NORTH NE P&I

SIGNALS NEWSLETTER

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Loss Prevention newsletter for North of England Members

Reporting pilot incidents

North of England is gathering information about incidents involving pilots following recent concerns about the number and value of such incidents. A reporting form has been included with this copy of *Signals* for Members to report incidents or near-misses. The information will be collected in a database to analyse whether there are any trends that would benefit from future loss-prevention measures.

See page 11 for full story

Avoiding Collisions

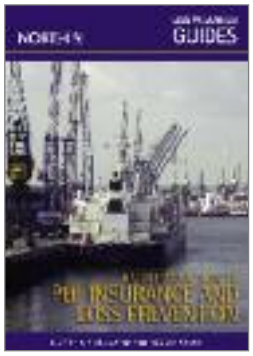
Investigations into collisions often reveal that the causal factors include not taking early action to avoid a close-quarters situation as required by the International Regulations for Avoiding Collisions at Sea. An article in this issue discusses the roles of the stand-on and give-way vessels in avoiding collisions, particularly in relation to taking early action. Another article looks at the role of automatic identification systems, including their limitations and use in avoiding collisions.

See page 4 for full story

Distance-learning course updated

The latest edition of North of England's well-known distance learning course is soon to be published. The fifth edition, updated to include recent industry developments, provides a comprehensive introduction to P&I insurance and loss prevention.

See page 10 for further details of the course and how to enrol.



Carriage of flexitanks

Flexitanks have been in use for the carriage of non-hazardous chemicals and other bulk liquids in containers since the 1970s. However, a significant increase in their usage has resulted in more reported instances of leakages and other problems. The article in this issue of Signals looks at typical problems and provides some general advice on procedures to be employed to avoid them.

See page 6 for full story

New law on redelivery

A recent judgment in the English Court of Appeal could have significant implications on the damages an owner can recover when a charterer redelivers the vessel late, where the late redelivery means the owner misses its next fixture. Charterers need to take care and make sure that the last voyage does not exceed the maximum period of the charterparty.

See page 2 for full story

Facilitating feedback

The Association is always interested to receive feedback about loss-prevention publications and services.

To make this easier, a feedback form is now provided on the back of the cover sheet dispatched with every issue of *Signals*. An electronic version of the form can also be downloaded from the risk-management pages on the Association's website.

See back page for further details.

Safety management system poster

A safety management system (SMS) is a structured and documented system enabling seafarers to implement a ship operator's safety and environmental-protection policy. A properly organised system should provide seafarers with guidance in a practical and efficient way, whereas a poorly organised system will not provide adequate guidance and may even cause seafarers to be less effective if the guidance is difficult to find or overly complicated. North of England's third *Safe Work* poster uses humour to convey the importance of having a well-organised safety-management system, comparing seafarers using an organised system with others using a poorly organised system.

A copy of the new poster – 'Safe Work, Safety Management' – is enclosed with this issue of 'Signals' for all Members and entered ships. A high-resolution A4-sized copy of the poster can be downloaded from the Association's website: www.nepia.com/risk/publications/posters/safework.php

Asbestos claims ruling

Thousands of workers in England and Wales suffering from an asbestos-related condition will not be entitled to claim compensation following a House of Lords ruling in October 2007.

Pleural plaques, which are areas of fibrosis present on the inner surface of the ribcage and the diaphragm, have no symptoms and are a condition that may act as a precursor to serious diseases such as mesothelioma and asbestosis. Five law lords unanimously upheld a Court of Appeal ruling that pleural plaques is not a disease in itself and sufferers are therefore not entitled to compensation.

The ruling however, only applies to sufferers of pleural plaques in England and Wales, and leaves other asbestos-related claims unaffected.

Haemorrhoids increase

In recent months the Association has noticed an increase in the number of cases where crewmembers have been disembarked, and even repatriated, suffering from haemorrhoids.

Haemorrhoids, commonly known as piles, are swollen enlarged veins in or around the anus. The haemorrhoids occur because the engorged blood vessels slow down or obstruct the flow of blood.

Symptoms

Some people with haemorrhoids may have no symptoms but, if they do, the most common are

- fresh bright-red bleeding from the anus – blood may be present on toilet paper or in the toilet bowl
- itchiness in the area around the anus
- a pain around the anus and lower rectum
- a feeling of something coming down, a bulge or a lump, at the anus giving the feeling that the bowel has not been emptied properly.

Causes

The exact cause of haemorrhoids is unknown though, despite what is sometimes said, they are not caused by sitting on hot radiators or cold floors! There are several factors that may increase the chance of haemorrhoids developing, which could include:

- genetic influence – you are more at risk if either of your parents suffered from haemorrhoids
- an unhealthy diet, especially one which is low in fibre
- heavy lifting jobs
- being overweight
- chronically straining with constipation or diarrhoea.

Treatment

Most episodes of haemorrhoids come and go quite quickly but, if simple measures do not help or the problem is more long lasting, keeps returning or worsening, then a doctor should be consulted.

Cold compresses and even ice can be helpful, otherwise cream or tablets may be prescribed. If none of these simple measurers work then surgery - which is usually very straight forward and effective - may be necessary.

A green approach to scrapping

'Green passports' could soon be as ubiquitous on ships as green deck paint – and possibly even before they become mandatory.

The concept of a green passport has been introduced by the International Maritime Organization (IMO) in its draft Convention for the Safe and Environmentally Sound Recycling of Ships. The document will contain an inventory of all materials potentially hazardous to health or to the environment that may have been used in the original construction of the ship, or may subsequently form part of it.

The passport will stay with the ship throughout its life and be added to as necessary to reflect changes in materials and equipment. It will eventually serve to alert the ship breaker to any materials or equipment on board that may need special treatment to avoid any health hazards or environmental damage.

Interim measures agreed

However, it may be some time before the convention comes into force. In the meantime, the Industry Working Group on Ship Recycling - comprising the International Chamber of Shipping, BIMCO, the International Association of Classification Societies, Intercargo, Intertanko, International Parcel Tankers Association and the Oil Companies International Marine Forum - have agreed upon a set of interim measures, based on those in the draft convention, outlining a number of principles to be observed when ships are sold for breaking.

The interim measure include recommendations for the selection of breaking yards and ship-recycling facilities, an inventory of any hazardous materials on board and ensuring, so far as possible, that the ship is gas-free while being broken.

The concept of the green passport is also being promoted. In particular, a number of classification societies are already offering help and guidance on the creation and maintenance of green passports.

Opportunity to act responsibly

The draft IMO convention is likely to become mandatory – the only question is when. There is much to be said for shipowners working on these issues now and following the interim initiative laid out by the Industry Working Group.

