Signals NEWSLETTER

NORTH
SERVICE, STRENGTH, QUALITY

Happy New Year and welcome...

to the January 2016 edition of *Signals,* which provides information relating to loss prevention and other topics of interest to those engaged in the business of operating ships both at sea or on shore.

IN THIS ISSUE

The sinking of the *'Bulk Jupiter'* with the loss of 18 seafarers in January 2015 highlighted yet again the dangers of cargo liquefaction to bulk carriers. The IMO has responded by issuing a circular concerning the loading of bauxite. North has been particularly concerned at the dangers of liquefaction for many years and has produced many *Signals* articles, industry news items and loss prevention briefings on the subject.

In addition to these publications we have now produced a loss prevention guide entitled *'Bulk Cargoes – A Guide to Good Practice'* which deals with liquefaction and other common bulk carrier issues. The guide accompanies this edition of *Signals* for vessels carrying bulk cargoes.

Issue 102: January 2016

LOSS PREVENTION NEWSLETTER FOR NORTH'S MEMBERS

Our belief is that by assisting our Members and their seafarers to gain knowledge on this topic, it allows them to exercise vigilance when loading bulk cargoes and to reduce their exposure to this risk. When loading bulk cargoes that may liquefy **Knowledge + Vigilance = Safety**. In this issue we also consider the IMO circular and the issues surrounding IMSBC Code Group C cargoes that can sometimes display Group A properties.

Additionally, the cargo section includes an article on seed cake in which we clarify the confusion surrounding the different types of seed cake. The problems associated with the carriage of organic grain and the use of 3D printers to produce fake container seals are also discussed.

In the ship section we consider the hazards associated with mooring line snap back – this time with the focus on the use of synthetic tails with high modulus synthetic fibre and wire mooring lines. Also discussed are STS operations, the new code of safe working practices and the EU rules on fuel sample testing during port state control inspections.

Three new emission control areas (ECAs) have been implemented in China around the Pearl River delta, the Yangtze River delta and at Bohai Bay. Our article outlines the timeline for the new sulphur limits and describes the boundaries of the ECAs. The regulation section also reports on the new UK Insurance Act.

Finally in the people section we take a look at North's Ukrainian pre-employment medical scheme and consider the pros and cons of social media and other modern technology on social dynamics aboard ships.

Interested in avoiding bulk cargo claims?

North has published a comprehensive guide entitled *'Bulk Cargoes: A Guide to Good Practice'*. It aims to answer all of the questions most often encountered by Masters of ships carrying bulk commodities.

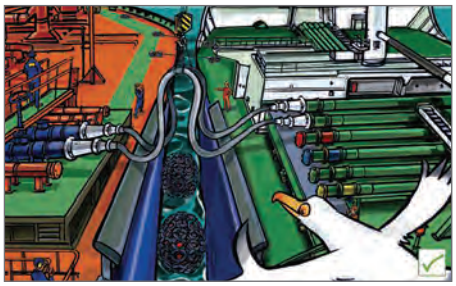
The guide explains basic rules to be remembered during loading, carriage and unloading of bulk cargoes. It discusses procedures, preparations and good seamanship practice for safe carriage of cargoes in bulk and describes the problems and recommended procedures associated with particular types of bulk cargo. It also gives guidance on points to be remembered during passage planning and the voyage itself.

A copy of the guide is enclosed with this copy of *Signals* for bulk carriers where Members have elected to receive hard-copy publications.

An electronic version of this and North's other loss prevention guides will be available to view or download from the new Member's area of North's website. The new Member's area is coming soon and more information will be circulated prior to the launch.

POOR STS PRACTICES DAMAGING VESSELS

Disputes and damage claims continue to occur during ship to ship (STS) transfer operations from contact between the two vessels.



There are many factors that can contribute to such incidents. Recent cases involve working in poor weather conditions and the lack of suitable fenders. However, it is clear that damage could have been avoided if the operations were properly planned, following best industry practices.

Oil tankers of 150GT and over must have a STS operations plan in order to comply with MARPOL. The vessel's procedures and plans should be based on the ICS/CDI/OCIMF/SIGTTO Ship to Ship Transfer Guide and the IMO Manual on Oil Pollution, Section 1 Prevention.

Although the Ship to Ship Transfer Guide is concerned with liquid and gas cargoes, North recommends these guidelines are also used when planning dry cargo STS transfers.

Our collision case study on the back page also looks at STS operations so be sure to give it a try (answers can be found on page 11).

For more information please read our loss prevention briefing on ship to ship transfers at: ***www.nepia.com/lp-briefings***

EU BUNKER TESTING

The European Union has provided instructions to its Member countries on how to test bunkers. This is to ensure vessels visiting EU ports are complying with the sulphur limit regulations.

Earlier this year the European Commission implemented Decision (EU) 2015/253. This mandated the rules on the verification, sampling and testing of the sulphur content of marine fuels. It included details on the minimum number of inspections to be carried out by the Member States and the accepted sampling methods.

The Decision came into effect in March 2015. However, the main impact will be felt when the on board sampling and testing requirements come into force in January 2016.

Sulphur Limits in the EU

The current limits on the sulphur content of marine fuels can be briefly summarised as follows:

- Vessels at berth or at anchorage in EU ports must only use fuels containing a maximum sulphur content of 0.10%.
- Passenger ships that operate on a regular service to EU ports must only use fuels containing a maximum sulphur content of 1.5% (reduced to 0.50% from 1 January 2020).
- Vessels operating in the MARPOL Annex VI Emission Control Areas (ECAs) – Baltic Sea, North Sea and English Channel – must only use fuel containing a maximum sulphur content of 0.10%.

Verifying Compliance

The first requirement is that all EU countries' port state control (PSC) officers must inspect the log books and bunker delivery notes (BDN) on at least 10% of the total number of vessels calling at their ports every year.

From 1 January 2016 there is a further requirement where a proportion of these inspected vessels will have to provide a fuel sample for laboratory analysis. This proportion depends on how close the country is to an emission control area:

a) Countries fully bordering an ECA: 40% of the **inspected** vessels (NB: *this is not 40% of all vessels*).

b) Countries partly bordering an ECA: 30% of the **inspected** vessels.

c) Countries not bordering an ECA: 20% of the **inspected** vessels – increasing to 30% in 2020.

The PSC officer can collect samples for analysis by either, or in some cases both, of the following methods:

i. Using the sealed 'MARPOL' sample from the relevant bunkering operation.

ii. On board spot sampling.

On Board Spot Sampling

The sample taken by the PSC officer should be drawn from the fuel service system using a dedicated sample valve. This sample valve must be approved by the vessel's Flag State.

