipper a declaration of the goethite content determined by internationally or nationally accepted standard procedures.

## Modified TML Test

The amendments to the IMSBC Code also contain details of a new method for determining the TML of iron ore fines, known as the modified Proctor/Fagerberg test. The modified test has been introduced as a result of the concerns voiced by a number of large iron ore producers that current testing methods contained in the Code did not accurately reflect the specific characteristics of iron ore fines cargoes.

The modified Proctor/Fagerberg test procedure was developed by mining companies and was scientifically peer reviewed by Imperial College London at the instigation of industry bodies, including the International Group of P&I Clubs. The test is based on data obtained from scientific analysis of the cargo properties and measurements obtained from vessels during loading and throughout the voyage.

The new test has a number of differences to the existing Proctor/Fagerberg test contained in Appendix 2 of the IMSBC Code:

- It is based on 80% saturation rather than the current 70% saturation.

- The weight of the compaction hammer has been reduced from 200g to 100g.
- The changes in the test method result in a higher recorded TML.

These differences will potentially allow iron ore fines cargoes to be loaded with a higher moisture content than would be permitted under current test methods.

## Can Test Confusion

When loading Group A cargoes, the Master of a vessel has the option of conducting a complementary on-site can test to determine whether or not free moisture or a fluid condition is detected. The can test has traditionally been the only means available to the vessel for testing cargoes which may liquefy.

However, North has been advised by cargo experts that cargoes permitted to be carried under the modified Proctor/Fagerberg test when subjected to a can test may possibly exhibit signs of free moisture. While the situation could lead to confusion over whether or not the cargo is indeed safe to carry, there is no alternative on-site test method currently available to the Master.

Therefore, should Masters have concerns over the safety of the cargo being loaded, their authority under the International Convention for the Safety of Life at Sea (SOLAS) to stop loading should be exercised and further advice sought. Also, to minimise potential disputes regarding any delays in loading, careful consideration should be given to the wording of the charterparty.

# NOISE CODE MAKING ITSELF HEARD IN 2014

On 1 July 2014, the International Convention for the Safety of Life at Sea (SOLAS) will be amended to make the 'Code on Noise Levels On Board Ships' (the Noise Code) mandatory for new vessels. The Code's purpose is to provide standards on preventing noise levels hazardous to human health and reduce seafarers' exposure to such noise levels. It gives consideration to the need for communication and the ability to hear audible alarms, the importance of protecting the seafarer from noise-induced hearing loss, and the provision of an acceptable degree of comfort during rest hours.

Introduction of the Noise Code will lead to changes in SOLAS, with Chapter II-1 Regulation 36 being replaced with a new Regulation 3-12 'Protection Against Noise'.

## Applicability to Vessels

An earlier version of the Noise Code has been in existence for over 30 years, but aspects of the new revised Code relating to design and construction to reduce noise levels will become mandatory through SOLAS.

Unless a Flag State administration deems that compliance with a particular provision is unreasonable or impractical, the Noise Code will apply to ships of 1,600 GT and above for which the building contract is placed on or after 1 July 2014; or, in the absence of a building contract, the keels of which are laid or are at a similar stage of construction on or after 1 January 2015; or the delivery of which is on or after 1 July 2018.

The Regulation goes on to address vessels for which keels have been laid (or at similar stage of construction) on or after 1 July 2009 but before 1 January 2015, and are delivered before 1 July 2018, by stating measures in accordance with the Noise Code shall be taken to reduce noise in machinery spaces to an acceptable level as determined by their Flag State.

Where noise levels cannot be reduced, then the source of noise shall be suitably insulated or isolated, or a refuge from the noise provided. The Regulation further states that ear protectors shall be provided for personnel entering such spaces.

## Noise Surveys and Management

The Noise Code also gives guidance on carrying out noise surveys, as well as advising on the maximum noise level limits for various spaces on board the vessel, exposure times and standards on hearing protection and warning notices. It provides guidance on how to include noise management into ships' safety management systems and gives suggestions on methods of attenuating noise.

The introduction of the Noise Code should produce benefits for seafarers' health, improve working conditions and improve the living conditions on board. It should also have the added benefit of reducing the noise levels of vessels operating in or around population centres or in sensitive environmental areas, hence providing a wider environmental benefit.