Members are also recommended to take advantage of the help and guidance available from classification societies on green passports now so they are well prepared for when the passports do become mandatory.

As the industry comes under increasing pressure from various quarters, not least from an environmental point of view, this is one of those occasions when it has the opportunity to be ahead of the game. The industry can prove it is capable of acting responsibly and of taking the initiative on issues such as this without having to wait for the heavy hand of legislation.

Late redeliveries get expensive for charterers

The recent *Achilleas* decision in the English Court of Appeal (*Transfield Shipping Inc.* v. *Mercator Shipping Inc.*) looks set to increase substantially the damages an owner can recover when a charterer redelivers a vessel late.

Previously the most an owner could recover from a charterer redelivering late was an increased rate of hire from the time the charterparty should have ended, to the time it actually ended, where the market had gone up in the meantime.

The facts of the case are that on the *Achilleas'* final charter voyage, charterer Transfield gave owner Mercator 20 and 15 days approximate notice of redelivery followed by a 10-day definite notice of redelivery. The owner then fixed a follow-on four-to-six month charter with Cargill at the rate of US $39,500 a day, the laydays commencement and cancelling (laycan) to coincide with the end of the Transfield charter.

US$ 1.4 million loss

However, it gradually became obvious to the owner that Transfield was going to redeliver late, and that the laycan date with Cargill would be missed. So as not to lose the Cargill fixture, the owner renegotiated a fresh laycan with Cargill but was forced to agree to a reduced charterparty rate of US $31,500 as the market had since dropped.

The *Achilleas* was redelivered nine days late. Under existing law, all the owner would have been able to recover was the difference in the original charterparty rate and the redelivery market rate for nine days, a claim of only US $158,301. However, the owner argued this did not reflect its true loss. The follow-on fixture to Cargill had lasted 191 days and 11 hours. By only earning US $31,500 a day instead of the original US $39,500, the owner had lost out on US $1,364,584. This, the owner argued, was the sum Transfield should compensate it for.

Decision makes new law

Making new law, the Court of Appeal allowed the owner to claim the US $1,364,584 loss. The court decided Transfield had been in breach of contract by redelivering late, and it was not unlikely that late redelivery of a ship would mean a subsequent fixture being missed. The owner had been forced to renegotiate with Cargill and as a result had suffered the loss, so the owner could recover this from Transfield.

Charterers need to take care, therefore, when giving their last voyage orders. They need to make sure that the last voyage does not exceed the maximum period of the charterparty, since they may find themselves facing a potentially large damages claim if the late redelivery means the owners miss their next fixture.

Why it is important to report near misses

An accident is rarely a single catastrophic event – it has a number of root causes and an error chain that all come together at one time and one place. This means an accident can be avoided by removing a root cause or avoiding an error, or an accident may still happen but the human, environmental or financial consequences are less severe.

It can also mean there is no accident but there is still a near miss. A near miss still has root causes and an error chain, so important lessons can be learned from investigating a near miss in the same way as an accident – as illustrated by the following well-known example.

Herald of Free Enterprise

On the evening of 6 March 1987 at 1805 hours, the ro-ro ferry *Herald of Free Enterprise* left the berth at Zeebrugge bound for Dover. Twelve minutes later the ferry capsized and 193 people lost their lives.

The immediate cause was flooding of the car deck through the open bow door, causing a massive free surface effect on the stability sufficient to cause the ship to capsize. The bosun who was supposed to close the doors was asleep in his cabin – nobody thought to call him and the chief officer left the car deck and went to the bridge knowing the bow doors were still open because the ship needed to stay on schedule. The doors could not be seen from the bridge as there was no indicator or camera fitted, despite requests by masters and chief engineers to have them fitted. The shore management of the ferry who had not actioned this request were later described as having a 'disease of sloppiness'.

But the root causes and error chain did not stop there. During the investigation it was revealed that a sister ship had crossed the Channel with the bow doors open but without incident. So there must have been other errors that made the ship lower in the water. Investigation found the following.

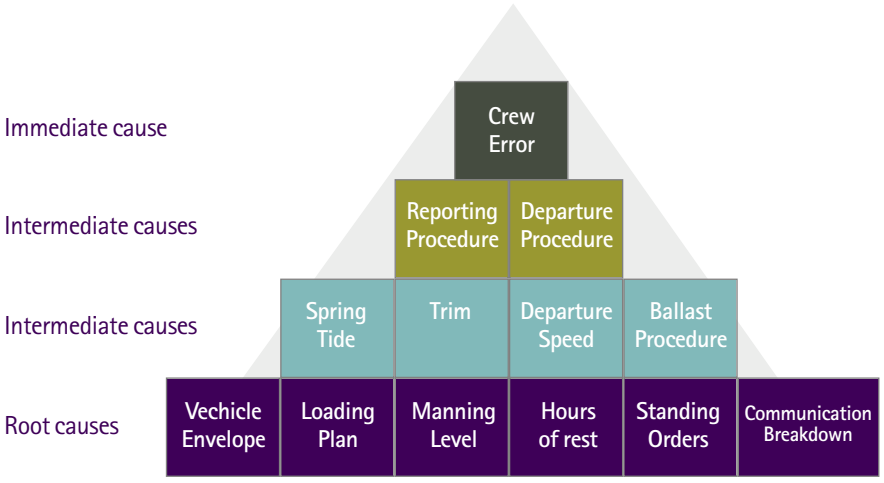
- The *Herald of Free Enterprise* had been 'ballasted down by the head' in order for the shore ramp to reach the car decks – the ship was not designed for the Zeebrugge route and was due to be modified.
- The stability booklet contained a maximum mean draft that must not be exceeded. When the stability was calculated after the accident, it was found that the maximum mean draft was exceeded. Ship's staff said that it was not necessary to read the draft as vehicle weights were always within certain margins and the stability was always the same.
- The increase in draft caused by squat when a ship moves through the water is amplified when in shallow water. The 'shallow water effect' occurs when the depth is less than twice the ship's draft, as it was on the evening the *Herald of Free Enterprise* sailed.
- Squat is also proportional to speed. Company procedures stated that engine telegraphs should not be put to full-ahead until clear of the breakwater. On 6 March 1987, the master put the ship full-ahead immediately on clearing the berth. The bow wave height was also proportional to speed – the higher the speed, the bigger the bow wave.
- The ship was not fitted with any transverse bulkheads or 'flood gates' – the car decks were open.

A simple review of the events of that night in March 1987 identifies six errors – the error chain – and some possible root causes – fatigue, a 'disease of sloppiness' or culture of negligence, a negative reporting system.

One step from a near miss

Removing just one of the many errors or root causes could have avoided the *Herald of Free Enterprise* tragedy. If, for example, the bosun had arrived late and closed the bow doors with only a small ingress of water, 193 people might not have lost their lives that night. But, there would still have been a near miss.