If there isn't a Flag State approved sampling valve, a sample can be taken from an alternative sampling point provided the following criteria are met:

- The sampling point is easily and safely accessible.
- Consideration is given to the different fuel grades that may be in use and the potential for cross contamination.
- The sample is taken downstream of the fuel service tank.
- The sample should be taken as close as possible to the engine/boiler, taking into consideration the flow rate, temperature and pressure behind the sampling point.
- The sampling point should be proposed by the vessel's representative – it must then be accepted by the inspector.

The PSC officer may take more than one sample if there is a possibility of fuel cross-contamination or there are multiple service tanks. The size of the sample drawn from each sampling point should be sufficient to fill three sample bottles. These bottles are then sealed with a unique ID.

Two of the bottles will be sent to a laboratory for analysis. The third bottle will remain on the ship where it must be retained for 12 months.

Bunker Suppliers

Bunker suppliers operating in EU ports are also directly affected by some of the provisions of the EU Decision. If they supply fuel that does not comply with the specification on the Bunker Delivery Note (BDN) on at least three times in a year they will be subject to a program of sampling and analysis.

Loss Prevention

To prevent any undue delays when calling at EU ports, shipowners and operators should ensure their crews are familiar with the sampling and testing requirements. The crew should be able to provide the necessary documentation on fuel sulphur content if requested by the PSC officer.

Familiarity with these rules is even more important if the vessel's fuel supply system is not fitted with an approved sampling point. Identifying a safe sampling point prior to an inspection could expedite the process.

Decision (EU) 2015/253 can be read here: ***http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015D0253***

THE HAZARDS OF MOORING LINE SNAP-BACK

Although well documented in accident reports and publications such as the *Code of Safe Working Practices for Merchant Seamen* and OCIMF's *Mooring Equipment Guidelines* and *Effective Mooring* guides, numerous incidents are still occurring where crew members are injured as a result of the snap-back of mooring lines which have parted under load.

A lack of awareness and a failure to properly assess potentially dangerous snap-back zones during the planning of mooring operations results in crew members being positioned in dangerous areas. In the event of the mooring line parting this poor positioning can result in serious or fatal injury.

A critical factor in the planning and assessment of the risks associated with a mooring operation, is understanding the properties of the mooring lines in use. Consideration must also be given to the effect any tail will have on the characteristics of the mooring rope. This is particularly relevant when fitting synthetic tails to high modulus synthetic fibre (HMSF) and wire mooring lines, both of which have less elasticity than synthetic ropes.

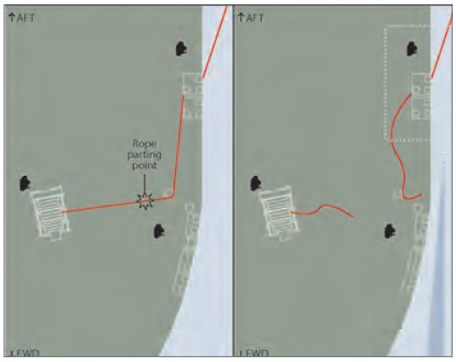
The increased elasticity and the increased elongation of synthetic ropes will increase the amount of energy stored in the tail when under load. The longer the tail the greater its potential elongation and so the greater the energy stored in the line.

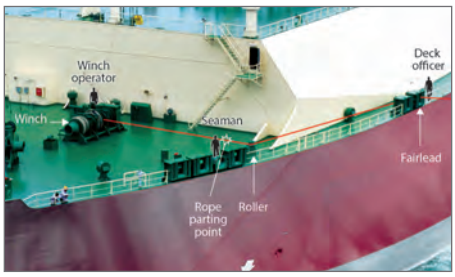
Should the mooring line fail, then the entire length of the mooring line could be expected to snap-back as a result of the increase in stored energy. If the line has been directed around rollers, then it is likely that complex snap-back zones will be created.

The potential for complex snap-back zones being created, and the potential for the elastic properties of the mooring line to be significantly changed, highlights the importance of properly planning mooring operations, ensuring all personnel involved have identified potential snap-back zones and are positioned clear of these areas throughout the mooring operations.

OCIMF recently conducted an investigation in to a serious incident resulting from a mooring line failure on board a large LNG carrier and published their findings entitled – *The Hazards of Snap-Back* ***www.ocimf.org/media/57482/The-Hazards-of-Snap-back-Initial-learnings-from-a-serious-incident-of-mooring-line-failure.pdf*** in September 2015.

Further guidance on mooring operations can be found in North's Loss Prevention Briefing – *'Mooring Operations'* ***www.nepia.com/lp-briefings*** and in our *'Mooring Operations'* Hot-Spot ***www.nepia.com/Hot-Spots***





Source: OCIMF

COSWP 2015 PUBLISHED

A new *Code of Safe Working Practices for Merchant Seafarers* (COSWP) has been published. The 2015 version has been extensively updated with a focus on practical guidance and improved risk assessment.

Amongst the many changes made include:

- Permit to work advice has been simplified.
- Fatigue and safety culture are included.
- The chapter on entry into enclosed spaces has been changed in line with new SOLAS requirements.
- New chapter relevant to oil and gas vessels.
- Ergonomics features in a new chapter.

Members are encouraged to refer to the latest version of COSWP.

www.gov.uk/government/publications/code-of-safe-working-practices-for-merchant-seafarers

UKRAINE PEME CLINICS GET CLEAN BILL OF HEALTH

North has operated a pre-employment medical scheme in Ukraine since 2007. The clinics continue to grow in terms of workload and have operated successfully since the inception of the programme.

Audit Programme

In October 2015 the Club's appointed medical advisor, Dr Charlie Easmon, carried out the annual audit of the three accredited clinics in Odessa. The purpose of the audit is to ensure that the accredited clinics are able to comply with, and maintain, the standards required by North.

The audit confirms the accuracy, thoroughness and objectivity of the test procedure. The clinics once again successfully completed the audit and Dr Easmon confirmed their accreditation for the year ahead. In addition to the Club's annual audit the clinics are also required to undergo the Ukrainian Government accreditation and inspection which takes place every three years.

Reputation and Cooperation

We are pleased to report that the manning agents and seafarers are very cooperative with the clinics. Seafarers accept and appreciate that a thorough examination is beneficial to their health over the long term.

The clinics appear to have established long term relationships with the seafarers who return on a regular basis for their examinations because of the good reputation of the clinics.

Protecting Seafarers

The system is designed to screen out seafarers who, if employed on Members' ships, could be a danger to themselves through illness and also potentially to other crew members.

The rejection rate up to December 2015 was 6.29%. The main causes of failure are Hepatitis C, gallstones, kidney stones and detection of illegal drugs.

