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triton

The Swedish Club

TS Taipei

A medal-winning performance

New publication: Anatomy of an Accident

Autonomous vessels – No human factor at all?

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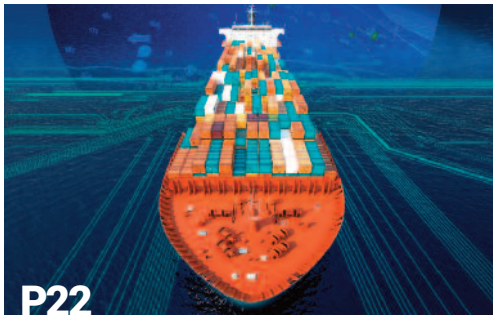

No.1 | 2017 triton
The Swedish Club

The Swedish Club Triton is published three times a year and distributed free of charge. The Swedish Club Triton is an editorially independent newsletter and opinions expressed by external contributors are not necessarily those of The Swedish Club. Articles herein are not intended to provide legal advice and the Club does not accept responsibility for errors or omissions or their consequences. For further information regarding any issue raised herein, please contact our head office in Gothenburg.

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Layout
Elaborate Communications Ltd

Print
PR Offset, Molndal 1704pr4000/E8

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Cover Photo: EPA Environmental Protection Administration, Taiwan

It never happens to me

Dear members and associates

"It never happens to me" is a common human reaction to accidents and casualties. As underwriters we can say that it may happen to us, but the question is when will it happen and involving which member? Underwriting is based on probability theory, where exposures are assessed. Pricing is tailored to cover the statistically likely outcome.

We have an organisation that is prepared to respond. This is what we are trained to do. The mission is to provide the reassurance that the Club is there to assist, in such a way that we will 'hit the ground running'. When an unlikely event happens, we have the experience to put in a rapid response, and this experience should make a difference. The case study involving the TS Taipei casualty, featured in this issue of the Triton, is but one example of what the Club can do when it happens to us.

The Emergency Response Training initiative is designed to test-run members' emergency response plans. The Club will add experience in a realistic scenario in which a vessel suffers a serious accident. The point is to monitor how the emergency is addressed by both the vessel's manager and the underwriter. It is much better to understand the requirements of emergencies before they happen. This training is offered free of charge to all members. Can you afford not to test it?

The Swedish Club announced a good result last year, once again delivering a balanced underwriting performance. We reported a combined ratio of 98%, underpinning our eight-year average of 97%. Underwriting is about delivering sustainable results over time. Our Board decided at the end of March to offer mutual P&I members a 4% discount on the premium (ETC). Mutuality is a two way street.

It happens to us – the Club is celebrating its 145th anniversary this year, a very respectable milestone on our journey. The Annual General Meeting will highlight this event by including some historical flashbacks. We also have another anniversary - the Club has also had an office in Hong Kong since 1982. The 35th anniversary celebration will be shared with members in October.

The Club is all about the people, and this year members and stakeholders will be invited to 'meet our crew' around the world.

Many interesting topics and social events are featured in this edition of the Triton. I hope you enjoy reading it.

Lars Rhodin
Managing Director

Safety scenario

Careless fumigation caused explosion

By Joakim Enström, Loss Prevention Officer

Each month the Club's Loss Prevention department issues a new safety scenario to assist members in their efforts to comply with international safety regulations and to follow best practice. Visit Swedish Club OnLine (SCOL) for more examples.

CASE STUDY

A bulk carrier had loaded yellow corn in each of its cargo holds, up to the level of the hatch coamings. After the loading was complete, fumigation technicians came on board and fumigated the cargo with fumitoxin pellets. The cargo documentation required the fumigation pellets to be applied subsurface, but instead the technicians poured the pellets from flasks while walking on the hatch coamings or hatch covers. This work took a little more than an hour and afterwards all cargo hatches were closed and the vessel sailed.

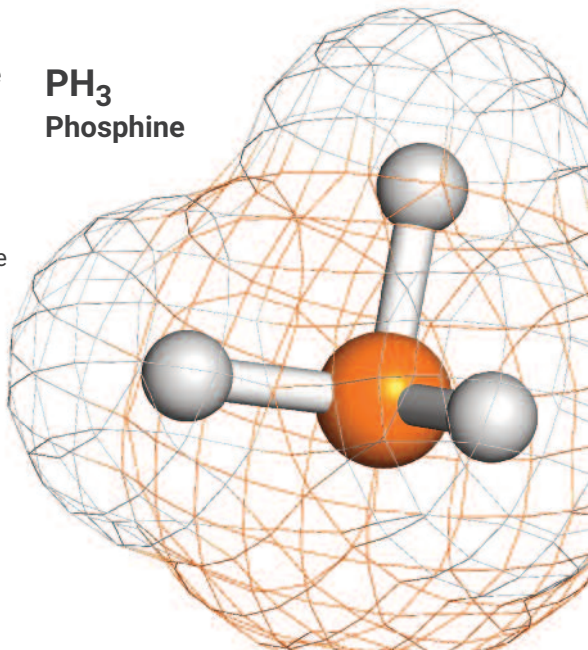
A couple of hours later there was an explosion in hold number 3. The crew saw that the hatch covers had moved slightly and blue grey smoke was seen coming from under the edges. About an hour later another explosion occurred. This time it was from hold number 4 and a couple of minutes later an explosion occurred in hold number 6. There were explosions in the remaining four holds shortly afterwards.

The method of application employed by the fumigation team lead to the explosions.

The method of application employed by the fumigation team had likely permitted the accumulation of the pellets in limited areas, which had promoted a relatively rapid reaction of the pellets with moisture, thereby generating concentrations of phosphine gas above the lower flammable limit. This then lead to the explosions.

Chemistry

Fumitoxin pellets and similar fumigants are made up of around 55% aluminium phosphide, ammonium carbamate and inert materials. The aluminium phosphide reacts with water to produce phosphine which is extremely toxic and an effective fumigant. Under normal conditions, phosphine is a gas which is slightly denser than air. It is colourless and has an odour variously described as "fishy", "garlic-like" or "like carbide". It will form an explosive mixture when mixed with air at a concentration exceeding around 1.8% to 2% by volume.



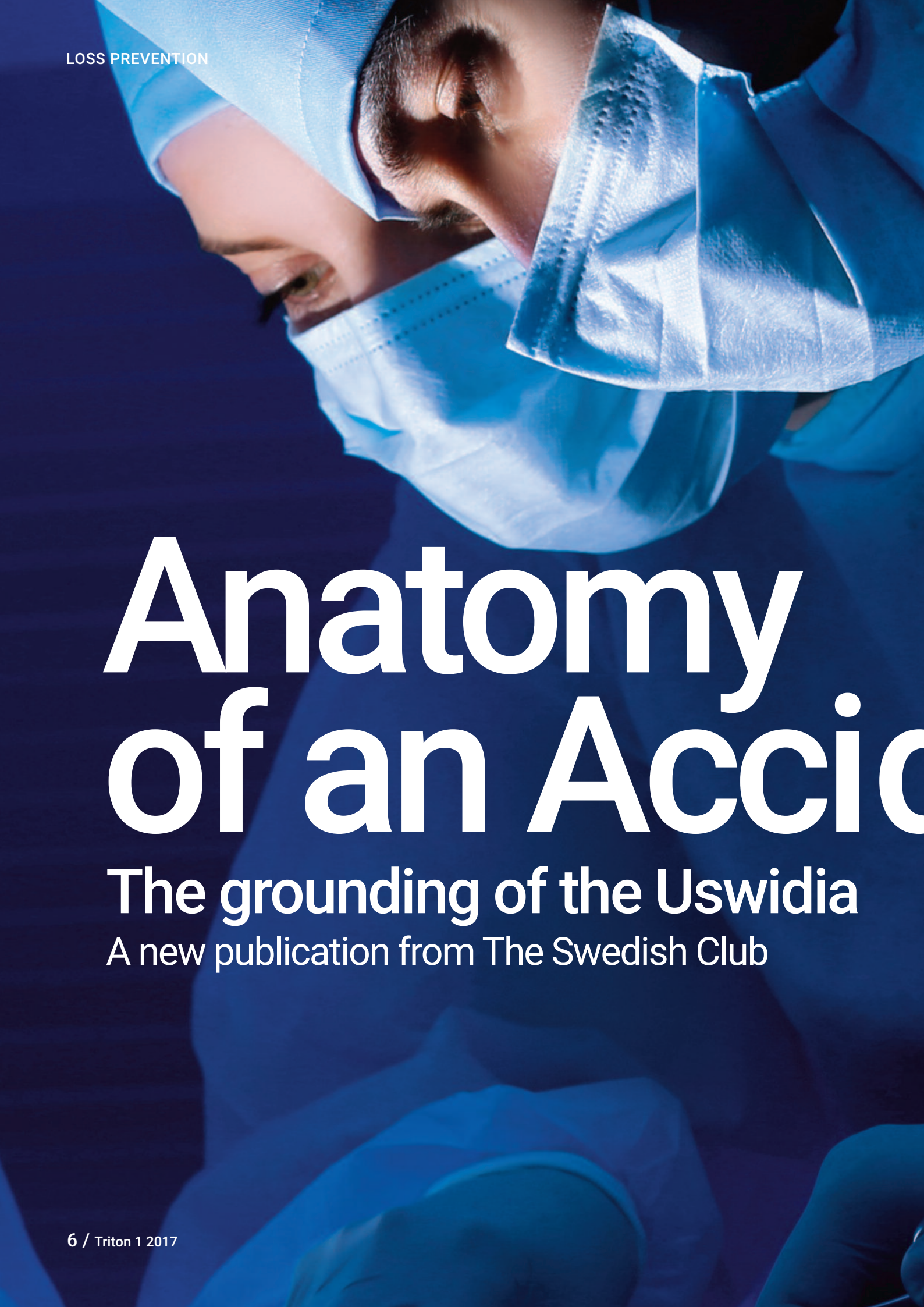
A couple of hours after fumigation pellets were applied there was an explosion in hold number 3. The crew saw that the hatch covers had moved slightly and blue grey smoke was seen coming from under the edges. About an hour later another explosion occurred.