All the other errors and root causes are still there to be discovered during the investigation process required to complete a near-miss report – which is why it is so important to report all near misses. They are just a step away from an accident.



Ensure your ships are insured for proper value $

Members will be aware that if the liabilities and costs incurred as a result of collision between an entered ship and another ship are in excess of the amount recoverable under the entered ship's hull policies, cover for the difference may be provided by the Association (Rule 19(10)(c)).

However, Members should also remember that such cover is conditional on the entered ship being insured for a proper value under its hull policies. If the Association's Directors determine that the amount actually insured is less than the proper value, a Member will only be able to recover the amount in excess of that proper value (Rule 19(10)(B)).

A similar provision applies to P&I cover relating to the proper value of an entered ship when it is being assessed for contribution in relation to the ship's proportion of general average, special charges or salvage (Rule 19(18)(a)).

When ship values are rising, it is thus important that Members continue to check that their entered ships are insured for proper values under their hull policies to avoid the serious risk of not being able to make a full P&I recovery in the circumstances described above.

Members with any queries or requiring further information should contact the underwriting department at the Association.

Collision avoidance – the importance of early and substantial action

Collision avoidance – the importance of early and substantial action

The following describes a real-life collision incident and subsequent investigation. It emphasises the importance of taking early and substantial action as soon a close-quarters situation develops.

There are two ships in the middle of the ocean, it is 0700 on a clear morning and both ships have seen each other at over 6 nautical miles (11 km) range. Both ships have automatic radar plotting aid (ARPA) radars running with the chief mate and a lookout on the bridge of one ship and the third mate and a lookout on the bridge of the other. One ship is doing 16 knots and the other 22 knots. Both bridge teams have established that risk of collision exists and appreciate that one ship is the give-way vessel and the other is the stand-on vessel.

At 0720 the ships collide. How can that possibly happen?

The give-way vessel

Rule 16 of the International Regulations for Avoiding Collisions at Sea (COLREGS) is one of the shortest rules, but also appears to be the most often-ignored or misunderstood rule. At 0700 in the middle of the ocean, when risk of collision has been established, there should be no possible reason why the give-way vessel cannot 'take early and substantial action to keep clear'. That is what the rule says and it says so for a reason – if possible, the bridge team should not wait, they should take early action and the risk of a collision will be enormously reduced.

Remember that 'substantial' means that the give-way vessel must show the watchkeeper on the bridge of the stand-on vessel that appropriate action has been taken. If there is plenty of sea room – which with two ships in the middle of the ocean there should be – the rules say that alteration of course alone is probably the most effective way of providing a sufficient change of aspect so that the stand-on vessel is in no doubt.

A reduction of speed can also be made too, but it may not be so readily apparent to the stand-on vessel. However, in this incident, there was also a misunderstanding about the availability of the engines on the bridge of the give-way vessel. Following a previous near-miss investigation it came to light that the bridge team were not aware that in fact the telegraph could be used when steaming under computer control without damaging the engines. The company put a circular on board all ships explaining this and asking bridge watchkeepers to sign to show they had understood. So why had the officer of the watch (OOW) stated to accident investigators that he could not slow down for fear of damaging the engines, yet his signature was on the circular? The explanation has nothing to do with collision avoidance but everything to do with 'loss of face' avoidance – there were three different nationalities of bridge watchkeepers on board and neither wanted to admit to the other that they did not understand the circular written in English, so they all signed without asking for an explanation.

The stand-on vessel

Now we need to consider the other ship, which is the stand-on vessel under Rule 17. Just as the give-way vessel is required to take early and substantial action, the stand-on vessel is required to maintain its course and speed – this is 'stage one' of Rule 17, Rule 17(a)(i).

However, there is a second stage to Rule 17 that may have to be applied on occasions when the bridge team decides the give-way vessel is not taking early and substantial action. As soon as the stand-on vessel doubts that the give-way vessel is taking appropriate action – early and substantial – the stand-on vessel may take action to avoid collision (Rule 17(a)(ii)). In other words at this stage the stand-on vessel has the choice to take action.

The answer as to when to apply Rule 17(a)(ii) is as soon as the OOW begins to doubt the actions of the give-way vessel. Masters will have probably written instructions in standing orders to call them if in doubt, and this would definitely be one of those occasions.

Even if the OOW is a qualified and competent watchkeeper and can deal effectively with the situation, one of his or her responsibilities is to keep the master informed of any situations that might endanger the ship and the crew. By calling the master, they are confirming their competence and understanding of the trust that has been put in them to keep a proper lookout and keep the ship and crew safe. They must not leave it too late to call the master.

Both vessels

If for some reason both the stand-on vessel and the give-way vessel find themselves so close that the action required under Rule 16 alone is not going to be sufficient to avoid a collision, then both vessels must take action.

The missed opportunities to avoid the accident in this case included the following.

- The give-way vessel did not take early and substantial action.
- The stand-on vessel left it too late to doubt the actions of the give-way vessel and missed the chance of taking action when it became apparent there was not sufficient action from the give-way vessel.
- Both vessels left it too late to take action once they had become so close that the give-way vessel's action alone was not sufficient to avoid a collision.

The question arises as to what happened in the intervening 20 minutes before the collision occurred. We have already seen there was a misunderstanding about the ability to slow down to allow more time to assess the situation. One ship also wasted time using the AIS to text '*PLS KEEP CLEAR*' to the other. One ship wasted time calling the other on the VHF, trying three different channels to get an answer.

Conclusion

As pointed out by the United Kingdom's Maritime Accident Investigation Branch investigators in this case, Rule 16 is the fourth-shortest rule in the book. It states

'Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.'

This is one sentence all bridge watchkeepers should know and apply instinctively, with the emphasis on *early* and *substantial*.

AIS - help or hindrance?

Five years on from the start of what transpired to be an accelerated phased introduction, there are many contrasting views on the effectiveness and role of automated identification systems (AIS).

The International Maritime Organization (IMO) originally described the purpose of AIS, in its recommendations on performance standards, as a means to improve the safety of navigation by

- contributing towards collision avoidance
- providing information concerning the ship and her cargo
- assisting as a tool for vessel traffic services.

However, terrorist activity in 2001 contributed towards a shift in the anticipated use of the equipment, with security issues replacing collision avoidance as the prime objective. This is reflected in the operational requirements contained in IMO resolution A.917(22) that identify the purpose of AIS as a means to

- help identify other vessels
- assist with target tracking
- simplify information exchange
- provide additional information to assist with situational awareness.

Loopholes in performance standards combined with incompatibility and expensive retrofit costs for radar-integrated systems saw many operators installing simplified minimum keyboard and display units. These provide watchkeepers with only rudimentary target data, nullifying many of the advantages inherent in some of the more sophisticated radar-overlay systems.