Further information regarding the scheme can be found on our website at the address below or alternatively contact ***gary.clifton@nepia.com***

www.nepia.com/people-care/

SOCIAL DYNAMICS, TECHNOLOGY AND INCREASED ISOLATION

Most incidents at sea are due to human error. One of the drivers of human error can be underlying emotional issues. Poor mental health of a crew member can have consequences for the vessel and the crew. This may be an increased likelihood of incidents occurring on board, or could be something more mundane such as having to spend time dealing with an individual's problems.

Isolation and Technology

In today's digital age isolation should, you think, be a thing of the past. A seafarer can connect to his family and friends back home across a multitude of electronic devices at more or less any time they choose. Why is it then that, despite technological improvements allowing greater connectivity to loved ones left behind, research shows that seafarers now have the second highest suicide rate of any occupation?

Separation from family, friends and other crew may cause a seafarer to feel isolated and this can lead to mental health issues.

However, isolation from family is not the only form of isolation that seafarers encounter. They may feel isolated and friendless on board. This in turn may mean that they are less able to cope with any problems they might encounter either from home or at work.

One of the drivers of this on board isolation may in fact be the technology that should make things easier. Having easy access to family and friends back home can cause problems in some cases. It does not allow seafarers to have the 'clean break' from domestic issues that they might have had in the past. Sometimes issues at home will cause seafarers anxiety and this can be exacerbated by the easy access that technology brings.

In most cases easy access to home is a great plus for seafarers, but it can on occasion actually become detrimental to seafarers welfare.

Another unintended aspect of modern technology is that the internet and the various social media platforms may actually make on board life less social.

In the past once they had finished their watch seafarers would interact with each other in the bar or lounge, having general conversation or sit together around the television and watch the latest movie. Perhaps an officer organised a weekly/monthly entertainment evening, darts, cards or a quiz. Maybe even a BBQ or a table tennis tournament.

All of this helped crew get to know each other, forge friendships and encourage effective teamwork. The sense of isolation was less and there was probably someone you could confide in if experiencing problems.

Modern technology has produced a situation where it is easy for seafarers to retreat to their cabins and plug in, which reduces social interaction.

Technological advancement, whilst improving ships operations, has also placed greater pressures on seafarers to carry out their tasks quickly and efficiently and in some cases has meant that fewer crew members are required to sail on board particular vessels. Certainly there is less and less time in port for already limited shore leave opportunities.

Vessels these days also tend to have a multinational crew, creating different cultural and social challenges, with language in particular.

So when faced with a small crew who it is not easy to speak to, working different shift patterns, possibly also eating at different times of the day, it is no wonder that crew members are retreating to their cabins to watch the latest DVD, video call their friends and family and/or play on their games console alone.

The World Health Organisation states that "Health is a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity." Therefore it is clearly important to recognise that direct face to face interaction on board, on a social basis, directly affects a seafarer's health and well-being. In order to decrease the number of cases of mental health issues, there needs to be contact with family and friends back home; but crucially, this should not come at the expense of social interaction with fellow crew members. There needs to be a balance, and the statistics evidencing an increased suicide rate amongst seafarers and an apparent decline in social interaction on board, should not be considered a mere coincidence.

It is in the general interests of the company, vessel, and crew to ensure a decent level of social interaction on-board. So occasionally banish the Xbox and get out the ping pong table, dart board, playing cards and board games. These will forge relationships on board and help the crew to be happy. A happy crew works more effectively, more efficiently and are more likely to be able to help individuals deal with any issues they may have.

SEED CAKE SOWS CONFUSION

A number of recent incidents have highlighted the considerable confusion around carriage of seed cake, particularly given its nature to self-heat which can lead to combustion. This article aims to clarify the carriage requirements for Members and vessel crew.

What is Seed Cake?

Seed cake is the residue remaining after the oil has been extracted from oil-bearing seeds, cereals or similar products. This cargo is most commonly shipped for use as animal feed or biofuel. A long list of the products which seed cake can be derived from is listed in the *International Maritime Solid Bulk Cargoes Code* (IMSBC). The IMSBC Code requirements are summarised opposite.

Oil is extracted either by mechanically crushing the seeds or by the use of a solvent. The method of extraction and the percentage of oil and moisture remaining will determine the category of the seed cake.

IMSBC Code Schedules

Currently there are four schedules of seed cake listed in the IMSBC Code:

- SEED CAKE, containing vegetable oil UN 1386 (a) mechanically expelled seeds, containing more than 10% of oil or more than 20% of oil and moisture combined.
- SEED CAKE, containing vegetable oil UN 1386 (b) solvent extractions and expelled seeds, containing not more than 10% of oil and when the amount of moisture is higher than 10%, not more than 20% of oil and moisture combined.
- SEED CAKE, UN 2217 with not more than 1.5% oil and not more than 11% moisture.
- SEED CAKE (non-hazardous).

The table opposite summarises the requirements of these schedules. This MUST be read in conjunction with the Code.

All seed cake schedules with a UN number fall into IMDG Code Class 4.2 – substances liable to spontaneous combustion and are categorised as Group B – cargoes which possess a chemical hazard. This can include self-heating or oxidation.

SEED CAKE SOWS CONFUSION (CONTINUED)

Due to the additional risks associated with Group B cargoes, these must be listed on a vessels document of compliance for the carriage of solid bulk cargoes. Where they are not listed, permission should be obtained from the vessel's Flag State. Permission may not be granted if suitable firefighting equipment is not fitted.

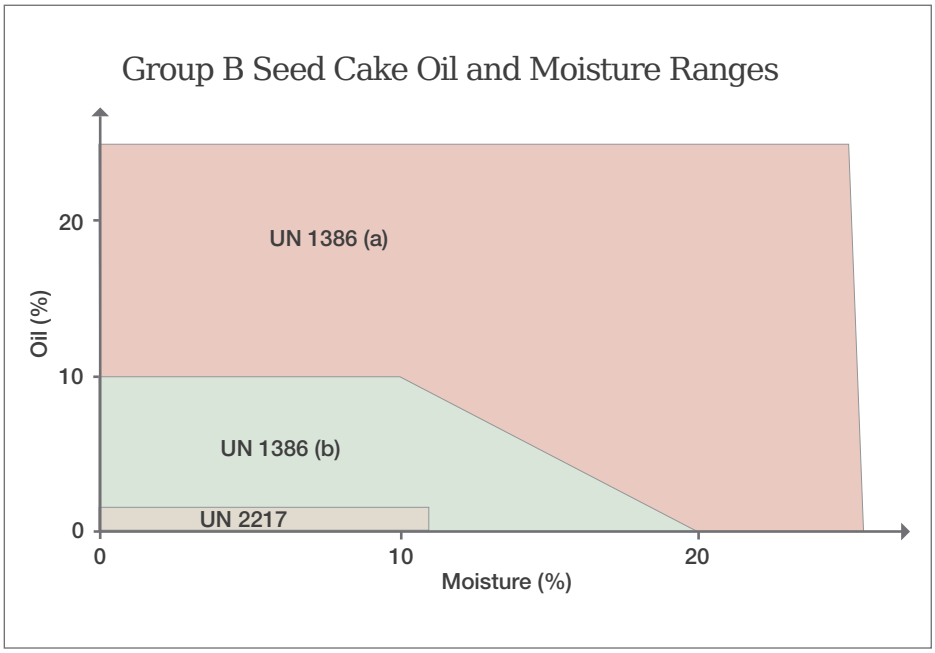
Only certain products can be carried under the seed cake (non-hazardous) schedule of the Code. These products must be in the specific form listed and must meet strict limits regarding oil and moisture content. Any difference in form, method of extraction, or oil and moisture content, will mean that cargo should not be carried as a seed cake (non-hazardous).