To prevent this occurring on your vessel ask yourselves these questions:

1. What were the immediate causes of this accident?
2. Is there a risk that this kind of accident could happen on our vessel?
3. How could this accident have been prevented?
4. What sections of our Safety Management System (SMS) would have been breached if any?
5. Is our SMS sufficient to prevent this kind of accident?
6. Does our SMS address these risks?
7. Do we have procedures for fumigation?
8. Would our procedures have prevented this accident?
9. Is everyone involved in the cargo operation aware of these procedures?
10. Would this loading have been in accordance with our procedures?
11. If procedures were breached, why do you think this was the case?
12. How are near misses shared within the company?
13. What do you think was the root cause of this accident?

- The crew need to ensure that the fumigation pellets are distributed as per the cargo documents.
- The Manager should ensure that the crew is aware of the requirements and procedures for the fumigation operation.
- Because the pellets were distributed in heaps this resulted in a significant accumulation, which in turn promoted self-heating and unusually rapid generation of phosphine gas in the holds' head spaces.
- Spreading out the pellets will reduce the self-heating tendency and result in lower temperatures and slower rates of phosphine generation.
- A significant fire and explosion risk exists if the concentration of phosphine gas in the air exceeds the lower flammable limit concentration.

- If an explosive or flammable phosphine/ air mixture is enclosed in the head space of a cargo hold and undergoes spontaneous ignition, a flame will propagate through the flammable mixture, leading to an increase in temperature and a concomitant increase in pressure (overpressure). This process is usually termed a volume explosion and the over-pressures generated in the process are capable of lifting hatch covers and damaging structural elements such as bulkheads.



Anatomy of an Accid

The grounding of the Uswidia

A new publication from The Swedish Club

Imagine, night has fallen and you are travelling at 12 knots en route from Sandnessjøen, Norway to Uddevalla, Sweden, in the chemical tanker Uswidia, laden with caustic soda. The wind is getting up – already Beaufort 5, when loud noises are heard from the turbo charger. Still able to navigate, you continue your route at a speed of 4 knots. But then the situation begins to escalate: the vessel completely breaks down and you are now drifting in winds of Beaufort force 7 and rough seas. Emergency services have been called in, but a towing line breaks and the vessel runs aground on rocks. Members of your crew have been injured and spaces have been breached.

dent

How does this nightmare scenario resolve itself? In fact, with the assistance of experts from all sectors of the maritime industry, a well-oiled machine comes into play, with clearly defined processes being played out through the course of the incident.

'Anatomy of an Accident' demonstrates how easily an incident can escalate, the various parties and processes involved in dealing with an emergency situation, and the complicated interplay between the various bodies involved in bringing an incident to a resolution.

'*Anatomy of an Accident*', a new publication from The Swedish Club, investigates just what constitutes that mechanism, and how an emergency situation will play out in real life.

Emergency Response Training

A key element of The Swedish Club's Emergency Response Training programme is the creation of a realistic incident scenario, run in situ and involving not only our members, but professionals working in important maritime services and support sectors. DNV GL, HRS Sør-Norge, Navigate Response, the Norwegian Coastal Administration, the Norwegian Maritime Authority and T&T Salvage all took part in the Uswidia simulation, providing both their time and expertise to support The Swedish Club's commitment to loss prevention.

'Anatomy of an Accident' demonstrates how easily an incident can escalate, the various parties and processes involved in dealing with an emergency situation, and the complicated interplay between the various bodies involved in bringing an incident to a resolution.

How would your operation deal with the grounding of the Uswidia?

With the assistance of experts from all sectors of the maritime industry, a well-oiled machine comes into play, with clearly defined processes being played out through the course of the incident.

Emergency Response Training

The Swedish Club's Emergency Response Training tests how your operations are affected when dealing with an incident, who is responsible for which action during an emergency, and showing just how the Club can help you as you act on the emergency plan and the ISM requirements.

The training ensures that your emergency response plan works, and that its individual elements interact and support one another should a real life crisis occur. We offer Emergency Response Training to our Club members free of charge.

Ship in trouble? Here comes the media

If there is any certainty in a casualty situation, it is this: a ship visibly in trouble attracts media attention - fast.

In the Emergency Response Training exercise, detailed in Anatomy of an Accident, Dustin Eno, COO & Crisis Response Manager at Navigate Response, gave advice on handling and managing mainstream and social media.

"We run a lot of exercises with our shipping clients, but mostly everyone is a bit remote – probably at the end of a phone line," he says. "In one way it is more realistic, because if you have a crisis you will not have them all in the same room together. But what The Swedish Club set up was very innovative in a sense of identifying these very distinct, separate organisations involved in the 'crisis' and bringing them together in a room where they were able to talk through all of the different issues.

"This was incredibly useful, enabling all parties to build dialogue and understand the processes each of them was going through. For example – DNV GL didn't just give us a report, but explained the factors they were considering, the issues they were concerned about, the variables and the past influences, so everyone could understand how they arrived at their recommendation."

Emergency exercises are vital for getting people to think about, and test, the connections they need in the event of an incident, he points out – salvors, local

Dustin Eno

COO & Crisis Response Manager at Navigate Response

authorities and class, as well as P&I and media. "In any exercise, we should be looking to create those connections, so you have talked to the organisation before and you know their phone numbers and procedures, so that you are not trying to figure things out in a crisis situation."

The way in which the 'casualty' situation unfolded was very realistic, says Eno. "It was that sense of thinking you have a handle on things, and then something else happens. Things almost never go to plan, especially in the early stages."

He concludes: "I am still amazed by how many companies have never fully tested their procedures. Take time to test your plan – because if you haven't done so in a realistic fashion, you could end up in disaster.

"As part of that, consider media response. Are you ready to respond? What do you need to be doing now to prepare for the worst-case scenario, while hoping it won't happen?"

The media response: Dustin Eno's Dos and Don'ts in a crisis situation:

Dos

- Identify stakeholders and establish contact with their press offices.
- Prepare a media statement emphasising what you are doing to address the incident and how you are mitigating any further damage.
- Monitor media and social media so that you will know what people are saying about your company and the incident.
- Remind your team (especially on the vessel involved) about your media and social media policy and give them the contact details of the person in charge of your media response.

Don'ts:

- Never speculate. If you don't know something absolutely, don't answer. It's OK to say you are still gathering information.
- Don't use jargon or legal wording when talking to stakeholders. People will react best to you as a human rather than as a company.
- For major incidents, don't assume the communications process is over until all investigations, legal proceedings and clean-up operations are complete (can be years).
- Don't lie or cloud the truth. This should be obvious, but unfortunately companies often think they can get away with dishonesty – they usually can't.

Don't fall foul of low sulphur fuel regulations

By Laia Politou, Claims Executive, P&I - Lawyer, Team Piraeus

Meeting low sulphur fuel regulations are a reality for most ship operators today. However these regulations are complex and can present a number of practical challenges to be faced.

The penalties for breach of low sulphur fuel regulations can be severe and include substantial fines as well as imprisonment in some jurisdictions for both shipboard and shore personnel. For instance, the Environmental Protection Agency of the United States has enforced civil penalties which may amount to USD 25,000 per violation, per day. The penalties are designed to deter future violations which means that they are likely to be larger the more aggravated the offence was found to be.

To avoid falling foul of legislation, members need to ensure that they have:

- Adequate procedures in place,
- An effective compliance strategy
- Proper training
- Robust monitoring
- Continuous due diligence as to which low sulphur fuel regulations are in force in the jurisdictions to which they trade

There can be difficulties in finding and obtaining compliant low sulphur bunkers, and so good contractual arrangements are the key. Under the BIMCO Fuel Sulphur Content Clause, it is the charterer which is obliged to supply low sulphur fuel, permitting the vessel to comply at all times with the applicable regulations. Moreover, a charterer will be liable to indemnify, defend and hold an owner harmless in respect of any losses, delays and fines arising from any failure on their part to supply compliant fuel. The use of this BIMCO Clause is therefore encouraged by The Swedish Club as an important step in protecting members.

Legislation

Since 1 January 2015, vessels have been required to use fuel with a sulphur content of no more than 0.1% when trading in certain Emission Control Areas (ECAs) designated under the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI (Regulations for the Prevention of Air Pollution from Ships).

The ECAs established under the MARPOL Annex VI are: the Baltic Sea area, the North Sea area, the North American area (covering designated coastal areas off the US and Canada) and the United States Caribbean Sea area (around Puerto Rico and the United States Virgin Islands). However, a shipowner's obligation to use low sulphur fuel is not limited to these ECAs. A number of other low sulphur regimes are in force in various jurisdictions such as California, Turkey, Hong Kong and Australia.

Similarly, according to EU Sulphur Directive 2012/33/EU, all vessels at berth in a port of any Member-State must use fuel with a sulphur content of 0.1% or less, even if that port is outside the Baltic Sea ECA or the North Sea ECA.

Dealing with the issue of ship shore discrepancies

By James Bamforth, Head of Claims, Claims Manager, Team Piraeus

The Club continues to see a steady number of ship shore discrepancies involving bulk cargoes, with potentially serious implications. Apart from delay or interruption whilst the matter is resolved, a failure to address the matter adequately can expose a shipowner to potentially significant claims, and can even risk prejudicing its P&I cover.