## Further Information

IMO resolution MSC.337(91) Adoption of the Code on Noise Levels on board Ships can be found at: [http://www.imo.org/KnowledgeCentre/IndexofIMOResolutions/Documents/MSC%20-%20Maritime%20Safety/337\(91\).pdf](http://www.imo.org/KnowledgeCentre/IndexofIMOResolutions/Documents/MSC%20-%20Maritime%20Safety/337(91).pdf)

## SOLAS Ch.II-1 Regulation 3-12 "Protection Against Noise"

1. The new SOLAS regulation regarding protection against noise shall apply to ships of 1,600 gross tonnage and above that:

- a) the building contract is placed on or after 1 July 2014; or
- b) in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2015; or
- c) the delivery of which is on or after 1 July 2018, unless the administration deems that compliance with a particular provision is unreasonable or impractical.

2. For ships delivered before 1 July 2018 and:

- a) contracted for construction before 1 July 2014 and the keels of which are laid or which are at a similar stage of construction on or after 1 January 2009 but before 1 January 2015; or
- b) in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2009 but before 1 January 2015;

measures as referred to in the Code on Noise levels on board ships, adopted by the Organization by resolution A.468(XII), shall be taken to reduce machinery noise in machinery spaces to acceptable levels as determined by the administration. If this noise cannot be sufficiently reduced the source of excessive noise shall be suitably insulated or isolated or a refuge from noise shall be provided if the space is required to be manned. Ear protectors shall be provided for personnel required to enter such spaces, if necessary.



# IMO UPDATE NOVEMBER 2013

## New Bulk Chemical Requirements

The International Maritime Organisation Maritime Safety Committee (MSC) approved amendments to the International Bulk Chemicals Code (IBC) at its 91st session in November 2012. The amendments will enter into force on 1 June 2014.

The amendments, as covered in MSC.340(91), specify the minimum requirements for different categories of chemicals. They contain an updated list of the products carried in bulk and a revised list of products to which the Code does not apply as these have been determined not to present significant hazards.



# 2014 UK RESIDENTIAL TRAINING COURSE IN P&I INSURANCE

North's highly successful annual residential training course in P&I insurance, based at the historic Lumley Castle Hotel near the Club's head office in Newcastle upon Tyne, celebrates 22 years this summer. The event on 13-20 June 2014 will again provide delegates with a thorough grounding in the basic principles of P&I insurance.

Over the years it has been constantly updated to reflect the changing shipping, claims and legal environments while remaining true to its key features of quality teaching, delegate participation and networking.

## Further Information

For more information and to download a brochure, visit: [www.nepia.com/residential-training-course](http://www.nepia.com/residential-training-course)



# 2013 SINGAPORE RESIDENTIAL TRAINING COURSE IN P&I INSURANCE



The second Singapore based training course in P&I Insurance took place at The Shangri-la's Rasa Sentosa Resort between 18-22 November 2013. The biennial event was attended by 45 delegates, primarily from Members' offices in the Asia Pacific region, with delegates jetting in from as far afield as Oman, USA, and Australia.

An intensive week of presentations, workshops and assessments gave delegates a comprehensive introduction to P&I insurance, claims and loss prevention.

This included a trip to the Singapore Polytechnic's Marine Simulation Unit where they experienced a collision as seen from the bridge of a ship. It was not all work as networking opportunities were available to delegates who were treated to some of the famous local and regional delicacies at the course dinner.



# COLLISION CASE STUDY

North's loss prevention guide entitled *Collisions: How to avoid them* includes a series of collision case studies intended to generate discussions about the International Regulations for Preventing Collisions at Sea (COLREGs). Further case studies are published in *Signals* from time to time and the next of these is provided here.

Each case study is set out as simply as possible, with the minimum information necessary to describe a developing situation. It also asks a number of questions but the answers are not provided. The case studies are intended to promote wide-ranging discussions about collision avoidance.

## Scenario

Your ship is entering harbour in thick fog. You are at slow ahead, pilot on board.

Another ship is leaving harbour at higher speed, with no pilot on board.

Both ships have the other on radar. Both ships have extra lookouts and are making the correct sound signal.

Your pilot insists on standing on slowly. He tells you the other ship will keep clear.

You only see the other ship moments before collision, which takes place in the narrowest part of the harbour.

## Questions

- 1 At 1348, what should your ship have done?
- 2 At 1348, what should the other ship have done?
- 3 What caused the collision?