Temperature checks should be carried out before loading to ensure that the cargo is less than 55°C, or the ambient temperature plus 10°C, whichever is lower. Temperature checks should also take place during the voyage.

The graph to the right shows the oil and moisture limits for Group B seed cake cargoes.

Documentation

Before loading, a suitable cargo declaration should be provided. This should state the schedule to which the cargo applies.



It should include oil and moisture content as well as the method of extraction. Moisture and oil content affects the chemical properties of the cargo. A certificate must be provided stating the oil and moisture content. Provided the cargo is accurately declared and is carried in accordance with the IMSBC Code, then it can be loaded and shipped without incident.

We trust this article is of assistance but remember always refer to the relevant IMSBC Code schedule.

Seed Cake Schedule	Mechanically Expelled	Solvent Extracted	Carriage Requirements
UN 1386 (a)	✓		May only be carried in bulk when special permission has been granted by the competent authority.
UN 1386 (b)	✓	✓	Must be within specified oil and oil and moisture combined limits. When solvent extracted cargo has more oil or oil and moisture combined than the limits in the Code, advice must be sought from the competent authority. Must be listed on vessels DoC as a permitted cargo.
UN 2217		✓	Must be listed on vessels DoC as a permitted cargo.
Non-Hazardous	✓	✓	Applies only to some products, as listed below, meeting strict limits for oil and moisture content.
Rape seed meal Soya bean meal Cotton seed meal Sunflower seed meal		✓	Containing not more than 4% oil and 15% oil and moisture combined and being substantially free from flammable solvents.
Citrus pulp pellets	✓		Containing not more than 2.5% oil and 14% oil and moisture combined.
Corn gluten meal	✓		Containing not more than 11% oil and 23.6% oil and moisture combined.
Corn gluten feed pellets	✓		Containing not more than 5.2% oil and 17.8% oil and moisture combined.
Beet pulp pellets	✓		Containing not more than 2.8% oil and 15% oil and moisture combined.

LIQUEFACTION KILLS

The *'Bulk Jupiter'* sank in the South China Sea in 2015 when carrying bauxite. The incident resulted in the loss of 18 crew members. This was the first time a vessel is thought to have capsized due to the liquefaction of bauxite cargo.

Bauxite is described as a Group C cargo in the International Maritime Solid Bulk Cargoes (IMSBC) Code. This means that it should not liquefy or present a chemical hazard to ships. But a recent report by the Bahamas Maritime Authority (BMA) found it probable that liquefaction, or a free surface effect, led to the loss of the ship.

IMO Circular

The BMA report led to an International Maritime Organisation (IMO) circular on bauxite. The IMO circular contains advice to Masters on when bauxite may be dangerous to load:

…the master should not accept this cargo for loading unless:

- *the moisture content of the cargo indicated in the certificate is less than the indicative moisture limit of 10% and the particle size distribution as is detailed in the individual schedule for BAUXITE in the IMSBC Code; or CCC.1/Circ.*
- *the cargo is declared as Group A and the shipper declares the TML and moisture content in accordance with paragraph 4.3.1 of the IMSBC Code; or*
- *the competent authority has assessed the cargo and determines that the particular cargo does not present Group A properties. Such assessments shall be provided by the shipper to the master as required by paragraph 1.2.1 of the IMSBC Code.*
- *if the master has reason to doubt that the cargo being loaded is consistent with the shipper's declaration then the master should stop loading and have the shipper verify the properties of the cargo. If necessary, advice should be sought from the competent authority of the country of loading; and*
- *if the cargo is declared as Group A, the master should refer to section 7 of the IMSBC Code, which warns about cargoes that may liquefy.*

Group C or Group A?

Bauxite is an example of an IMSBC Code Group C cargo that has displayed Group A properties. There are others such as iron ore fines, chromite ore, fluorspar, manganese ore, coal and barytes. Experience has shown that all of these cargoes may at times have Group A properties and at other times be Group C. Sometimes this double property is recognised in the code and sometimes it's not.

An Issue of Trust

These grey areas cause problems and the question arises "can a Master trust the Code?"

The answer to this question is "YES!". Master's should trust the code, however it may not be prudent to believe that what the code says is **always** correct.

The code is a vital tool for managing cargo risk. Its use has ensured that many millions of bulk cargoes have been, and will continue to be, loaded and carried safely. Its use also minimises delays and disputes.

But at the same time Masters and crews must recognise that the code is not perfect.

A Snapshot in Time

The code is a snapshot in time. Its schedules reflect what is known about a cargo at a point in time. It may be based on outdated research or on cargo sourced from just one mine. When something changes, production methods or a cargo source, the properties of the cargo can change. Cargo listed as Group C may sometimes be Group A, or even Group B. New cargoes may not be listed.

The process for listing or changing a schedule at IMO can take a long time. It requires evidence based on research and experience. Even where problems occur it can take years for the code to change. Good examples of this are nickel ore which was absent from the code, and iron ore fines which was carried under the iron ore schedule, for many years.

Knowledge is Key and Vigilance is Vital

The IMSBC code recognises that it may not be perfect at section 1.2 and the code allows for change. These changes take time. Meanwhile vessels will load cargo which may be absent from the code or which may not be fully described.

To avoid loading dangerous cargo, Masters and officers should have enough knowledge of the IMSBC Code and of problematic cargoes, to keep their ship safe. Vigilance before, during and after loading is vital in ensuring a safe voyage.