The problem

On occasion, a discrepancy is found between the shore figures and the vessel's draught survey. More often than not, the Master will face significant pressure to issue a bill of lading containing the shore figures. He will then have to decide whether the discrepancy is within an acceptable margin.

Of course, what constitutes an acceptable margin varies according to the particular facts and circumstances. However, in broad terms, any discrepancy in excess of 0.5% is almost certain to be an unacceptable margin.

Acceptable margins

Where the discrepancy is clearly within an acceptable margin, the Master should still attempt to include either the ship's figures alone or both the ship's and the shore figures in the bill of lading. If this meets with significant resistance from the shipper, there should be no issue with accepting the shore figure in the bill of lading.

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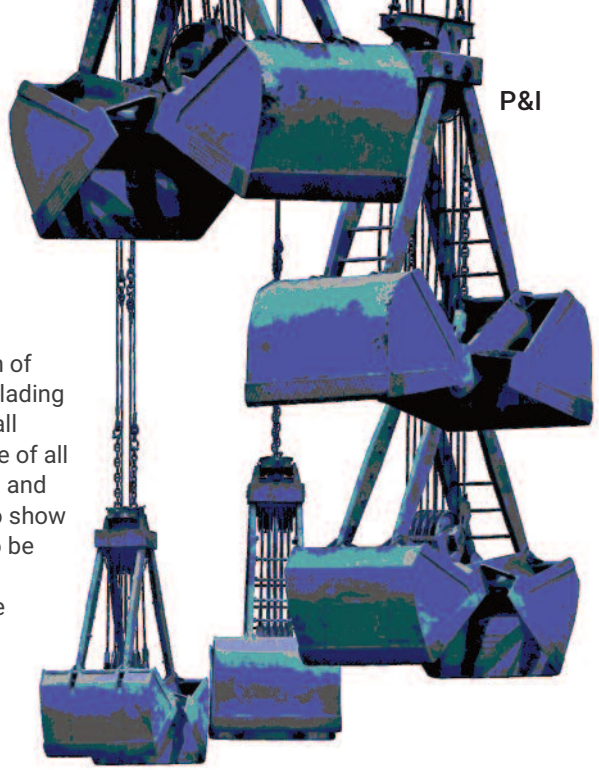


Unacceptable margins

Where the discrepancy is not within an acceptable margin, the situation is more complicated. Provided the Master has reasonable grounds for suspecting that the details provided by the shipper are inaccurate, he may refuse to sign the bill of lading.

There are no clear rules about exactly when a Master can reasonably refuse to sign a bill of lading if he considers the cargo quantity in the bill to be inaccurate. This will depend upon the facts of the situation, and the law and jurisdiction of the port of loading will also need to be taken into account.

In general terms, the following actions (taken in conjunction with correspondents/surveyors appointed via the Club) might be considered:

1. Conduct a re-check of the draught survey figures, ideally on a joint basis with all involved parties. This may lead to a reduction in the discrepancy to an acceptable margin.

2. Ascertain the method used to determine the shore figures. Are there limitations of accuracy, for example because equipment is not properly calibrated?

3. Insist that the bill of lading contains either (a) ship's figures or (b) ship and shore figures. If neither is accepted, the Master should refuse to sign the bill of lading until the matter is resolved.

4. Seek guidance from the local Court / the appointment of a court surveyor as to the loaded quantity.

5. Sail and leave the matter to be decided whilst the vessel proceeds to the discharge port. However, it is vital that every opportunity has first been afforded for the ship's figures to be checked and verified, and that all steps are documented in writing.

Other steps, such as the inclusion of appropriate clausing in the bill of lading (e.g. 'weight, quantity unknown') all sealing of hatches in the presence of all concerned parties prior to sailing, and unsealing at the discharge port to show no interference en route may also be advisable. Nonetheless, they are unlikely to be of assistance where the figure inserted in the bill of lading is obviously wrong.

Letters of Indemnity

An owner will commonly be offered a Letter of Indemnity ('LOI') from the shipper/charterer in return for issuing a bill of lading containing the shore figures only. Although this may seem to present a simple way of resolving the impasse, accepting a LOI in such circumstances carries a significant degree of risk. If a Master authorises the issuing of a bill of lading with a figure which he does not believe to be true, it is likely that any related LOI would be unenforceable. Furthermore, P&I cover may be prejudiced. In which case, the LOI will effectively operate to replace P&I cover, raising issues including the reliability of the party providing the LOI.

Letters of Protest

The Club has seen a number of situations where a Master has reacted to a significant ship shore discrepancy by issuing a Letter of Protest ('LOP') insisting that the shore figures are incorrect, but has later acceded to commercial pressure and issued a bill of lading containing the shore figures only.

Issuing a LOP can be useful where the difference is within an acceptable margin. However, issuing a LOP in circumstances where the margin is unacceptable can be counter-productive. For one thing, the LOP provides evidence that the Master believes the bill of lading figure is wrong. This causes a risk of prejudice to P&I cover. For another thing, the LOP provides documentary evidence that can potentially complicate any defence the owner may have to a consequent shortage claim at the discharge port.

Keeping records

Whilst it is important to maintain a clear record in documentary form wherever there is a significant discrepancy between ship and shore figures, this should be done carefully and in conjunction with the Club, the P&I correspondents and surveyors.

Each problem is unique and there is often no set template for dealing with this type of problem – it needs to be dealt with according to the particular facts and circumstances of each case. However, shipowners should at least ensure that they do the following:

- **As soon as possible, notify all parties, including the Club and the correspondent.**
- **Constructively engage with all parties, including shippers and charterers, with a view to obtaining a solution.**
- **Maintain a very careful record of actions and events.**

There are no clear rules about exactly when a Master can reasonably refuse to sign a bill of lading if he considers the cargo quantity in the bill to be inaccurate.

When in doubt...call

By **Barry Compagnoni**
Captain, U.S. Coast Guard (retired), Independent Maritime Consulting LLC, Southport, USA

Barry Compagnoni served the U.S. Coast Guard for 27 years, specialising in marine operations and regulatory compliance.

Failing to report a marine casualty in US coastal waters can have a significant impact. Current civil penalties for failure to report can be in excess of USD 37,000 and in addition, further penalties can be assessed for failure to conduct drug and alcohol testing. Barry Compagnoni explains how to stay on the right side of the law in such a situation.

Maritime professionals need to know the US regulatory context

On the bridge, a Master's orders to his officers often include the directive, "When in doubt, call." Too often, when responding to an incident, Masters, companies, and agencies fail to heed this simple requirement. This failure exposes companies and vessel officers to substantial civil penalties and operational controls affecting the vessel's future commercial schedule. Why is such a simple action missed so often?

Marine casualties, which require Coast Guard notification (defined in 46 CFR §4.05-1), are specific casualties or accidents involving vessels that occur in the navigable waters of the United States, or any events caused by or involving a vessel in such waters.

These conditions include the Serious Marine Incident (SMI) (defined in 46 CFR §4.03-2) - marine casualties resulting in death or deaths, injuries requiring professional medical treatment beyond first aid, more than USD100,000 damage to property, loss of a vessel, or oil spills in excess of 10,000 gallons.

Most of the conditions that require notification of the Coast Guard are quite clear and unambiguous. However, incidents involving injuries to a crew member, passenger, or other individual seem to be more problematic, requiring the assessment of the Master or crew to make a judgement call. It is this judgement that often takes the response to the incident down a troublesome path that exposes parties to potential penalties.

In order to avoid this unwitting exposure, there are three simple steps for the owner, agent, or vessel master to take to ensure that the response starts out on the correct course. Regardless of the nature of the casualty, the initial actions to notify the Coast Guard should follow the same process.

Too often, when responding to an incident, Masters, companies, and agencies fail to heed this simple order.

Follow three basic steps to respond

Step One: Inform

The Coast Guard must be immediately notified of the incident and the Essential Elements of Information (EEIs) supplied.

46 CFR §4.05-5 requires that whoever reports the incident to the Coast Guard should also provide the name and official number of the vessel involved, the name of the vessel's owner or agent, the nature and circumstances of the casualty, where the casualty occurred, the nature and extent of injury to persons, and the damage to property. Immediate reporting is the key measure of compliance.

Step Two: Test

Everyone involved in a SMI should be tested for drugs and alcohol.

The guidance in 46 CFR §4.05-12 places the onus of responsibility for alcohol and drug testing on the marine employer. This information should be included in the written report (see below) and include: identification of the individuals tested, how the tests were administered (by personal observation or chemical testing), and that any evidence of intoxication will be recorded in the ship's official log book. If an individual shows evidence of intoxication, he or she must be notified that the entry is being made in the log book and the entry must be witnessed by another member of the crew. If an individual refuses a chemical test, this refusal must be recorded in the official log and witnessed by another member of the crew.

Step Three: Report

Form CG- 2692 - Report of Marine Casualty, Commercial Diving Casualty, or OCS-Related Casualty must then to be submitted to the Coast Guard.

Outlined in 46 CFR §4.05-10, this written report is required in addition to the immediate notice and must be completed by the owner, agent, Master, operator, or person in charge and returned within five days to a Coast Guard Sector Office or Marine Inspection Office. However, if filed without delay after the occurrence of the marine casualty, the report can suffice as the initial notification (see Step One above).

The following forms may also be required, depending on the nature of the incident:

a. CG-2692B - Report of Mandatory Chemical Testing Following a Serious Marine Incident Involving Vessels in Commercial Service

b. CG-2692C - Personnel Casualty Addendum

c. CG-2692D - Involved Persons and Witnesses Addendum

Now that the Coast Guard has been notified, what next?