Casualty investigations carried out by the Association and other third-party organisations have identified the misinterpretation and improper use of AIS as contributory factors in ship collision and near-miss incidents. There are several reasons for this, including the following.

Garbage in, garbage out

The shift in emphasis during implementation, and delay of any structured training, may have left many seafarers misinformed about the operational limitations of the new equipment. It was almost four years after the start of its phased implementation before a model course appeared on the IMO bookshelf, leaving many ships' officers with only the manufacturers' manuals for instruction. This has exacerbated operational errors, incorrect data entry and led to the misinterpretation of data received, damaging situational awareness and producing inherently flawed critical decisions.

'Ship on my port bow!'

Target identification has always been a fundamental function of AIS equipment for security and vessel-management purposes. However, whether this can contribute to collision avoidance is often the subject of heated debate. Evidence suggests the ability to identify the other vessel when a close-quarters situation is developing can often prove counter-productive.

In the vast majority of cases, when both vessels adhere to the requirements of the International Regulations for Avoiding Collisions at Sea (COLREGS) there should be no need for any verbal communication. Apart from the very significant distraction and valuable time lost while attempting to contact another vessel, once contact has been established, language difficulties are notoriously common and often lead to actions by one or both vessels that are contrary to COLREGS requirements, transforming what should have been a routine collision-avoidance manoeuvre into a more complex and unpredictable situation

Guidance

IMO Resolution A.917 (22) – *Guidelines for the operational use of shipborne AIS* – provide some clarification on equipment use. Equipment must be set up in accordance with the manufacturer's instructions and voyage requirements, updated when required and checked at least once a month or once per voyage, whichever is shorter. Any changes must have the master's approval. The accuracy of this information - in particular the dynamic values for position, speed and other transmitted data - are fundamental if general situational awareness is to be improved.

Inherent limitations

Not every vessel has an AIS transmitter and some of those that do may chose for security reasons not to use it. For vessels that do, the accuracy of information transmitted relies entirely on the ship's officers; reports of incorrect data being transmitted are common. For these reasons AIS must not be relied upon as the sole source of target data and in no way should it be expected to replace target information generated from visual observation, radar plotting or an automatic radar plotting aid.

Although the IMO recognise a potential in AIS to contribute to collision avoidance, it is not unconditional. AIS is described as an additional source of navigational information that may support other navigational systems.

To maintain performance standards of AIS equipment, IMO has issued circular MSC.1/Circ 1252 – *Guidelines on annual testing of the AIS*. Testing should be carried out by a qualified radio inspector who is authorised by the administration or a recognised organisation. Details of the tests required are included in an annex to the circular.

Flexitanks – your questions answered

Flexitanks have been in use for the carriage of non-hazardous chemicals, oils, wine and other bulk liquids in 20' maritime dry containers since the 1970s. They are now widely available in sizes ranging from 10,000 to 25,000 litres for use with liquids of varying densities.

Construction ranges from single to multi-layered. Multi-layered flexitanks – with a minimum of four layers - are recommended for all applications involving sea transport in a 20' container. Most manufacturers and suppliers of flexitanks offer detailed training for customers and loading assistance from attending technicians.

What are the risks of carrying flexitanks in standard containers?

The main problems with the carriage of flexitanks in standard containers appear all to be related to the stowage, filling, handling and securing of the flexitanks, which result in leakage of the contents. Containers with flexitanks may not be declared as 'specials' and may not appear on the specials list along with dangerous goods, reefer, out-of-gauge and high-cube containers – so problems may only show up on board if there is a leak or the flexitank has been stuffed in an inappropriate container.

Some flexitank manufacturers and suppliers produce warning labels for the doors of containers so it may be possible for the crew on board to identify a container with a flexitank after stowing.

Leakage of contents could cause wet damage to other cargo but if the contents are foodstuffs there should be no 'chemical' hazards but there may be a hazard from slips, trips and falls. However, care should be taken in disposing of leaked contents since they might be 'cargo residues', which are classified as category 4 garbage under the International Convention for the Prevention of Pollution (MARPOL), annex 5.

Even if the contents are not foodstuffs, the risk of the leakage being harmful should be low since the carriage of hazardous products is not permitted in flexitanks in accordance with the International Maritime Dangerous Goods (IMDG) Code. Leakage of contents could cause wet damage to other cargo.

Some of the factors causing leakage following damage to the flexitank are:

- incorrect assembly in the container, resulting in chaffing damage during the voyage
- not following procedures in closing container doors, resulting in pinching damage
- not following procedures in stowing filling pipe, resulting in pinching damage
- poor handling practice, resulting for example in forklift damage.

Expansion and contraction problems where the container is subject to very high and low temperatures may also cause damage. There is a pressure-release valve and the tanks are rated in expansion and contraction to limits that should cater for these extremes.

Case study

A recent case was reported where several containers of wine survived a sea passage but the flexitanks burst whilst ashore on rail wagons in direct sunlight. The wine appears to have continued to ferment, which created an initial build up of pressure and caused some leakage from the bottom fill valve of the tank. The heating from direct sunlight caused additional expansion sufficient to burst the flexitanks and cause structural damage to the containers.

It appears that – contrary to recommendations - the flexitanks were of single layer construction and had no pressure relief valve fitted. Although wine is generally one of the less dense products carried in flexitanks, sweeter wines may be quite dense and a top filling flexitank might also have been a better choice.

Could there be structural damage to the container or loss of ship stability from flexitanks?

There may be safety issues resulting from static or dynamic stresses from slopping liquid affecting container structure or affecting ship stability.

Flexitanks are chosen by size and density of liquid to be carried on the basis of being 100% full, which is said to avoid the dynamic slopping liquid stresses that can be associated with less-than-full tank containers. The fact that flexitanks are 100% full also suggests there may be no significant free surface effect on the stability of the ship.

Typical advice from manufacturers and suppliers of flexitanks is that the container must be a standard 20' ISO container suitable for the safe transport of up to 24,000 kg of non-hazardous liquid in a flexitank. The maximum age of container should be no more than three years and the Container Safety Convention (CSC) data plate must be valid and certify that the container is rated for a minimum of 30,480 kg.

Will an industry-wide increase in the use of flexitanks lead to an increase in claims?

Indications are that almost all liquid commodities that are suitable for shipment by flexitanks are already being carried.

Apart from the general increase in all cargo volumes, there are no current industry reports that forecast a significant increase in the types of products for which flexitanks are used.

Is there a need for common standards of flexitank carriage?