Remember when loading bulk cargo:

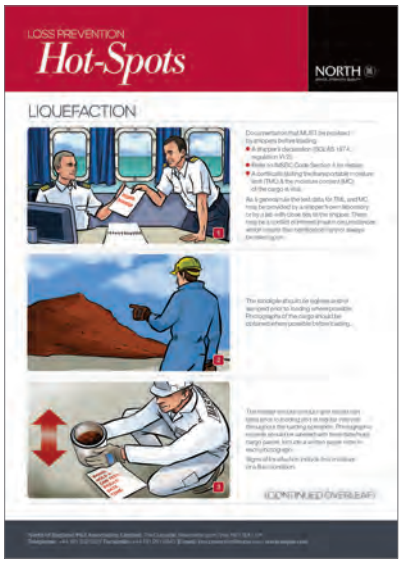
Knowledge + Vigilance = Safety

Knowledge at North

North insures lots of bulk carriers and assists with many problems. This breadth of experience is used to produce publications and advice for our Members and their crews.

We have been particularly concerned with liquefaction for many years and have produced many *Signals* articles, industry news items and loss prevention briefings on the subject. Using these resources to increase your knowledge will help you to be vigilant and to keep your ship safe.

To access this advice please visit our website: ***www.nepia.com/lp-publications***



ORGANIC GRAIN

Consumer demand for organic grain products is increasing. As such, the international trade for these products is likely to grow.

Grain crops are given organic status by recognised national bodies. To achieve organic status, certain standards of farm management must be met. This includes the sustainable use of land, protection from contamination by bordering land and limiting the use of chemicals.

Non-organic grains have been carried in bulk carriers and general cargo vessels for many years. Carriage and fumigation practices are tried and tested. The carriage of organic grains introduces new challenges; particularly the risk of contamination by chemicals or non-organic produce.

The basis for good storage and safe transport of organic crops is proper planning, good management and high standards of hygiene.

Importance of Certification

There are usually two certificates issued with organic cargoes:

- a phytosanitary certificate; and
- an organic status verification certificate issued by the exporting country's organic body.

The organic certificate is extremely important. An incident, event or error that results in the cargo losing its organic certification can end up with it losing a large proportion of its value. If the carrying vessel is responsible or liable for this loss of its organic status, they could be presented with a significant claim.

Pest Control

One of the main challenges in shipping organic grains by sea is pest control.

The use of pesticides is detailed in IMO Circular MSC.1/Circ.1358 *"Recommendations On The Safe Use Of Pesticides In Ships"*. It provides guidance on the safe use of contact insecticides and fumigants.

Some organic contact insecticides are available, but they cannot be used on a cargo that has already been loaded into the ship's hold as they cannot penetrate deep into the stow. These pesticides are only effective if sprayed onto the cargo before loading, or used for localised treatment.

If there is an intention to use a contact insecticide, it must comply with the relevant organic certification body. Be aware that some insecticides described as being "natural" are still prohibited. Remember that contact insecticides will only treat the surface of the cargo.

Treatment of grain cargoes in the ship's holds has traditionally been through fumigation. However, the use of the common fumigants, such as methyl bromide and phosphines, is strictly forbidden by organic certification bodies.

An alternative would be to carry the cargo under a controlled atmosphere. This involves introducing and maintaining high levels of carbon dioxide (CO_2) or nitrogen (N_2) in the hold. At time of writing we are not aware of any instances where this has been carried out. Effective hold sealing would be vital and equipment would be needed to supply and inject the inert gas. This could be through the use of compressed gas bottles or a CO_2 or N_2 generator.

CO_2 is approved by the organic bodies to treat products that have been infested with insects. This requires a concentration of 35-60% carbon dioxide for anywhere between 4 to 21 days. But it is understood that it is not always fully effective.

There are some more alternative methods but these can only be carried out pre-shipment. These include: aeration cooling which involves forcing cool air through the grain; and heat treatment where the grain is briefly raised above 63°C before being rapidly cooled.

The options for on board pest control of organic grain cargoes are limited. Pre-shipment treatment must be the preferred option. Vessels should record any details of pre-shipment treatment that they are given by shippers. The shipper's advice should be followed carefully.

Avoiding Contamination

It is very important that organic cargoes are kept separated from non-organic cargoes. This is to prevent cross-contamination. Areas where cross-contamination could occur should be identified and control measures put in place. Strict access control to the holds should be in force and records kept.

Take care when a non-organic cargo in another hold is under phosphine fumigation. The organic cargo's status could also be lost if any of the gas leaks out and reaches the hold. Organic cargoes are routinely tested at discharge and if traces of unauthorised fumigants are detected then this will lead to the loss of certification.

As with any grain cargo, the holds must be cleaned to a 'grain clean' standard before loading. However, when preparing the hold for organic grain cargoes it is very important to remove all traces of any cleaning chemicals that were used. Perhaps seek advice on the use of cleaning chemicals from the shipper.

Remember, cargo hold cleaning records provide valuable evidence in the event of a claim.

After Discharge

Due to the restrictions on the use of fumigants, there is a higher risk of infestation in organic grain cargoes. After discharge has been completed, it is possible that infested cargo residues will remain in the cargo hold. It is therefore important that the hold is properly cleaned before carrying any further cargoes.

Pest Management

The vessel may already have an effective pest control management program in place. Detailed records of the programme should be kept. These records could act as evidence in the event of a claim. Any existing program should be checked to make sure it is compatible with organic cargo if/when carried.

Naturally, good housekeeping and proper garbage/waste management can go a long way to prevent pests.

Responsibilities

It is clear that the carriage of organic cargoes presents new risks to the carrier. The financial impact of losing organic status must not be underestimated. Shipowners and carriers should ensure they receive full and written instructions on hold preparation, carriage and pest control from the shippers or charterers. They may also wish to protect themselves as far as possible by using a suitably claused charterparty.

CARGO THEFT GOES 3D

Thieves are taking advantage of new technology when they target cargo in containers. There have been reports that 3D printers have been used to make fake security seals.

Fitting fake seals on a container after stealing its contents is a well-known ploy. The thief breaks the old seal to gain access into the container and steals the cargo. They then close the door and a replacement seal is fitted to hide their tracks.

In many cases the theft is not discovered until the container is delivered to its final destination. By that time it is very difficult to know where and when the theft took place.

In a recent article by the British International Freight Association (BIFA), 3D printers have been used by criminals to clone seals. They can be made within 10 minutes and traceability is near impossible. Identification marks can also be easily applied to the seal cylinder, making detection even more difficult.

For more information on container theft and how to prevent it, read our loss prevention briefing at: ***www.nepia.com/lp-briefings***

E-FRAUD

North has recently been notified of a number of cases concerning the fraudulent misdirection of payments due under or in relation to charter parties and other shipping contracts. As this suggests a worrying and rising trend, the following guidance is issued to alert Members, brokers and other concerned parties to this problem, including providing some practical suggestions on how to manage and avoid the risks involved.