The Coast Guard's purpose in investigating these incidents is to determine: the root cause: if there was a failure of material which contributed to the casualty; if there was an act of misconduct, inattention to duty, negligence or willful violation of the law; whether Coast Guard personnel or any representative or employee of any other government agency or any other person caused or contributed to the cause of the casualty; or, if the accident needs to be further investigated by a Marine Board of Investigation.

Frequent and proactive dialogue with the Coast Guard is the best method to manage expectations on both sides.

The Coast Guard will evaluate the notification to determine if a marine casualty or SMI has occurred and follow up with an investigation if warranted. The owner, agent, and Master should stand by for further direction from the Coast Guard to cooperate with, and not obstruct, any potential investigation of the incident. Frequent and proactive dialogue with the Coast Guard is the best method to manage expectations on both sides.

Liquefaction: A jigsaw of variables

With the news that Indonesia has lifted its ban on the export of ore, the issue of cargo liquefaction comes to the forefront once again.

By Lee Stenhouse, Managing Director of Roxburgh, a consultancy with a specialisation in the risks of handling and transporting nickel, bauxite and iron ore.

As a result of significant total losses over recent years, liquefaction is an emotive issue for the shipping industry and has become synonymous with specific materials types, such as nickel and bauxite, that are associated with specific geographic locations. As a result, the industry has created a perception of the existence of 'liquefaction hotspots'.

But why is it that not all materials of a particular type or all those that are loaded from these specific geographic hotspots liquefy? In fact there are a large number of factors that affect the stability of the cargo, creating a 'jigsaw of variables'. Almost any location can become a failure hotspot if the pieces of the jigsaw fall into place.

It is important to appreciate that solid bulk ore cargo behaviour is dynamic and complex involving a number of variables requiring a high level of geotechnical understanding. The interaction of these variables is key to cargo stability. The industry focuses on the term 'liquefaction', but this is just one of a range of modes of failure that a cargo may experience.

Cargo stow failure occurs when several key factors or variables begin to affect each other and contribute to a decrease in the stability of the cargo stowed. These variables are likely to include mineralogy, particle size, moisture content, stow profile, loading state, energy input and vessel size.

It is well understood that the more unstable the cargo stowed then the greater the risk of reduced vessel stability, dependent upon the number of holds that are affected.

As in a jigsaw, when several of the key pieces come together the likelihood of problems occurring as a result of cargo failure increases significantly: conversely, where the pieces do not interact the risk of cargo failure is greatly reduced, despite the general market perception being one of 'problem cargo/ problem location', such as nickel ore from the Philippines for example.

But what causes these variables?

Wet base

The management and measurement of the moisture content of the cargo is of prime importance. Much has been made of the effect on vessel stability of the alleged 'dangerous wet base' phenomena, which is commonly linked with bulk ore materials such as iron ore fines, bauxite and nickel ore shipped from Brazil, West Africa, Philippines and Indonesia etc.

However wet base development is a natural process that can be found where materials are permeable and contain moisture. It should be noted that a wet base itself is not inherently dangerous unless a significant depth of base of the cargo becomes saturated via moisture migration and the pressure in the moisture at the base of the stow increases to the equivalent of the weight of cargo above that point.

Almost any location can become a failure hotspot if the pieces of the jigsaw fall into place.

Specific geographic regions are fighting these variables to avoid gaining a reputation as a hotspot. However, without a control and command structure in place, materials can easily fail.

Socio economic elements

In some geographic locations, where there is plentiful raw material and demand is high, extraction may be carried out with a low cost base - hence little or no processing and limitations on the practical technical knowledge and operational experience of those involved. In addition, this limitation also extends to a lack of knowledge on moisture management techniques and ore body variability, which ultimately control the behaviour and stability of the cargo in the hold of a vessel.

Cargo variability

In general terms, as a mine asset matures the ore body can demonstrate significant variability in its composition and structure. Ore body variability significantly effects the largest to the smallest shippers and is one of the primary reasons behind bulk ore cargo behavioural problems occuring.

Shipper

Larger shippers are more likely to have the financial capability to be selective as to when and if materials are extracted and transported. In addition, before loading, many of these shippers have the capability to process materials to enrich cargo and remove undesirable fractions; actions which generally have a positive effect on cargo behaviour.

Conversely, small shippers often do not have the finances to process and enrich the raw extracted material, especially with current bulk market conditions: all fractions are transported, irrespective of whether they are likely to have a positive or overly negative effect on the cargo behaviour.

Voyage duration

Induced wave energy can create the trigger mechanism for problems to occur, and so the length of a voyage is a part of the puzzle. For example, Indonesian sourced materials have similar characteristics to those shipped from the Philippines, but when sailing from Indonesia the voyage time to Chinese discharge ports can be an additional 3-5 days, meaning more energy into the cargo as a result of induced wave motion and greater potential for cargo failure and instability.

Specific geographic regions are fighting these variables to avoid gaining a reputation as a hotspot. Seasonal conditions place significant strain on technical resources to manage the natural ore body variability and it is not unusual to see significant transportable moisture level (TML) variability on a daily basis.

Without a control and command structure in place to understand and manage the variables, the pieces of the jigsaw are more likely to come together. Hotspot development is not reliant on location, it is about understanding what the pieces of the jigsaw are and ultimately how they may fit together.

Barriers to predicting cargo behaviour

It is often beyond the technical capability of many shippers and Masters to adequately assess and consider the likely interaction between the variables as a result of:

(a) Inadequate and inaccurate material test data

(b) Limited or non-existent Competent Authority control over the safety assessment of cargoes pre-loading

(c) Local economic pressures

(d) Limited shore-side space for stockpiling and moisture drainage

(e) Huge variability of material from a mineralogy, strength and geotechnical perspective

(f) Key stakeholders having a vested contractual/commercial interest in ensuring shipments proceed uninterrupted

New Rules make life easier for charterers

In the course of The Swedish Club's daily activities we work with a wide variety of individuals and organisations in many sectors of the maritime industry and beyond. One of our key challenges is to find new ways of communication which are relevant and meaningful to the business areas our contacts are engaged in.

In recognition of the importance of charterers to our business The Club has launched a new addition to the portfolio, *'Rules for Charterers' Insurance'*. The publication has been written to meet the specific needs of charterers and to ensure that cover can be more easily tailor made to meet their individual requirements in a way that improves the user experience for all involved in supporting them.

'Rules for Charterers' Insurance' is broken into easy to read topics, enabling brokers and charterers to see at a glance the rules that apply to an individual situation. Future rule amendments can be incorporated in a logical and transparent fashion and not only is it now easier for brokers to find the data they require, but they can also simply refer to the handbook when completing insurance slips.

'Rules for Charterers' Insurance' is broken into easy to read topics, enabling brokers and charterers to see at a glance the rules that apply to an individual situation.

TS TAIPEI

A medal-winning performance

When the 168-metre long, 20,615 dwt container ship TS Taipei suffered engine failure in a strong storm and was blown aground 300 metres away from a scenic beach off Shimen, Taiwan in March 2016, the stage was set for what could have been an incredibly expensive and catastrophic outcome.

Bad weather continued and 14 days later the ship broke in two; at least 100 cubic metres of bunker fuel leaked into the sea; the cargo on board included nine containers of dangerous goods; the Taiwanese authorities were understandably pushing for a speedy response; and the entire casualty was played out under the relentless spotlight of the media and public concern.

Despite all of this, the TS Taipei can be held up as a success story. The efficient, cost-effective way in which the Club responded and dealt with the casualty earned industry recognition for a job well done. 151 days after the TS Taipei ran aground, the Taiwanese authorities held a seminar and celebration dinner to mark completion of the wreck removal and clean-up, and presented medals to the salvage contractors involved.

"As a Club, we are here to add value for our members – and that becomes very obvious when you have a significant case like the TS Taipei," says Lars Malm, The Swedish Club's Director, Strategic Business Development & Client Relations. "Through our comprehensive claims handling experience, expertise and knowledge acquired over many years, we can make a huge difference in keeping claims costs down, through proactive claims handling.

"These big casualties are all about speed of response and effective project management. This is not just about a claims handler sitting at a desk – it is our people going to the site to discuss with the authorities, salvors and lawyers and find solutions onsite – with back-up in the office taking care of communication, documentation, etc."

Lars A. Malm, Director, Strategic Business Development & Client Relations

The TS Taipei casualty was handled by The Swedish Club's Hong Kong office, where claims manager Julia Ju recalls receiving the first call with news that the vessel had run aground.

"The first questions are always – how serious? Anybody injured? Any oil pollution? Cargo damage? A grounding might not be serious and only a hull and machinery (H&M) problem if the vessel can be refloated.

The efficient, cost-effective way in which The Swedish Club responded and dealt with the casualty earned industry recognition for a job well done.

Photo: Taiwan Maritime Services Limited

Julia Ju, Claims Manager, Team Asia

However, immediately after the first call I received a phone call from the insurance broker, telling me it was indeed very serious – the Master had abandoned ship and all the crew had been disembarked by helicopter by the Taiwanese air force. The media was already covering the incident."

The Club quickly appointed a local surveyor and lawyer, and senior claims manager Bruce Hung flew from Hong Kong to Taipei. However, salvors could not get close to the vessel as the bad weather continued for the next five days. "It wasn't until 15 March that anyone could get close to the vessel," explains Ju.

Pollution was minimal at that point but on 24 March the vessel broke into two pieces; three holds were flooded and about 100 cubic metres of bunkers leaked into the sea.

The priority was to offload the remaining bunkers and then to remove the dangerous cargo from the ship. "It was not possible to do both at once," says Ju. "So we finished the debunkering and then focused on the nine containers of dangerous cargo. Fortunately eight of these were stowed on deck and were easy to remove – the ninth was immersed in seawater."