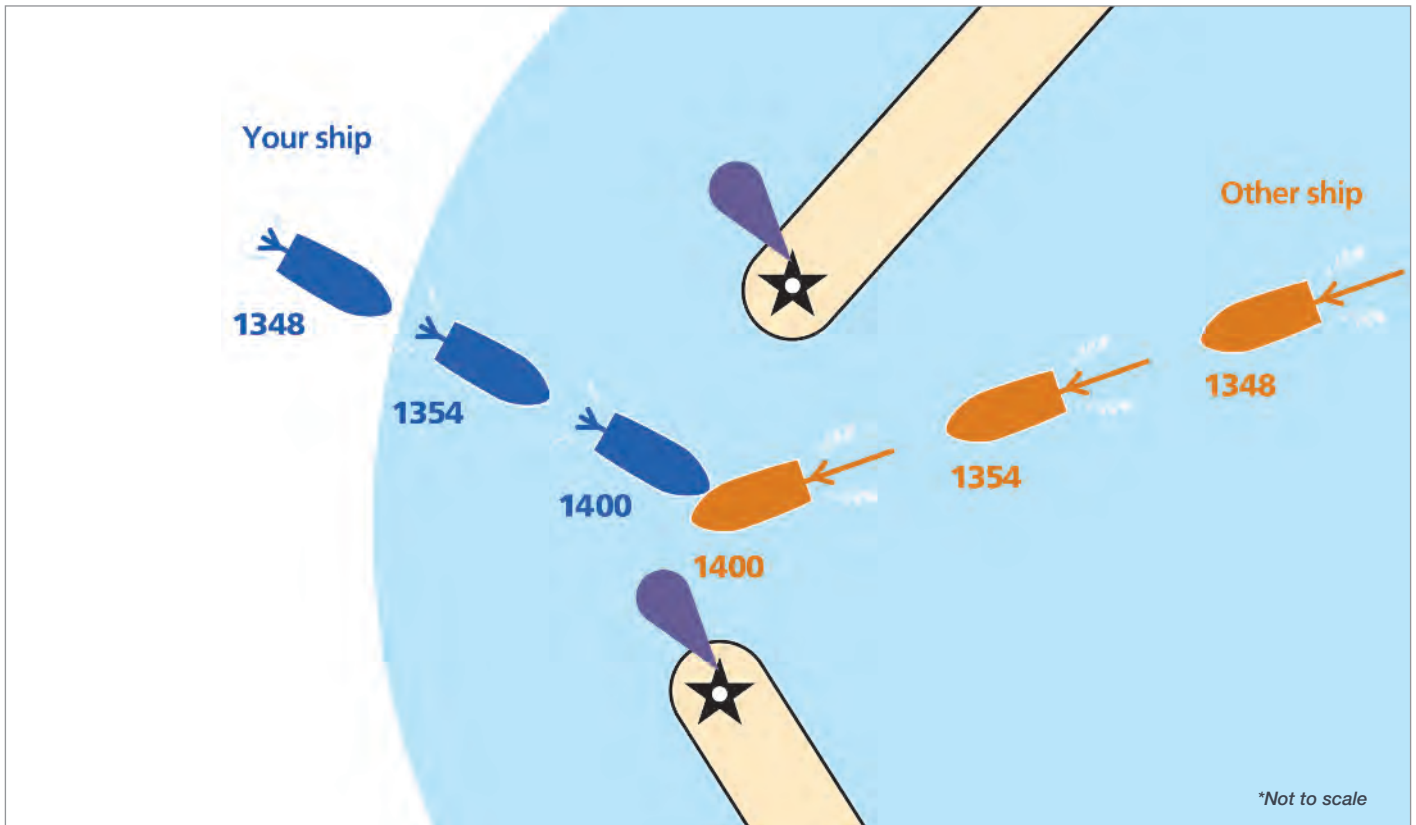
## Further Information

North's loss prevention guide entitled *Collisions: How to avoid them* can be viewed on its website: [www.nepia.com/lpguides](http://www.nepia.com/lpguides)

## Your Copy of Signals

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

- People Claims – Controlling the Cost.



## 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 the North's loss prevention facility is to provide a source of 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 that information are expected to satisfy themselves that the information is relevant and suitable for the purposes to which it is applied. In no circumstances whatsoever shall North of England P&I Association Limited be liable to any person whatsoever for any loss or damage whatsoever or howsoever arising out of or in connection with the supply (including negligent supply) or use of information (as described above).

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**The North of England P&I Association Limited**

The Quayside  
Newcastle upon Tyne  
NE1 3DU UK  
Telephone: +44 191 2325221  
Facsimile: +44 191 2610540  
E-mail: [loss.prevention@nepia.com](mailto:loss.prevention@nepia.com)

[www.nepia.com](http://www.nepia.com)