In June 2006 the Container Owners Association's flexitank working group set in motion a process of discussion and investigation with flexitank manufacturers and suppliers, with the aim of developing a code of practice for flexitank operation. North of England has contributed information for this process.

Checklist to assist Members

The following checklist should assist Members with the carriage of flexitanks by ensuring that suitable preparations are carried out.

1	Is the flexitank selected suitable for the product in terms of density – total weight of product and container considered?
2	Is the flexitank selected going to be 100% full
3	Is the flexitank constructed of four or more layers?
4	Is the flexitank top loading?
5	Is the top of the flexitank fitted with a pressure relief valve?
6	Has a standard steel 20' ISO container suitable for the safe transport of up to 24,000 kg of non-hazardous liquid in a flexitank been allocated.
7	Is the allocated container less than 3 years old?
8	Does the allocated container have a valid CSC plate (rated to minimum of 30,480Kg)?
9	Does the allocated container appear to have existing damage/weakness in the side panels.
10	Are the side panels of the allocated container corrugated?
11	Is the flexitank being installed in the allocated container by trained persons or manufacturer's or supplier's technicians?
12	Is the flexitank being loaded by trained persons or manufacturer's or supplier's technicians?
13	Is the retaining bulkhead at the container doors approved/supplied by the flexitank manufacturer or supplier?
14	Have the insides of the container side walls (at least 1.5m high) and the floor been lined for example with single face cardboard?
15	Are the manufacturer's or supplier's approved inspection, installation, loading and discharging procedure being followed?
16	Has a warning label been fixed to the left hand door? For example: "Caution flexitank container with bulk non-hazardous liquid (Commodity). Do not open left hand door until flexitank is emptied. Do not loose shunt".

The Association would like to thank the following for help in preparing this article: Taylor Marine TR Little. Telephone +44 (0)151 2368806. Website: www.taylormarine.net

Philton Polythene Converters. Telephone +44 (0)1268 696331. Website: www.philton.co.uk

Any new information about the carriage of flexitanks will be given in Industry News, available on the Associations website: www.nepia.com

Container claims go overboard

Recent winters have brought bad weather in the North Sea and Atlantic, which should not be altogether unexpected. What was unexpected was the number of container ships that lost containers overboard. This naturally caught the attention of insurers, surveyors, flag States and class societies – not to mention seafarers on board left staring at empty deck space.

The recent incidents of container losses and collapsed stows during heavy weather appear to have four principal factors as causes.

Lashing equipment

Investigations into a number of incidents indicated an apparent common feature of losses from, or collapsed stows on, large container ships fitted with fully automatic twistlocks of the latest design and manufacture.

North of England Members operating ships equipped with fully automatic twistlocks have already been advised to take note of these developments and contact their lashing-equipment manufacturer and classification societies for advice, and to take appropriate action to reduce the risk of further incidents. Suggested actions include consideration of temporary reductions in container stack heights, revised weather routeing and replacement of suspect lashing equipment.

Cargo Securing Manual

The explanation sometimes offered after an incident is that 'the lashings broke'. However, this is unlikely to be the principal cause if the containers have been stowed and secured in accordance with the ship's Cargo Securing Manual. If stowage, in terms of permitted stack weights and individual tier weights, is in accordance with the manual; if securing is carried out in accordance with the manual, using only the types of equipment specified; and if the ship's metacentric height (GM) is within the limits specified in the manual, then it is highly unlikely that the lashings will break in any reasonable circumstances – including heavy weather navigation.

What probably causes lashings to break are heavy containers stowed over lighter containers that exceed the individual tier position limits and/or the introduction of high-cube containers into a stack of containers – contrary to the Cargo Securing Manual. This may raise the centre of gravity of the stack and the latter may also increase the securing angle of the long and short lashing beyond the designed angle of maximum effectiveness.

Consider a situation where an individual stack has a serious heavy-over-light mistake, including a high-cube container in a lower tier, but the stack weight has not been exceeded. The ship's planning computer may default to stack weights and there will thus be no warning alarms. However, an experienced chief officer or master would also look at the 'lashing forces' function – where the errors would become immediately obvious. On the stack weights screen or the bay plan, the only clue indicating the presence of a high-cube container may be the letters HC (high-cube) instead of perhaps DC (dry container 8'6"). Members should thus check whether their ships' planning software includes a facility to check the effect of stowage of high-cube containers.

Mis-declared overweight containers

If a stow has collapsed and some containers have been lost overboard, and a close examination of the stowage plan and securing arrangements shows that the containers were loaded and secured in accordance with the Cargo Securing Manual, there must be other causes. Examination of containers left on board after a stow of containers has collapsed sometimes reveals that the containers were over the declared weight, and it is possible that containers lost overside were overweight.

Operationally, mis-declared overweight containers are a difficult problem to solve. The weights are declared by the shipper mainly on trust and small under-declarations may be undetectable. Gross under-declarations may be apparent during container handling by mobile equipment or by container gantry cranes fitted with strain gauges, provided of course that those involved in shore-handling of containers are aware of the potentially serious nature of the under-declaration.

The problem is perhaps best addressed by the carrier's shore organisations as an operational issue, either sending representatives to observe suspect shippers stuffing containers or, as a commercial issue, identifying shippers from the manifest that are not known customers or have been identified previously with an involvement in mis-declaring weights.

Navigation around heavy weather

Experienced mariners prefer to anticipate heavy weather and adjust the voyage plan to avoid it. Unfortunately, some ships heave-to only when they find that normal progress is no longer possible, even though the heavy weather was forecast. Consequently the ship is stressed, the potential for cargo damage or loss overboard is increased – and no time is saved over the ship that anticipated the heavy weather.

With the extent and increased accuracy of weather information available today, plus the weather routeing available from ashore or from on-board computer systems, it should be possible for mariners to anticipate and avoid heavy weather, including having a contingency in the voyage plan for a maximum-wave-height route or set parameters for a least-damage route.

Members who have any observations or queries are invited to contact the Association's risk management department.
Email: loss.prevention@nepia.com

Carrying green fuels

Moves to replace fossil fuels, such as petroleum oil, with greener alternatives have led to greater cultivation of the plants from which biofuel is produced and therefore more frequent shipment, and in greater quantities, of the vegetable oils and chemicals for producing biofuels. Greater demand for these cargoes also means that they are now more valuable.

There are five broad categories of biofuel cargoes.