The Scenario

A common scenario is that an unauthorised third party obtains access to the email system of a party involved in the brokerage correspondence chain. This could be owners, charterers or brokers. The unauthorised third party then seeks to misdirect payment elsewhere – sometimes using the "hacked" party's email address and sometimes, using an email address which is very similar to a legitimate address.

The consequences of this fraud can be substantial losses of revenue, an obligation to pay again, damage to commercial relationships and the potential for expensive litigation.

Who Bears the Loss?

There is no simple answer to this question. It depends on the terms of the contract in question and the circumstances of the case.

Often the paying party will bear the losses unless they can establish that the payment as directed amounted to a good discharge of their obligation to pay under the contract, or resulted due to the actionable fault of their counterparty, or another party involved in the transaction.

This can become a complicated issue when messages to redirect payment come via the brokerage channel, as questions arise as to whether or not the payer could treat such messages as being made with the authority of the genuine beneficiary under the contract.

Protecting the Transaction

Ideally the parties should include the details of beneficiaries and bank accounts in the contract itself, rather than leaving the provision of banking details for payments until afterwards.

Exchanging payment details after the contractual stage gives fraudsters an opportunity.

If they can insert themselves into correspondence it allows them to misdirect payments, usually by substituting fake invoices for genuine ones.

If the beneficiary and bank account details are agreed at the outset, along with a formalised process for substituting the beneficiary and bank account if variations are required, there is less room for error or doubt, provided the payer is diligent in double checking to ensure payments (or variations) are being made in accordance with the contract.

Any request via the brokerage channel to redirect payments, especially if contradictory invoices are circulated, should be treated with caution. It is good practice to double check these requests by telephone with the brokers and/or the contractual counterparty. They may also be confirmed in writing by alternative means, such as fax or telex.

Going outside the brokerage channel email chain in this way is important as more sophisticated fraudsters can go to elaborate lengths to avoid the abuse of the email system being easily detected by the innocent parties.

This can include using deceptively similar email addresses to those legitimately used and altering the protocols on the email system to which unauthorised access has been obtained to block certain in-coming emails.

Make Yourself a Hard Target

Prevention is better than cure. Good IT security is the key defence to protecting the financial interests of everybody involved in shipping transactions.

This should include simple practices such as:

- regular changing of passwords;
- not sharing passwords or sensitive transactional information with others not involved;
- avoiding opening suspicious attachments to emails that could contain viruses designed to obtain unauthorised access to email systems; and
- periodic review and upgrading of IT security hardware and software.

In the case of any suspected unauthorised access, IT security and email protocols should be checked promptly by qualified technicians and appropriate action taken to mitigate against the risk of further attempts or incidents.

The fraudsters are out there – take steps to ensure that you are a hard target.

NYPE 2015 – THE NEW CHARTER PARTY FORM

On 15 October 2015, a new version of the New York Produce Exchange Time Charter form was issued (NYPE 2015).

NYPE 2015 is the product of a co-operative effort between BIMCO, the Association of Shipbrokers and Agents (ASBA), who are the copyright holders of the NYPE form, and the Singapore Maritime Foundation (SMF) and is jointly authored by the three organisations.

It is the result of three years work during which there was extensive industry consultation. As with any joint drafting exercise there will doubtless have been compromises.

In their press release, BIMCO described the objective of the NYPE revision as being *"to produce a dry cargo charter party that reflects contemporary commercial practice and legal developments that have taken place in the past twenty years … which takes proper stock of the most commonly applied amendments and additional clauses used by practitioners in the dry cargo sector."*

It is significantly longer than previous NYPE editions, now amounting to 57 typed clauses and there is also a four-page form requiring a detailed description of the chartered vessel.

That said, according to Inga Froysa, Chairperson of the BIMCO NYPE revision sub-committee:

"Users of the current NYPE form will certainly still recognise and be familiar with the core elements of the time charter party, but they can also expect to see some significant changes and improvements.

Notably, the contract incorporates many of the rider clauses that are routinely added to the existing NYPE – but we have made sure that any new clauses incorporated into the new NYPE are relevant, balanced and consistent with the other provisions."

Of particular note is that NYPE 2015 is designed for adaption for either a single trip or a standard period.

There are some additional clauses that apply only to period time charters (where the minimum charter period exceeds five months) and Members are advised to check carefully whether the additional clauses should or should not apply in the context of their own agreement.

It also includes provision to state whether the "Owners" are the legal or registered owners of the ship, or whether they are operating the ship under a bareboat (demise) agreement or are time chartering the ship from another entity.

Other notable changes include:

- The parties' option either to agree that the ship will be delivered ready to receive cargo, or that it will be ready to receive cargo at the first loading port if different from the delivery place. It is important that parties make a careful selection and delete the option not to apply. If parties overlook this then the owners, by default, will be under a strict obligation to deliver the ship at the delivery place ready to receive cargo.
- Provisions designed to give greater certainty to the effect of delivery and re-delivery notices and in particular restricting the ability to give further employment orders contrary to the notices already given. This is intended to reverse the problem created by the *"Zenovia"* [2009].
- Clause 9 regarding bunkers, which whilst comprehensive in scope (dealing with prices, quality, sampling etc), extends over 3 pages in length!
- The right to damages after withdrawal for non-payment of hire and also a right to suspend service. The grace period notice required before withdrawal now applies even if the non-payment of hire was intentional.
- Amendment to the "Owners to Provide" clause to include "lubricating oil".
- Amendment to the "Charterers to Provide" clause to include "customary pilotage".
- A clause specifically for speed and performance (as opposed to the mere speed and consumption description found in the NYPE 1993). Notably the performance warranty is to apply *"throughout the duration of this charterparty"* and so is a continuing warranty. There is also provision for the parties to resolve any speed and consumption claims by referring such disputes to an "expert" or "alternative weather service", "whose determination shall be final and binding".
- There is a detailed slow steaming clause (Clause 38) expressly to permit Charterers to give orders contrary to the traditional bill of lading obligation to prosecute voyages *"with utmost despatch".*

Rider Clauses

NYPE 2015 includes within its text a number of BIMCO clauses often added as Rider Clauses. However, Members should note NYPE 2015 does not include a number of BIMCO clauses that Members might now regard as necessary inclusions, such as BIMCO's:

- Asian Gypsy Moth Clause.
- Bunker Non-Lien Clause.
- Cargo Fumigation Clause.
- Anti-Corruption Clause.

Only time will tell whether the authors of NYPE 2015 have indeed met their objective of producing a version of NYPE that has *"global appeal"*.

Perhaps an objective indicator will be when the authors of *Wilford on Time Charter Parties* feel it necessary to issue a new edition to reference NYPE 2015.

In the meantime, NYPE 2015 was published by BIMCO with a 32 page booklet of explanatory notes. Members will however undoubtedly have queries on NYPE 2015, and are asked to raise these with their usual FD&D contact.