A key element in keeping costs down was the Club's decision to use external salvors in cooperation with local salvors. Nippon Salvage Company took care of removing the bunkers; a local company removed the containers; and Smit was awarded a capped wreck removal contract. "We could have issued a big tender and invited international salvors to do everything – and meanwhile there would have been more pollution, the authorities would have been extremely agitated and costs would have increased," said Malm. "Instead, we were able to activate local salvors, who responded immediately with the equipment and capacity they had."

Contract negotiation is decisive in a case like this, he points out. "At the same time, the fact that we built a relationship with the local authorities also helped us. It is important to keep the authorities informed and to get their understanding and support – then they will help you."

Debunkering was finished by 1 April and the containers of chemicals were removed by 7 April.

It was agreed that Smit would use a refloating method for the wreck removal – patching up the damage and making the vessel buoyant enough to be towed to a safe place. This was the ideal way to remove the wreck but it required not only hard work but also expertise in marine engineering.

When the vessel grounded, there were 392 containers on board. In total, two-thirds were removed in sound condition, from the deck and hold number one. The rest, in the three

"The whole operation took 151 days from grounding to completion of the wreck removal. The media, which had been highly critical since the start, were impressed – some even described it as a 'world record'."

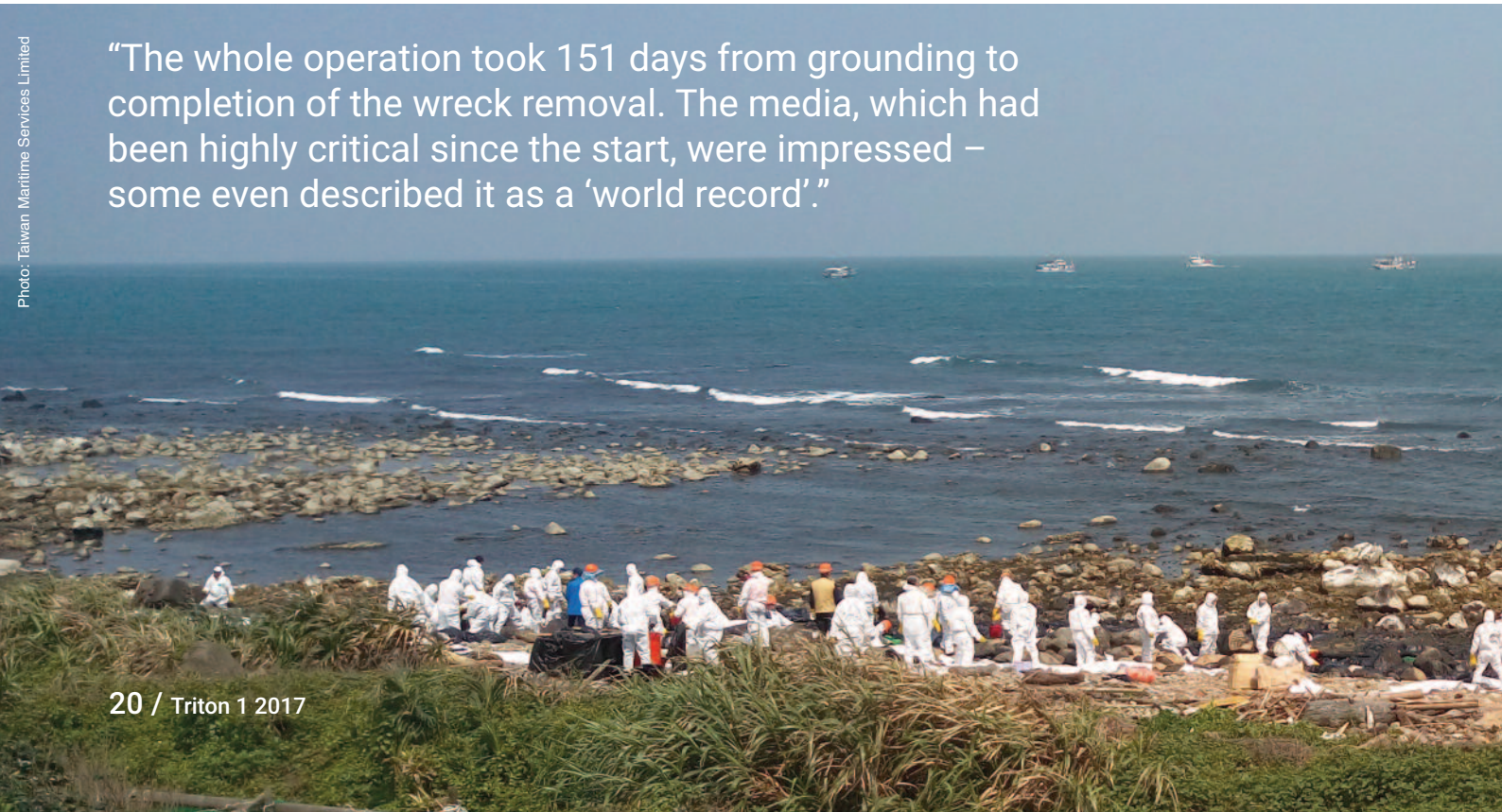


Photo: Taiwan Maritime Services Limited

flooded holds, had been soaked through and had to be removed with the wreck. The refloating was successful and it was the first time a wreck in the Taiwan jurisdiction had been removed this way.

"The whole operation took 151 days from grounding to completion of the wreck removal," says Ju. "The media, which had been highly critical since the start, were impressed – some even described it as a 'world record'. Of course that wasn't quite right, as circum-stances are different in each case – but it was a good solution and very quick."

Meanwhile, there was the clean-up. At first, the Club had about 30 people employed to patrol the shoreline looking for leaked fuel oil. After the vessel split in two, nearly 400 local villagers were employed on a daily basis to clean up the shoreline. There was invaluable professional guidance from the International Tanker Owners Pollution Federation (ITPOF), which sent experts to Taiwan very quickly to advise the local authorities and contractors on how to remove oil and clean up efficiently and correctly.

Looking back, what lessons can be learned from TS Taipei? "If there is a secret, it is first that we made the correct decisions," says Ju. "We employed the most suitable contractor for each stage of the work – including the local firm who performed quickly and well.

"The Club was proactive and committed. And – very important – we worked as a team. We had our people onsite and we had support from both Hong Kong and Gothenburg offices. Cooperation with the authorities was really important – the authorities will always want to move things forward as quickly as possible. At the end, they were definitely satisfied with the outcome."

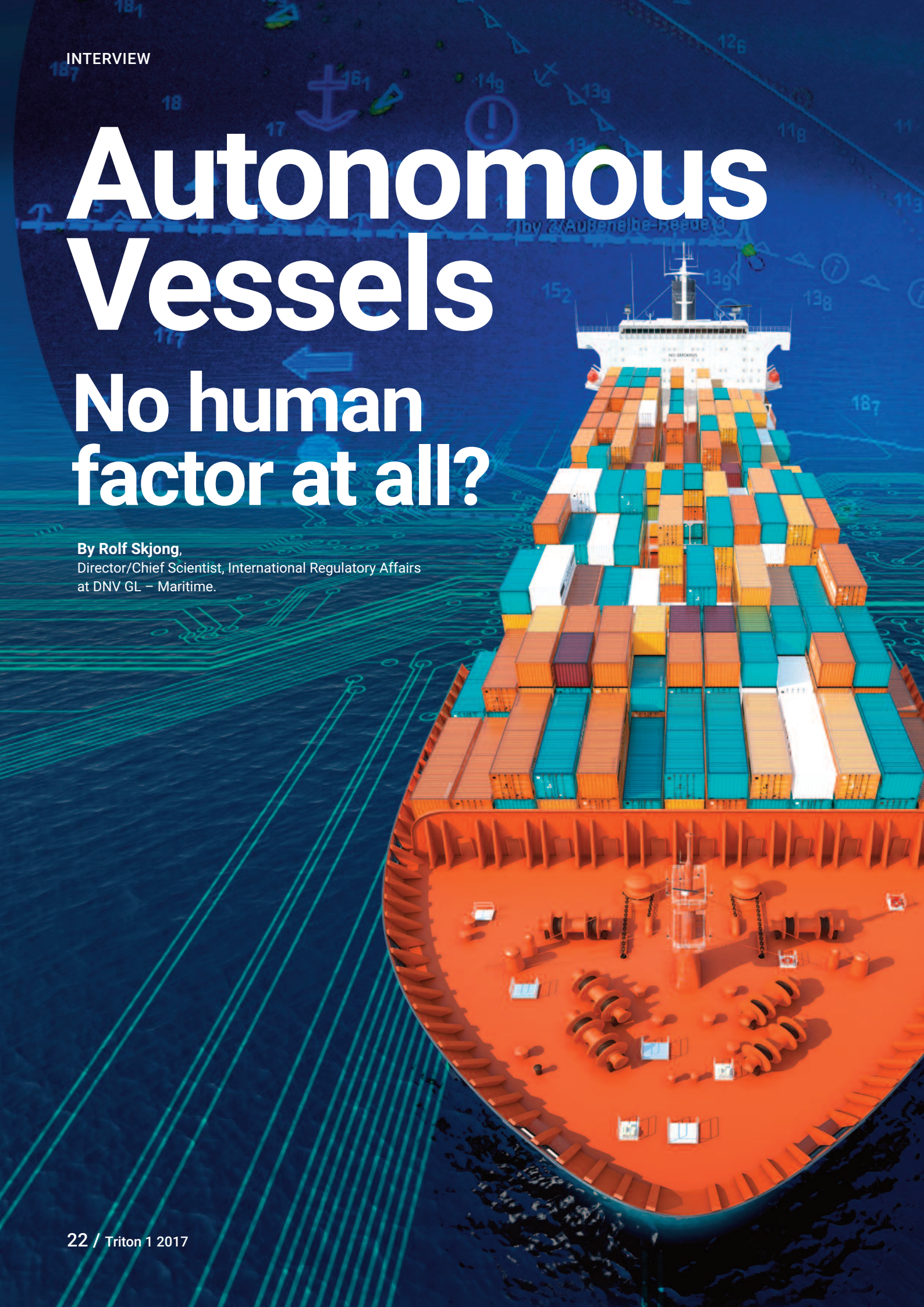
"The Club was proactive and committed. And – very important – we worked as a team. We had our people onsite and we had support from both Hong Kong and Gothenburg offices.