- *Ethanol* - either a fuel by itself or in mixtures and is also used in manufacture of other biofuels.
- *Vegetable oils* - oils from rape seed, canola, sunflower, oil palm, coconuts and soya beans are the most commonly used.
- *Fatty acid methyl esters (FAME)* - produced by mixing vegetable oils and an alcohol, such as ethanol, in the presence of a catalyst, they can be used as a form of bio-diesel by themselves.
- *Gasahol* - a mixture of petroleum gasoline and ethanol in various proportions. It is most usually in the form of 'E10', containing 10% ethanol and 90% gasoline. Increasingly 'E85', a mixture of 85% ethanol and 15% gasoline, is being produced.
- *Bio-diesel* - either a pure FAME or a mixture of a FAME and petroleum diesel. Most usually in the form of 'B5' (also called 'BD5'), containing 5% bio-diesel and 95% mineral diesel, the specification for motor fuel is likely to be amended soon to allow the use of 'B10' / 'BD10'.

There are various consequences of the increased trade in biofuels and their precursors. Whereas it may not be as susceptible to contamination as similar cargo intended for human consumption, any contamination - such as water - that may absorb or be absorbed by ethanol is more likely to give rise to expensive claims. It is therefore important that owners take care in tank preparation and cleaning.

It is not yet fully determined what the carriage hazards of biofuels are and therefore what the carriage requirements are. Not all the products mentioned above have been evaluated for carriage under the International Convention for the Prevention of Pollution from Ships (MARPOL) or even whether they fall within Annex I (oil) or Annex II (noxious liquid substances in bulk).

It has also not yet been determined whether such cargoes are acceptable prior cargoes by the Federation of Oils, Seeds and Fats Associations (FOSFA) or the National Institute of Oilseed Products (NIOP).

However, in the meantime the International Parcel Tankers Association (IPTA) has published a useful information sheet on biofuels. This can be downloaded from the Industry News section of the Association's website.

Members who have any queries about the carriage of biofuels should contact Peter Scott or Andrew Kirkham at the Association.

IMO update

The International Maritime Organization's (IMO) Maritime Safety Committee (MSC) met in Copenhagen, Denmark in October 2007 (MSC 83). Agenda items discussed included the following.

SOLAS amendments

The following amendments to the International Convention for the Safety of Life at Sea (SOLAS) were approved in principle.

Gangways and accommodation ladders

Draft standards were approved for the construction and approval of means of access equipment including gangways and accommodation ladders on new ships based on existing standards cited in ISO 5488:1979 *Shipbuilding - accommodation ladders*, ISO 7061:1993 *Shipbuilding – aluminium shore gangways for seagoing vessels* and national standards. The date of build for new ships to which the regulation will apply will be decided at MSC 84 in 2008.

Gangways and accommodation ladders on all ships, new and old, will be subject to survey; the scope of which will include proper operation and the condition of winches. Test loads used will be the lower of either the maximum operational load or the design load.

Emergency towing procedures

All vessels are to be provided with procedures fore and aft for emergency towing based on existing arrangements and equipment. These arrangements will include drawings, methods of communication and sample procedures for use.

Intact Stability Code

New ships over 24 metres in length should comply with part A of the revised Intact Stability Code. Criteria include minimum range of righting arm, range of stability due to wind and ship-specific criteria.

Material safety data sheets

A new International Convention for the Prevention of Pollution from Ships (MARPOL), regulation VI/5-1, on material safety data sheets (MSDS) requires ships carrying MARPOL Annex 1 cargoes (oil) and marine fuel oils to be provided with a MSDS prior to loading such cargo. The requirement is expected to enter force on 1 July 2009.

Recommended coating standards for voids

IMO circular MSC.244 (83) contains recommendations for protective coating systems for void spaces on all types of ship. This includes all voids that are subject to close-up surveys under an enhanced survey programme.

Prior to approving the coating technical file, administrations are to check that

- technical data sheets comply with coating performance standards
- coating identification is consistent with the technical data sheet
- inspectors are appropriately qualified
- inspectors' reports indicate compliance with the technical data sheet
- inspectors monitor implementation of coating inspection requirements.

ISM Code

MSC agreed that guidelines for administrations should be revised to make them more effective and user-friendly and associated training should be developed to assist companies and seafarers improve implementation of the International Safety Management (ISM) Code.

MSC adopted MSC-MEPC/Circ.5, which provides guidance on the operational implementation of the code and recommends companies undergo internal audits to verify compliance with the safety-management system.

MSC-MEPC.7/Circ.6 was also adopted and includes the recommended qualifications of the designated person ashore (DPA) under the provision of the code. The company should provide documentary evidence to show the DPA has the relevant qualifications, training and experience to undertake the duties prescribed in the code.

Explosions in chemical and product tankers

Following previous investigation and analysis of explosions in chemical and product tankers, MSC recommended that a formal safety assessment be carried out before decisions are made concerning the mandatory provisions of inert gas systems on product tankers under 20,000 DWT.

Measures to enhance maritime security

Proposed amendments to the International Convention on Standards of Training, Certification and Watchkeeping (STCW) requirements for basic security-related training were endorsed. Draft amendments will be reviewed by the IMO sub-committee on standards of training and watchkeeping.

IMO

Turkish discharge fines - a reminder

The Association has previously reported on the fines imposed by Turkish environmental authorities for discharges from ships. As a reminder, any discharge of any substance from a ship is likely to give rise to a fine, which is calculated on a set amount according to the vessel's tonnage.

Such fines are required to be paid in cash and, if done promptly, result in a 25% discount. Alternatively, the fines must be secured and the Association understands that the Turkish authorities have recently agreed that P&I club letters of undertaking are suitable for this purpose. However, these do not attract the 25% discount.

It is possible to challenge the fines but the advice usually received by the Association is that if there has been any substance discharged into the sea, whether accidentally or not and regardless of whether the master regards it to be 'clean' or not, attempts to appeal or dispute the fine are not likely to be successful.

How to avoid fines

Omur Marine, the Association's correspondent in Istanbul, has recently issued advice to Members as to how to avoid pollution fines, as follows.

- All scuppers are to be plugged.
- No de-ballasting should be carried out unless the ballast water has been checked and is known to be clean.
- All overboard discharges should be closed and valve handles padlocked or sealed in closed position.
- Sewage systems, even approved sewage systems, should not to be run during the stay at port or in the anchorage.
- All 'grey water' should be held on board.
- No deck washing or hatch-cover hose testing should be performed in port or at anchorage. Ultrasonic testing of hatches can be carried out in Turkish ports. Members are advised to notify the Association of any need for hatch testing as far in advance as possible so that the necessary ultrasonic testing can be arranged.
- Fire-main and fire hoses to be carefully checked if needed to be deployed.
- Continuous deck-edge plates should be fitted if possible.
- All garbage, even bio-degradable matter, cargo residues, tank or hold-cleaning residues and other substances should be retained on board or prevented from escaping.

Even if the vessel is in shipyard or dry dock, it may still be held responsible for pollution in the first instance even if caused by negligence of the shipyard, dry dock or any of its employees or agents. Therefore, the crew should be vigilant and, where they believe pollution has taken place, they should protest immediately in writing to the shipyard or dock management.