NEW INSURANCE ACT COMING SOON

A new Act is coming into force in the United Kingdom and will bring the biggest change in insurance law for over 100 years.

The UK Insurance Act 2015 will come into force in August 2016 and will affect insurance contracts subject to English Law. It amends the Marine Insurance Act (MIA) 1906 which has long been the basis of P&I insurance, for UK based P&I Clubs.

The new Act impacts eight of the thirteen International Group P&I Clubs as they are based in the UK and subject to its law. The eight clubs – which include North P&I – have come together to agree on how the new Act should be incorporated into each of their rules.

Details of the approach taken by North and the other IG clubs affected can be found in our Circular: ***www.nepia.com/news/circulars/the-uk-insurance-act-2015/***

NEW EMISSION CONTROL AREAS IN CHINA

Three new emission control areas will be established in China. They have been created to reduce the levels of ship-generated air pollution and mainly focus on the sulphur content of fuels. The three areas are the Pearl River Delta, the Yangtze River Delta and Bohai Bay. It should be noted that these emission control areas arise as a matter of Chinese domestic law and are not MARPOL Annex VI designated emission control areas.

Details of these areas were first announced when the *"Ship and Port Pollution Prevention Special Action Plan (2015-2020)"* was issued by the Chinese Ministry of Transport. This was followed by the implementation plan which was released in December 2015.

The new regulations apply to all vessels entering or operating within the emission control areas, with the exception of military, pleasure craft and fishing vessels.

Boundaries and Core Ports

As part of the implementation process a number of 'core ports' have been identified. The boundaries and core ports for each emission control area are as shown right.

Timeline of New Sulphur Limits

The limiting of the sulphur content of the fuels used within the emission control areas will be a staged process. Also, there are provisions for vessels to take alternative measures to comply with the new rules, such as connecting to shore power – also known as cold ironing – or using clean energy fuels. Another alternative is to use an exhaust gas scrubber.

The details in the timeline for the regulations are not clear at present. But it is understood to be as follows:

From 1 January 2016: Strict enforcement of the existing international conventions and domestic laws and regulations on sulphur oxides, particulate matter and nitrogen oxides. The notable change is the indication that there will be stricter enforcement of the existing international and domestic requirements.

In addition, the ports within the emission control areas have the option to introduce a 0.5% sulphur limit and/or other control measures. In view of this option, it will be necessary to monitor developments on a port-by-port basis.

From 1 January 2017: Vessels at berth in a core port within an emission control area should use fuel with a maximum sulphur content of 0.5% – except one hour after arrival and one hour before departure.

From 1 January 2018: Vessels at berth in any port within an emission control area should use fuel with a maximum sulphur content of 0.5% – except one hour after arrival and one hour before departure.

From 1 January 2019: Vessels operating within an emission control area should use fuel with a maximum sulphur content of 0.5%.

At a date which has yet to be advised after **31 December 2019** there will be an assessment made by the Chinese authorities with a view to adopting one or more of the following:

- Reducing the maximum sulphur content to 0.1% for vessels operating in the emission control area.
- Expand the geographical size of the emission control areas.
- Consider any other further initiatives.

Members are advised to keep up to date on how this new staged regulation process progresses. Where necessary, have sufficient compliant low sulphur bunkers to comply with the Chinese domestic requirements.

Check the situation with local agents well in advance of calling at an affected port.

Yangtze River Delta:
Core ports in the Yangtze River Delta are Shanghai, Ningbo, Zhoushan, Suzhou and Nantong

Bohai Bay:
Core ports in Bohai Bay are Tianjin, Qinhuangdao, Tangshan and Huanghua

Pearl River Delta:
Core ports in the Pearl River Delta are Shenzhen, Guangzhou, Zhuhai and Hong Kong

AMSA AND PARIS MOU ANNUAL REPORTS – THE USUAL SUSPECTS

Both the Australian Maritime Safety Agency (AMSA) and the Paris Memorandum of Understanding (MOU) have recently published their annual reports for 2014. The reports, which contain statistics on deficiencies and detentions, may be useful for members focussed on improving their PSC record as they highlight the most common port state control (PSC) deficiencies.

The usual suspects, firefighting equipment and lifesaving appliances, feature at the top of deficiency lists in both reports.

The AMSA report highlights that the principal causes of detention remain related to International Safety Management (ISM), fire safety, lifesaving appliances and pollution prevention and these causes have persisted for the last three years. AMSA also state that they find it difficult to see how well established requirements for fire safety, lifesaving appliances and pollution prevention continue to be such significant issues. According to the Paris MOU report, safety of navigation, fire safety, lifesaving and certificates and documentation were the top four deficiency categories.

The full reports can be found at the following links:

www.amsa.gov.au/forms-and-publications/about-amsa/publications/Annual-Reports/2014-2015/

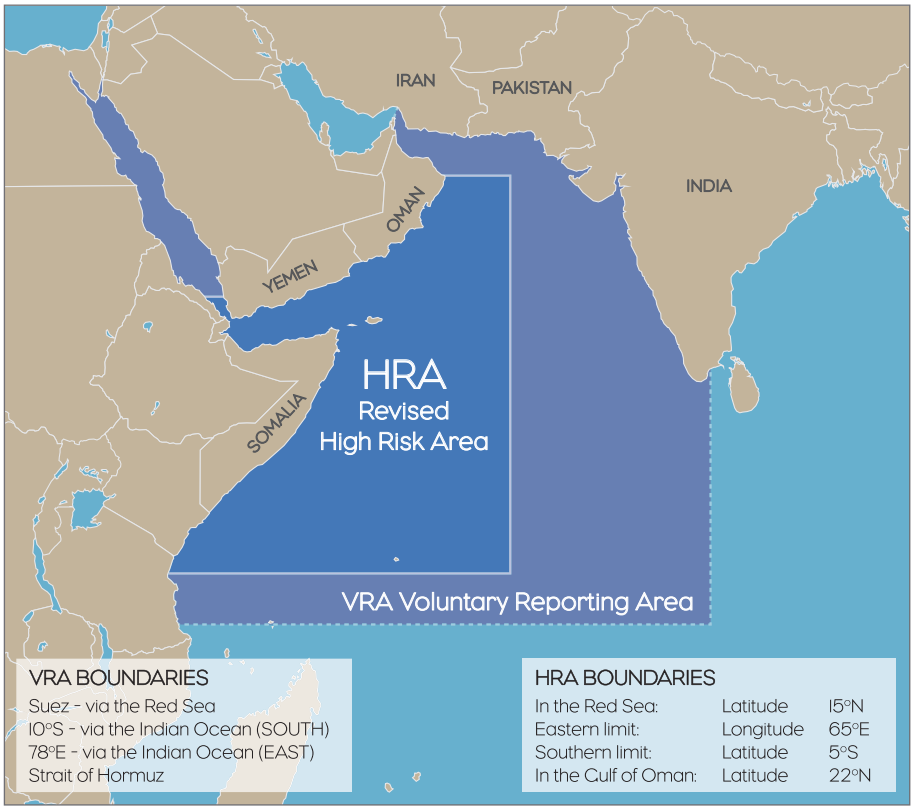
www.parismou.org/2014-annual-report-paris-mou-psc

Use them to help improve your PSC inspection preparations. Don't get detained due to one of the usual suspects!