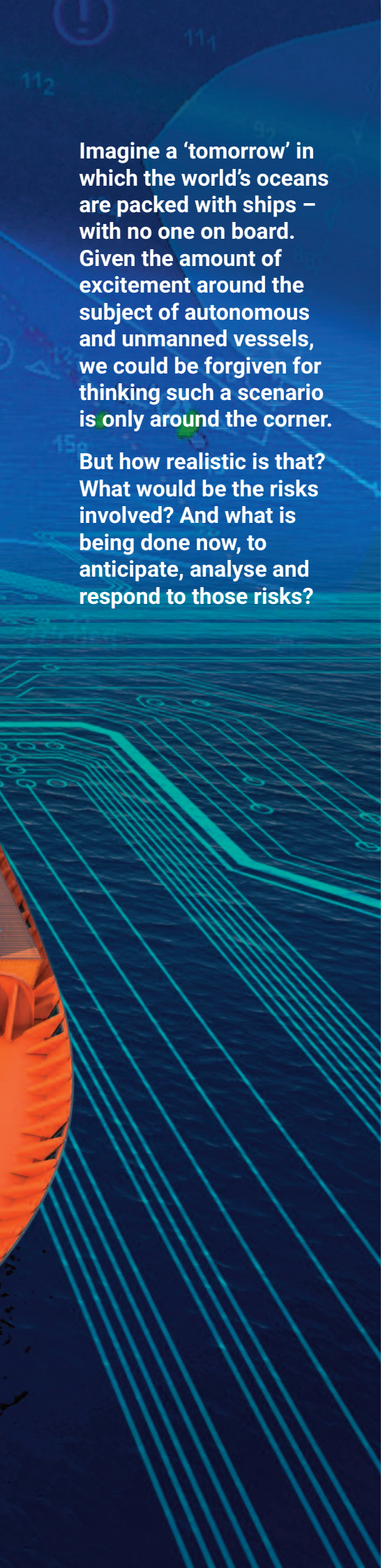
Malm concludes: "Our speed of response was vital, and bought us time. We were able to achieve a very successful wreck removal. This was a good example of the way in which we can 'add value' for our members by reducing the cost of claims. In this major casualty, our ability to respond to that emergency and run a very complex project was tested – and we passed the test."

Autonomous Vessels

No human factor at all?

By Rolf Skjong,
Director/Chief Scientist, International Regulatory Affairs
at DNV GL – Maritime.





Imagine a 'tomorrow' in which the world's oceans are packed with ships – with no one on board. Given the amount of excitement around the subject of autonomous and unmanned vessels, we could be forgiven for thinking such a scenario is only around the corner.

But how realistic is that? What would be the risks involved? And what is being done now, to anticipate, analyse and respond to those risks?

A natural progression

First, it is important to distinguish between 'autonomous' and 'unmanned', says Rolf Skjong, Director/Chief Scientist, International Regulatory Affairs at DNV GL – Maritime.

"There is a lot of news in the media about unmanned ships but frankly it is unrealistic to have unmanned ships before you have operated ships that are manned and autonomous or remotely controlled," he says. "People don't always realise that there is a whole list of regulations that prevent things from happening at speed. Indeed, if you listen to what the proponents of unmanned ships say, in reality they speak about the 'concept' of unmanned ships, and it is not unrealistic to have unmanned ships in the future. However, you will not see a totally unmanned ship in international waters as fast as some would like to suggest."

What we will see, says Rolf Skjong, is more and more functions being automated and moved to shore, with associated reductions in manning – "and how this is done will be very well regulated".

He says: "It is an ongoing process. Look at manning levels 20 years ago – they were much higher than what they are now and that is to a large degree because of automated systems."

National waters

That softly, softly approach applies to shipping in international waters, he emphasises. "In national waters, it is different. National authorities can agree to carry out tests and trials that don't strictly follow the international

Conventions, and 'ships of war and troopships' are exempted. Examples we have seen include an unmanned minesweeper and unmanned surveillance crafts."

Sea trials on the way

DNV GL is involved in a number of related projects through its research division, including the UK-Norwegian project in which Automated Ships Ltd and Kongsberg Maritime are building the Hrönn, the world's first unmanned and fully automated vessel for offshore operations.

Sea trials of the Hrönn are scheduled for 2018; these will take place in Norway's newly designated automated vessel test bed in the Trondheim fjord, under the auspices of DNV GL and the Norwegian Maritime Authority.

"Currently, only small unmanned boats are being utilised for near-shore operations but there are no technical limitations to constructing large, unmanned and automated systems," say the partners involved, who add: "The only impediments are regulatory."

> "To an extent, insurance is about estimating the risk by looking in the mirror, and here we are faced with something really new. But based on the requirements for equivalency, the risks should be either the same or less than they are currently."

The Hrönn's intended uses could include survey, remotely operated underwater vehicle (ROV) and autonomous underwater vehicle (AUV) launch and recovery, light intermodal cargo delivery, delivery to offshore installations and open water fish farm support. It could also be used as a standby vessel, perhaps to provide firefighting support. "If you want to succeed, you have to start somewhere – and that will be at national level."

Implications of unmanned vessels

The International Maritime Organization has, of course, given some consideration to the implications of unmanned vessels, but IMO in November 2016 "agreed that autonomous vessels were not a challenge that IMO was likely to face in the period 2018-2023".

However, a new proposal for a regulatory scoping exercise to establish how the regulatory framework will need to be amended 'to enable the safe, secure and environmental operation of Maritime Autonomous Surface Ships (MASS) within the existing IMO instruments' has been submitted to the IMO's Maritime Safety Committee (MSC) by Denmark, Estonia, Finland, Japan, the Netherlands, Norway, the Republic of Korea, the UK and the US.

In its summary, the proposal says: "The use of MASS creates the need for a regulatory framework for such ships and their interaction and coexistence with manned ships."

The aim is to get the activity into the MSC's work programme, to identify 'showstoppers' for autonomous and unmanned ships in the current international regulations, says Rolf Skjong. If all runs to time, by mid 2020 there should be a list of regulations that need to be changed.

As far as the risks are concerned, is it just a case more of the same, as ships become more autonomous?

"The reality is that progress means the risk moves to the computer algorithms rather than the Master," he says. "Obviously if unmanned and remotely controlled vessels are going to be allowed, you would have a requirement above all for a cyber-proof connection to the ship – in fact, I believe you would require two independent connections.

"You would have a stronger reliance on, and requirement for, sensors on board ship to deliver improved situational awareness around the ship."

Hrönn, the world's first unmanned and fully automated offshore vessel *(Kongsberg Maritime)*

"There is a lot of news in the media about unmanned ships but frankly it is unrealistic to have unmanned ships before you have operated ships that are manned and autonomous or remotely controlled."

He adds: "I believe that in any onshore control room, you will end up with people who have sailed ships themselves, have the same qualification requirements and the same certificates – it is logical that they should have relevant qualifications."

International regulations and Conventions would all have a requirement of 'equivalence', he points out. "In other words, automated or unmanned ships can in principle not be allowed unless there is proof that they are equally safe or safer. And that is really the challenge that people have – delivering that proof."

When it comes to insurance, he says: "To an extent, insurance is about estimating the risk by looking in the mirror, and here we are faced with something really new. But based on the requirements for equivalency, the risks should be either the same or less than they are currently. Automation could obviously also contribute to reducing risk."

"To an extent, insurance is about estimating the risk by looking in the mirror, and here we are faced with something really new."

When might we see a ship in international waters with no one on board?

"I usually say not before 2040, but this is uncertain. I have been at the IMO since 1995 and I know how long these things take. This is not a trivial matter at all, and there might be a lot of resistance."

And taking human beings off the ship doesn't remove the human element. As the proposal to the MSC states: "While the MASS would be unmanned, many of the issues that need to be considered would relate to the interactions between the MASS and humans, either on board other vessels or in shore-based roles, and, as such, the human element would be an area of consideration within the proposed scoping exercise."

The Swedish Club's MRM training will be as relevant as ever....

A hidden cost of carrying DRI

The Carriage of DRI from the perspective of an FD&D lawyer

Direct reduced iron (DRI or sponge iron) is a cargo that is becoming ever more frequently seen, especially in vessels from India. Produced through direct reduction of iron ore in the solid state, it is mainly used in making steel. But many operators are finding they are getting more than they bargained for, in dealing with this notoriously tricky cargo.

The potential dangers associated with the carriage of DRI are known in the industry: its porous structure makes it extremely reactive and prone to re-oxidation on contact with air and moisture. A more unusual issue, which has seen the Club involved in FD&D disputes recently, is that of DRI fines damaging the vessel itself.

DRI is an inherently dusty cargo, and this dust is highly susceptible to oxidation i.e. rusting. During cargo operations the dust generated covers the vessel's deck and superstructure. With a little moisture/humidity in the air, the dust adheres to the vessel's paintwork and rusts. The resultant transformation from a pristine vessel to what looks like a 'rust bucket' is dramatic. It is a major job to clean off the staining, requiring not only 'elbow grease' but also chemical cleaners.

With a little moisture/ humidity in the air, the dust adheres to the vessel's paintwork and rusts. The resultant transformation from a pristine vessel to what looks like a 'rust bucket' is dramatic.