The Association is grateful to Omur Marine Ltd for information included in this article.

Telephone +90 212 2493535.
Website: www.omurmarineltd.com

New ship-identification regulations come into force

The International Convention for the Safety of Life at Sea (SOLAS), regulation V/19-1, on long-range identification and tracking (LRIT) of ships entered into force on 1 January 2008. It will apply to ships built on or after the 31 December 2008, with other vessels being subject to a phased implementation.

The regulation will be applicable to ships engaged on international voyages as follows

- passenger ships, including high-speed craft
- cargo ships of 300 GT or more, including high-speed craft
- mobile offshore drilling units.

The system, which is expected to be operational from 30 December 2008, requires ship-borne transmitting equipment, a communication service provider, an application service provider, LRIT data centres, an LRIT data distribution plan and an international LRIT data-exchange provider.

Data for governments only

Information transmitted will include the ship's identity, location, date and time. Information will be available to contracting governments for vessels up to 1,000 nautical miles (1,852 km) from their coast. Unlike automatic identification system (AIS) data, LRIT information will only be made available to those entitled to receive it.

The new rules follow development by the International Maritime Organization's (IMO) maritime safety committee of a multilateral agreement for sharing LRIT information for security and search-and-rescue purposes. Proposals for long-range tracking of vessels were initially put forward at the 2002 SOLAS conference and subsequently developed by IMO's safety-of-navigation and radiocommunications and search-and-rescue sub-committees.

Dangerous goods packers require mandatory training

The International Maritime Organization's dangerous goods, solid cargoes and containers sub-committee has submitted proposals for compulsory training of shore-side personnel for inclusion in amendment 34-08 to the International Maritime Dangerous Goods (IMDG) Code.

The proposals for mandatory training of those responsible for preparing dangerous cargoes for shipment follow the significant number of recent incidents involving carriage of such cargoes.

As discussed by the sub-committee when it met in London in September 2007, many freight-packing services are located substantial distances from the loading port. Shore-side personnel may therefore not be aware of the harsh nature of the marine environment and the need for strict compliance with the contents of the IMDG Code.

Ballast Water Convention requirements postponed

Enforcement of the first deadline for the fitting of ballast water treatment facilities on new build ships under the forthcoming Ballast Water Convention has been postponed by the IMO. Delays with ratification and type approval of treatment equipment are thought to have contributed to the decision to delay the enforcement of Regulation B-3- Ballast Water Management for Ships.

Shipowners will not be required to have systems installed on vessels constructed during 2009, that have a ballast capacity of less than 5,000 cubic metres, until the second annual survey, or 31 December 2011.

The assembly has requested the Marine Environmental Protection Committee to review, and possibly extend, this postponement to ships built during 2010.

Bunker Convention entering into force

The International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001, will enter into force on the 21st of November 2008.

Once in force, ships over 1,000 GT registered in a State party to the convention, will be required to carry certification to demonstrate that the ship has insurance or other financial security to cover the liability of the owner for pollution damage equal to the limits of liability under the applicable national or international limitation regime.

This amount should not exceed the limits described in the1996 Limitation of Liability for Maritime Claims (LLMC) Protocol to the Convention on Limitation of Liability for Maritime Claims 1976.

Risk-management visits to members in 2007

North of England's risk-management department travelled to many different parts of the world during 2007 to visit Members, provide in-house seminars and participate in Member's own seminars. Over 80 such seminar visits were made by members of the risk-management team during the year to Europe, the Middle East, Far East and North America. The visits are an integral part of the Association's loss-prevention strategy, which is to provide a service where topics of interest can be discussed and information exchanged with Members on an individual basis.

Andrew Glen and Andrew Kirkham from North of England's risk management department

Fifth edition of distance-learning course to be published

The fifth edition of North of England's well-regarded distance-learning course in P&I insurance and loss prevention is soon to be published. The latest version of the course consists of a guide entitled *An Introduction to P&I Insurance and Loss Prevention,* a course workbook and supplementary material including selected loss-prevention guides. The workbook contains guidance on completing the course, case studies, self-test questions and the tutor-marked assignments to be submitted for marking. All the material will be supplied in both paper and electronic formats.

The latest information and an application form for enrolment on the course is available on the Association's website. Prospective students requiring further information should contact Denise Huddleston in the risk management department.
Website: www.nepia.com/risk/education/distance.php
Email: distance.learning@nepia.com

Residential training course 2008

The Association's annual residential training course in P&I insurance and loss prevention will take place from Friday 6 June to Friday 13 June 2008 at Lumley Castle near Newcastle-upon-Tyne, UK. The three part course provides:

- On Saturday and Sunday - an introduction to ships and shipping, including a visit to ships at a local port
- On Monday - an introduction to marine insurance
- From Tuesday to Friday – a workshop based in-depth look at P&I insurance and loss prevention

Delegates can choose which part or parts they wish to attend, which makes the course suitable for people of varying backgrounds and experience. Demand for places on this very popular course is always high so Members are advised to register as soon as possible to avoid disappointment!

A course brochure accompanies this edition of 'Signals' sent to Members. Delegates should register by returning the registration form. Further details of the course can be obtained from Adele Lathan in the risk management department. Email: rtc2008@nepia.com

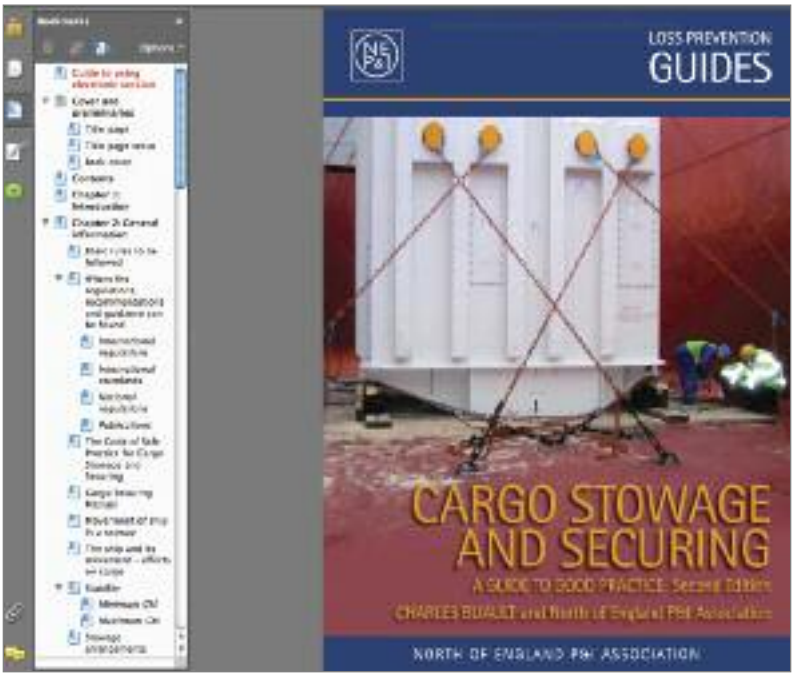
New electronic loss-prevention guide published

The Association has published a number of loss-prevention guides over recent years covering a wide variety of subjects, ranging from personal injury prevention to bills of lading. Following requests from Members the Association will start to publish its guides in an electronic format. The format chosen is pdf and each guide will be fully indexed and cross-referenced electronically, as well as being able to make use of the normal search methods available in a pdf document using a suitable reader.