PIRACY: HIGH RISK AREA NOW SMALLER

The BMP 4 High Risk Area (HRA) has been reduced in size from 1 December 2015. This development is in response to the reduction in pirate attacks in the Indian Ocean. The Voluntary Reporting Area (VRA) limits remain unchanged.

Ships entering the VRA must still register with the Maritime Security Centre for the Horn of Africa (MSCHOA) and report to the United Kingdom Marine Trade Operations (UKMTO) to be monitored during transit.



Piracy Threat Still Present

The threat of piracy in the region has not gone away. Ongoing risk assessment and a high level of vigilance is essential before entry to, or when operating in, the VRA.

Revised HRA Map

A new edition of the Maritime Security Chart Q6099 incorporating these amendments can be viewed and downloaded from the UKHO website. *www.ukho.gov.uk/ProductsandServices/PaperCharts/Documents/Q6099_144.pdf*

War Risk Insurance

Members should note that this revision is distinct from the Joint War Committee Areas of Perceived Enhanced Risk which can give rise to additional premiums for war risk insurance.

A significant change has been announced to the Listed Areas after a review by the Joint War Committee. The waters enclosed by the following boundaries for the new listed area:

a) On the north-west, by the Red Sea, South of Latitude 15°N

b) On the west of the Gulf of Oman by Longitude 58°E

c) On the east, Longitude 65°E

d) On the south, Latitude 12°S

Members may also wish to review their charter parties in light of the changes to HRA.

SINGAPORE RTC A SUCCESS

North's highly successful Singapore residential training course (RTC), aimed primarily at Members from Singapore and the Asia Pacific region has once again proved a success.

Shipping industry professionals from throughout the Asia Pacific region and from farther afield, once again showed support for the course.

Delegates came from Singapore, China, India, Indonesia, Japan, Korea and Malaysia.

There were also delegates from as far afield as Canada, Italy, Saudi Arabia, the UK and the USA.

The 3rd Singapore residential training course in P&I insurance ran over five days from 16-20 November 2015.

The next course is planned for November 2017. More information on the course, pricing and booking can be obtained from Elizabeth Er in the Singapore office *elizabeth.er@nepia.com*

COLLISION CASE STUDY – STS CONTACT DAMAGE (ANSWERS TO QUESTIONS)

1. No, as between the two STS vessels the Collision Regulations do not apply. The intention and method of COLREGS is to remove the 'risk of collision' by avoiding a 'close quarters' situation but in STS operations the two ships are intended to come into contact. STS is therefore a collision (two ships coming into contact) but under an agreement to exclude COLREGS.
2. It follows that the rules in Part B do not apply.
3. Because COLREGS do not apply, neither ship has priority over the other. Responsibility for any damage is measured by each master's negligence and in this case **both** masters agreed to perform a manoeuvre under conditions when rolling damage was foreseeable. By this analysis neither master was negligent, in which case neither ship has a claim against the other and each ship bears its own loss and damage.

And remember, once on their final approach, ships performing STS are 'Restricted in Ability to Manoeuvre'. They must show the appropriate lights and shapes and must follow COLREGS in relation to other shipping in the vicinity.

UK RTC REGISTRATION NOW OPEN

Registration for North's highly successful, annual residential training course in P&I insurance is now open. The course, which is held at South Shields' marine school and at the historic Lumley Castle Hotel, will run from 10-17 June 2016.

For more information on course topics and to download a brochure, visit ***www.nepia.com/rtc***

NORTH'S SMARTPHONE APP

North's smartphone app, launched in January 2015, has now been downloaded by users all over the world. The app which is available both online and offline, provides a simpler, quicker way to access North's databases of staff, correspondents, entered vessels, blue cards and wreck removal cards.

The app is available over most major smartphone platforms and can be downloaded from our website: ***www.nepia.com/apps***

COLLISION CASE STUDY – STS CONTACT DAMAGE

Introduction

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

Scenario

The two ships are preparing for an STS transfer. The 'orange' ship is the receiving vessel, she is the larger of the two and is part-loaded. She is steering due east at 5 knots. The 'blue' ship is the transferring vessel and the smaller of the two. She is fully loaded. The 'blue' ship is almost on station, her speed is reducing to 5 knots and she is edging towards the 'orange ship'.

Wind and swell are from the north. Both ships are rolling and there is a risk of contact at deck level.

Questions

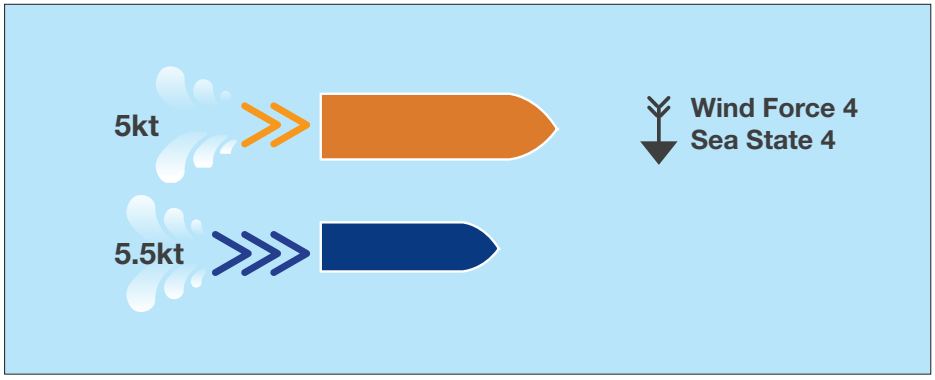
1. Is this situation governed by the collision regulations?
2. If 'yes', which of the rules in Part B, Section II apply?
3. If contact damage occurs to the 'blue ship', which vessel is responsible?

Answers can be found on page 11.

Further Information

Members can obtain electronic versions of North's loss prevention guide *Collisions: How to avoid them* by e-mailing ***loss.prevention@nepia.com***

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



Your Copy of *Signals*

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

- *'Bulk Cargoes: A Guide to Good Practice'* (for appropriate Member and vessel types).

Disclaimer

NORTH
SERVICE, STRENGTH, QUALITY

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