Charterers may try to limit their liability by reference to an 'in lieu of hold cleaning' (ILOHC) provision in the charter party (C/P). That would appear incorrect, however, since such a provision applies only to the vessel's holds. The cleaning actually required will often exceed a multiple of the ILOHC amount.

By Martyn Hughes,
Senior Claims Manager
FD&D, Team Gothenburg

A clause included in the C/P, along the following lines may assist:

'Whenever DRI has been carried, charterers are responsible for the thorough cleaning and reconditioning not only of the vessel's holds but also of any contaminated decks, shell plating and superstructures, to the Master's satisfaction. For the avoidance of doubt, all extra measures required, including but not limited to the hire of scrubbing machines, protective clothing and shoreside cleaning teams and/or the use of acid/other cleaning products are for charterers' account notwithstanding any ILOHC provision stated in the charterparty. The vessel to remain on hire until such cleaning has been completed.'

Legal update

The strive towards clarity

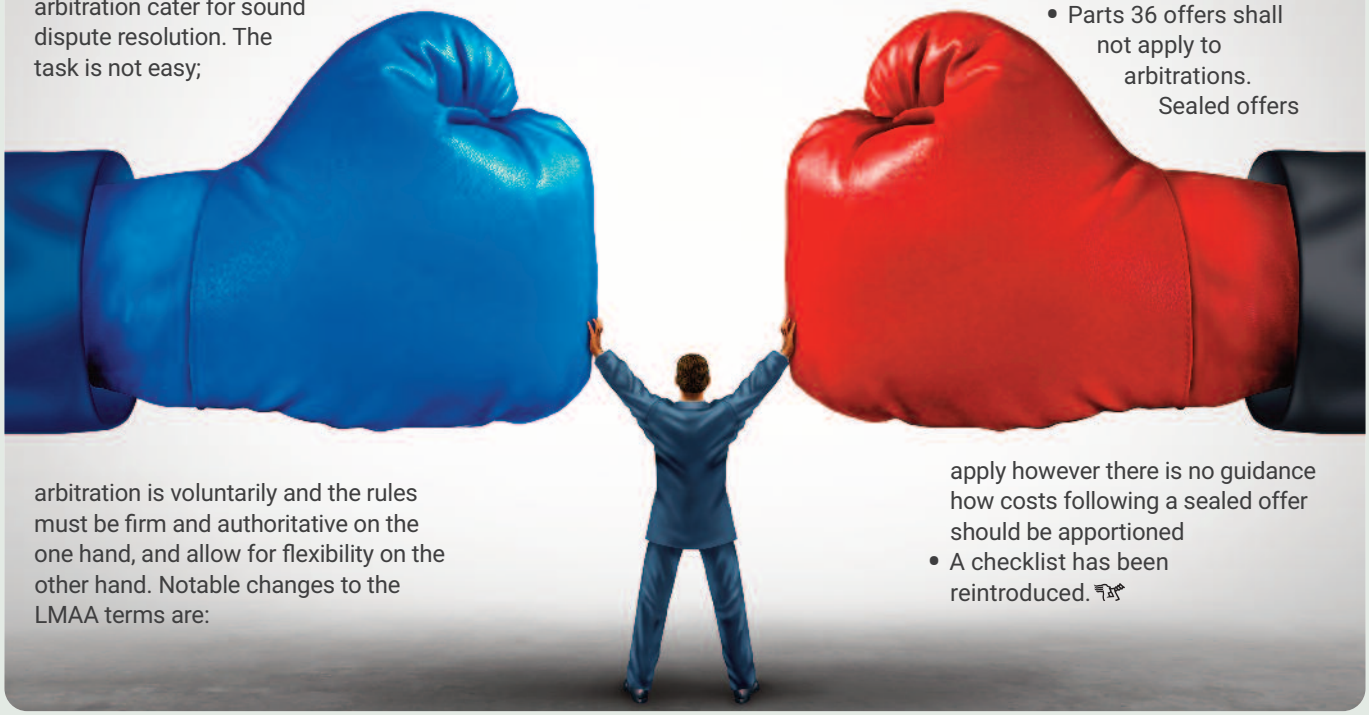
In times of, seemingly, increased unpredictable events it is pleasing to note developments towards clarity. To this end, courts and other legal institutions have an important task to fulfil.

By Anders Leissner,
Director, Corporate Legal & FD&D

Review of rules for arbitration

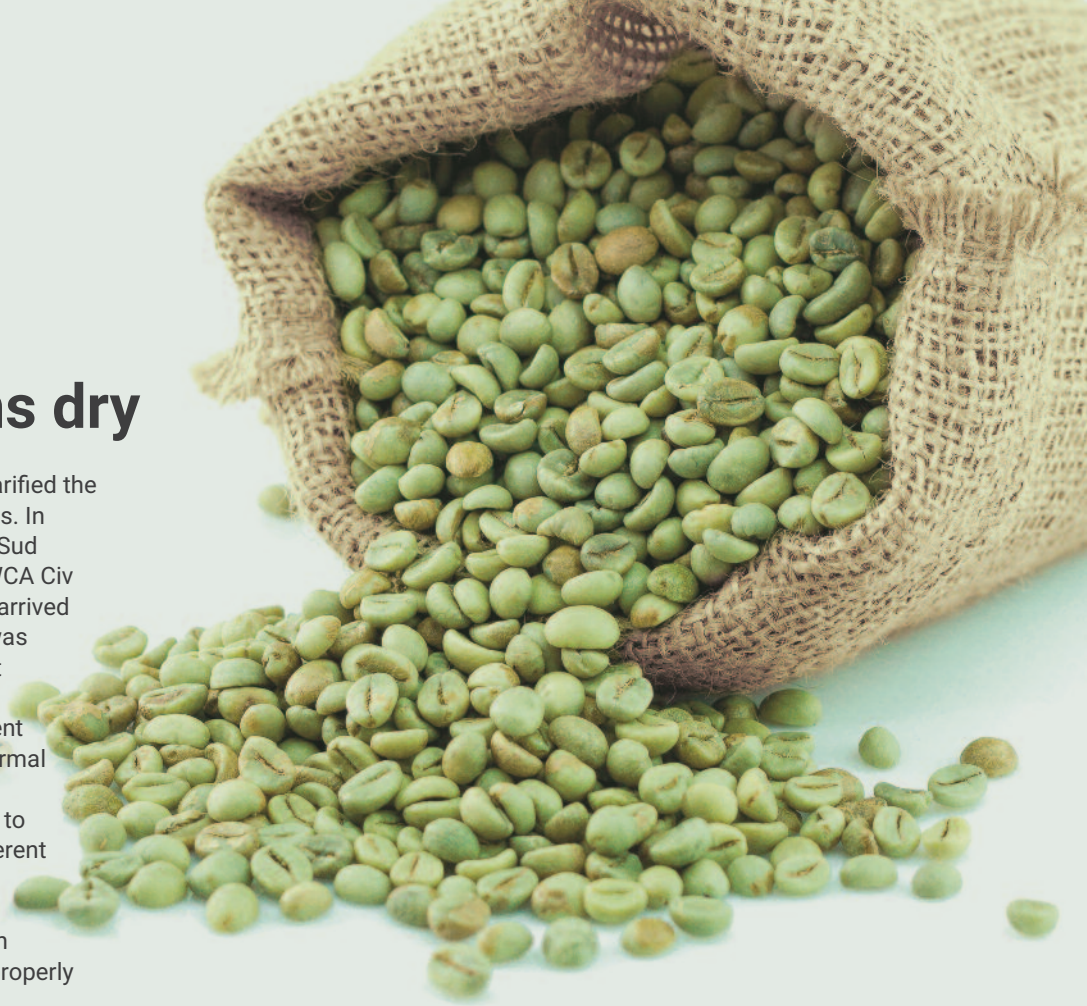
The London Maritime Arbitrators Association (LMAA) and Swedish Chamber of Commerce (SCC) have both recently assumed this task in reviewing and updating their respective rules for arbitration.

Indeed, the devil is in the detail and whether an arbitration institution is successful will largely depend on whether its rules governing the arbitration cater for sound dispute resolution. The task is not easy;



arbitration is voluntarily and the rules must be firm and authoritative on the one hand, and allow for flexibility on the other hand. Notable changes to the LMAA terms are:

- The limit for the Small Claims Procedure is increased from USD 50,000 to USD 100,000.
- LMAA, instead of High Court, is to make default appointment of an arbitrator.
- The Tribunal can ask any of the parties to provide security for its costs.
- The Tribunal has power to make procedural directions.
- Parts 36 offers shall not apply to arbitrations. Sealed offers apply however there is no guidance how costs following a sealed offer should be apportioned
- A checklist has been reintroduced.



Keep the beans dry

The Court of Appeal has helpfully clarified the burden of proof in inherent vice cases. In Volcafe Ltd and others v. Compania Sud Americana de Vapores SA [2016] EWCA Civ 1103 a cargo of green coffee beans arrived wet and the shipowner argued this was not due to any fault by the vessel but instead the cargo's inherent vice.
The court agreed and held the inherent vice defence can apply to entirely normal cargoes and held further that the shipowner does not have the burden to prove he was not negligent after inherent vice has been established. Further, the court clarified that standard industry practice was adequate when assessing whether cargo has been properly cared for.

Get your act together

Another useful clarification has been rendered by The Commercial Court in Transgrain Shipping (Singapore) PTE Ltd v. Yangtze Navigation (Hong Kong) Co Ltd & Anor (MV Yangtze Xing Hua) [2016] EWHC 3132 (Comm). A cargo of soya beans was discharged in a damaged condition. It transpired the cargo had started to overheat because it had been stored on board the vessel for four months at the discharge port, on charterers' instructions.