The electronic guides will be provided free of charge, but will only be available to Members.

A copy of each guide as it becomes available can be sent to a Member on request, where it will be licensed for free distribution within the Member's organisation and to its entered ships. However, the electronic guides are still subject to copyright and may not to be distributed outside the Member's organisation.

The first guide to be developed in this way is 'Cargo Stowage and Securing – a Guide to Good Practice'. Members requiring an electronic version of this guide should contact Denise Huddleston in the risk management department. Email: loss.prevention@nepia.com



New feedback service for loss prevention

Signals is the principal loss-prevention publication from North of England and is intended to keep Members' sea and shore staff advised of current information related to P&I insurance, and sometimes other topics of more general interest.

The Association is always interested to receive feedback about the newsletter, or North of England's other loss-prevention publications and services. Members are very welcome to contact the Association if there are any topics that they or their seafarers would like to be covered in future issues, any ways in which the loss-prevention service can be improved, or any information that has been particularly useful.

To make this easier, a feedback form is now provided on the back of the cover sheet dispatched with every issue of Signals. An electronic version of the form can be downloaded from the risk-management pages on the Association's website: Comments can also be sent to the risk-management department by fax, email or post using the contact details given on the form.

Pilot incident reports

There has been a lot of concern expressed over recent years about the number of incidents, such as collisions and damage to property, that occur when there is a pilot on board. North of England has been an active member of a committee set up by the International Group of P&I Clubs to report and analyse such incidents. The incidents considered by the committee are those that have resulted in P&I claims over US $100,000.

The Association would now also like to gather information about other incidents and near-misses that have occurred when a pilot is on board. A reporting form has thus been included with this copy of Signals and sent to all Members and entered ships. The Association would be very grateful if Members could use this form to report any incidents or near-misses involving a pilot. The information will be collected in a database to analyse whether there are any geographical or incident trends that would benefit from future loss-prevention measures. Specific incident data will not be shared with any other organisations.

Northumbria University award

Tony Baker from North of England recently presented Samantha Diggory with the Association's award for being the highest achieving student on the School of Law's International Trade LLM programme at Northumbria University, Newcastle, UK.

Electronic information services for Members

North of England's electronic risk-management information services include the following.

Industry News

Industry News is a proactive loss-prevention service for Members that is available on the Association's website.

Members can access Industry News from the link on the home page of the Association's website: **www.nepia.com**

E News

E News is distributed to Members by email and provides a monthly digest of *Industry News* items, club circulars and press releases.

Members' shore or sea staff who wish to be added to the E News circulation list should send their contact details – including their name, position, company and email address – to the Association using the dedicated E News email address: add.enews@nepia.com

RSS feeds

The Association provides RSS (really simple syndication) feeds for *Industry News*, club circulars and press releases, which enable Members to receive new information as soon as it is published and without having to check the website for updates.

A guide to using the RSS feeds is available on the Association's website: www.nepia.com/rss/

Signals Search 14

Questions

1. Which ship's document contains an inventory of all materials potentially hazardous to health?
2. Which ships' actions are governed by COLREGS Rule 16?
3. Which convention will enter force in November 2008?
4. What is used to carry liquids in a container?
5. North of England has published a report form to record incidents and near misses when who is on board?
6. Which recent court decision related to the damages an owner can recover for late redelivery?
7. Where will North of England's 2008 residential course take place?
8. What is a mixture of gasoline and ethanol?
9. What value should a ship be insured for?
10. What is the name for the sequence of events leading to an incident or near miss?

P	S	B	E	V	T	O	P	I	T	E	G	X	G
E	G	U	F	W	S	F	F	E	A	L	M	U	O
R	T	N	F	P	R	O	P	E	R	T	A	O	X
R	E	K	H	M	V	W	H	H	D	S	G	G	H
O	X	E	C	C	N	P	W	W	I	A	D	T	J
R	G	R	Q	M	Y	J	H	I	A	C	F	W	F
C	F	L	E	X	I	T	A	N	K	Y	N	B	Y
H	L	E	S	S	E	V	Y	A	W	E	V	I	G
A	Q	E	J	B	A	C	H	I	L	L	E	A	S
I	N	Z	B	Z	S	X	X	T	V	M	A	T	M
N	L	O	H	A	S	A	G	A	G	U	O	E	H
V	B	T	O	L	I	P	H	I	P	L	M	J	E
Z	T	R	O	P	S	S	A	P	N	E	E	R	G
Q	A	J	I	N	V	A	J	I	C	C	J	O	A

- Signals Search is open to all readers of Signals.
- Send a photocopy of your completed search, along with your name and, if appropriate, name of ship, position on board, company and address to Denise Huddleston at the Association. Email: denise.huddleston@nepia.com
- All correct entries received by the closing date will be entered in a prize draw.
- Closing date Friday 7th March 2008.

The first correct entry drawn will receive a prize along with a statuette of *"Bosun Bo"*. The next 5 correct entries drawn will each receive a statuette.

Details of the winner and runners-up will appear in the next edition of *Signals*.

Your copy of Signals

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

- Brochure – 2008 residential course in P&I insurance and loss prevention (Members only)
- Incident form – Report of incident or near miss during pilotage (Members and entered ships only)
- Safe Work poster - Safety management – (Members and entered ships only)
- Signals Experience – C002 – Ore cargoes and liquefaction (Members and entered ships only)
- Signals Experience – S002 – Near Miss (Members and entered ships only)

Answers to Signals Search 13

1 Emails
2 Permit to work
3 Kuala Lumpur
4 Ukraine
5 Bridge
6 Nairobi
7 North Online
8 Nickel ore
9 On load release hooks

Signals Search No.13 Winners

Winner:

Hans Pabbruwee, Post & Co

Runners-up:

Captain Pramod B Sambrani, United Arab Shipping Company
John H W Chou, Taiwan Maritime Services
Captain A G Bischiniotis, Seacrest Shipping
Captain J A Brown, Arklow Shipping Limited

NORTH NE P&I

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