The question was whether the charterers were liable for the damages even if the instruction to wait with the discharge was not necessarily a fault. The relevant contract – the Inter-Club Agreement – provided if a loss is due to 'act or neglect' by one party, that party shall bear 100% of the loss. The court held 'act' in the Agreement mean simply an act and does not presuppose negligence of any kind. Hence, the instruction to wait with the discharge rendered the charterers 100% liable. Clear as crystal.

The importance of internal anti-corruption guidelines

The long arm of the law

Following a four year investigation the Serious Fraud Office (SFO) and Rolls Royce entered into a Deferred Prosecution Agreement (DPA) approved by the Queen's Bench Division on 17 January 2017.

While the DPA concerns the Aviation and Energy branches of Rolls-Royce rather than its Marine Engine Business, the case showcases the powers of the UK authorities following the implementation of the UK Bribery Act 2010. It demonstrates the importance for any company conducting business in an international environment having and adhering to effective internal anti-corruption guidelines in dealings with intermediaries in other jurisdictions.

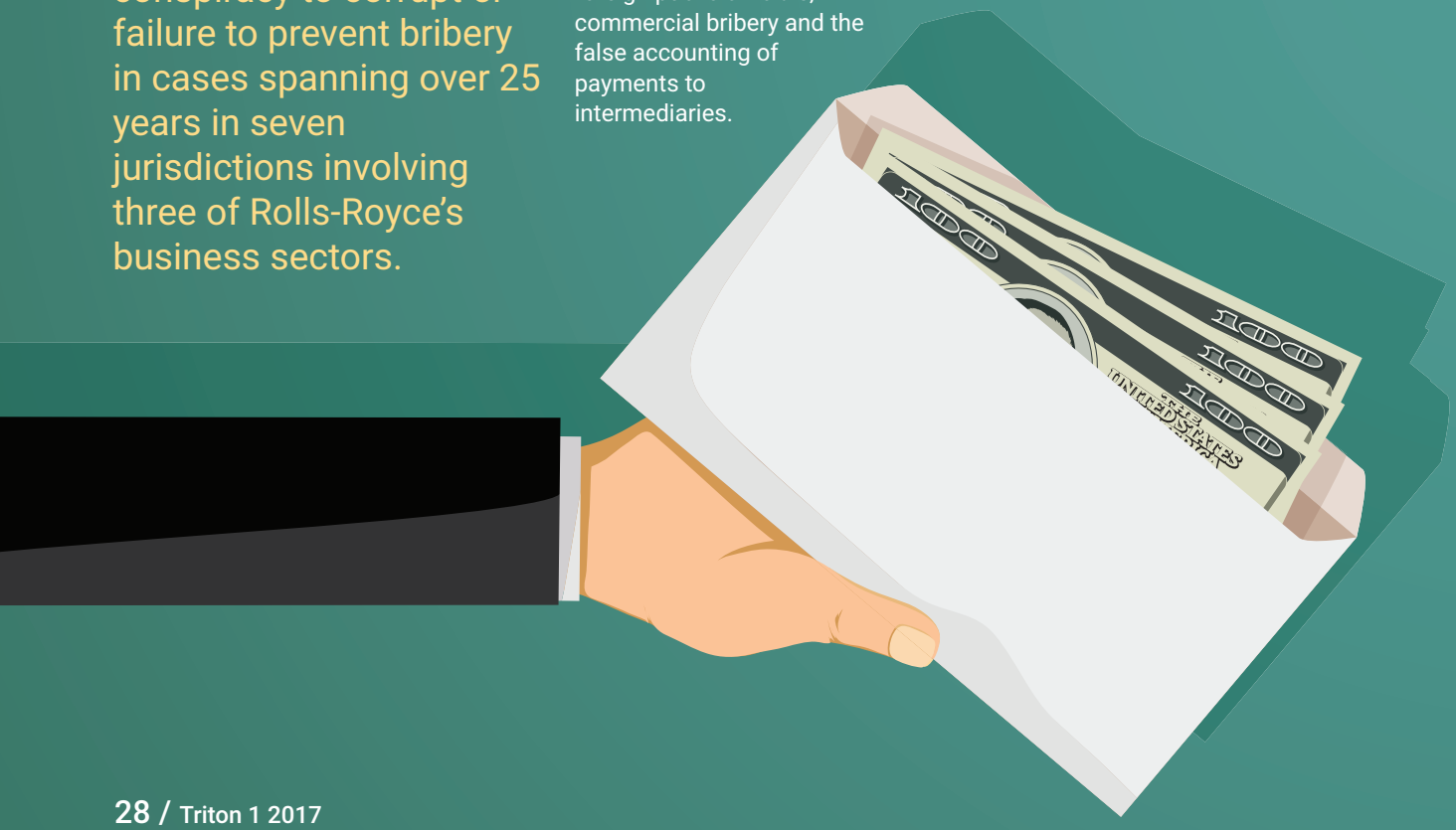
The SFO had revealed twelve counts of conspiracy to corrupt or failure to prevent bribery in cases spanning over 25 years in seven jurisdictions involving three of Rolls-Royce's business sectors. The jurisdictions in which the conspiracy to corrupt or failure to prevent bribery had occurred were China, India, Indonesia, Malaysia, Nigeria, Russia and Thailand. The wrongdoings involved local companies handling sales, distribution and maintenance acting as intermediaries of Rolls-Royce.

The SFO had revealed twelve counts of conspiracy to corrupt or failure to prevent bribery in cases spanning over 25 years in seven jurisdictions involving three of Rolls-Royce's business sectors.

According to the judgment in the Serious Fraud Office v Rolls-Royce Plc & Rolls-Royce Energy Systems Inc. the conduct of Rolls-Royce involved offences relating to the bribery of foreign public officials, commercial bribery and the false accounting of payments to intermediaries.

By Malin Högberg,
Senior Claims Executive, P&I and FD&D,
Team Gothenburg

The offences were multi-jurisdictional, numerous and spread across the business of the Rolls-Royce branches involved.



In addition to the penalties paid to UK authorities, Rolls-Royce will also pay GBP 141,000,000 to the US Justice Department and GBP 21,500,000 to Brazil's Ministero Publico Federal.

Deferred Prosecution Agreement (DPA)

This is only the third DPA that the SFO has struck since the concept was first introduced into UK Law in 2014. A DPA allows an organisation to avoid prosecution where the organisation freely confesses to economic crimes such as fraud or bribery. A DPA does not hinder prosecution of individuals in connection with a case. Instead, a DPA is a voluntary agreement regarding suspension of the prosecution of the company only, provided the company fulfils certain requirements, including the payment of a financial penalty.

The offences were multi-jurisdictional, numerous and spread across the business of the Rolls-Royce branches involved. The offences have, further; caused and/or will cause substantial harm to the integrity/confidence of markets; was persistent over 25 years; and involved substantial funds being made available to fund bribe payments. The conduct displayed elements of careful planning and involved senior Rolls-Royce employees. In particular, the conduct related to the award of large value contracts earning Rolls-Royce in total over GBP 250,000,000 in gross profit.

The DPA involves Rolls-Royce effecting payments of GBP 497,252,645 (comprising disgorgement of profits of GBP 258,170,000 and a financial penalty of GBP 239,082,645) plus interest and reimbursement of the costs incurred by the SFO. The DPA payment is the largest penalty ever levied by the SFO. In addition to the penalties paid to UK authorities, Rolls-Royce will also pay GBP 141,000,000 to the US Justice Department and GBP 21,500,000 to Brazil's Ministero Publico Federal. The penalties will be paid over five years.

The SFO is considering prosecuting individuals in connection with the case now that an agreement has been reached with Rolls-Royce.

It should be said that Rolls-Royce demonstrated extraordinary cooperation involving voluntary disclosure of vast amounts of internal information resulting in a substantial discount on the penalty levied. Without such far-reaching cooperation the penalty would have been twice the size of the penalty now imposed.

The SFO is considering prosecuting individuals in connection with the case now that an agreement have been reached with Rolls-Royce.

The DPA showcases the far-reaching nature of the UK Bribery Act 2010 spanning across the international business of Rolls-Royce and emphasises the importance of thorough cooperation should any company find itself the subject of an investigation by the SFO.

IMO Polar Code –

Recent years have seen an increase in polar operations due to changing weather patterns, diminishing sea ice - both seasonal and multiyear - and increased accessibility. Destination shipping, transit shipping and offshore oil and gas activities have all increased, creating the imperative to promote safety and reduce the potential for environmental pollution from vessels operating in Arctic and Antarctic waters.

By Tore Forsmo,
Area Manager, Team Norway

Twenty years of international efforts have led to the International Maritime Organizaton (IMO) adopting the IMO Polar Code in 2014 and 2015. But how does it work, and why is it important commercially?

The promise of shorter sea routes across the north with potential fuel savings and reduced piracy risks were attractive propositions to shipowners back in 2009 when the work on a mandatory Polar Code was started at the IMO. Distance savings using routes such as the Northern Sea Route/ Northeast Passage compared with traditional blue-water trading routes can be as high as 35%. There has also been an increase in tourism and destination traffic, much of it related to oil and gas activities.

Initially, a list of hazards related to ship operations in polar waters were identified as a basis for developing goals and functional requirements of the Code.

The Polar Code is divided into two main sections.

The International Code for Ships Operating in Polar Waters (IMO Polar Code)

The Polar Code was developed to supplement existing IMO instruments in order to increase the safety of ships' operation and reduce the impact on people and the environment in remote, vulnerable and potential harsh polar waters. The Code is mandatory for all new SOLAS registered vessels operating in Arctic and Antarctic waters from 1 January 2017. For existing vessels, Polar Code certification is mandatory from the first renewal inspection after 1 January 2018. The Code comes as an addition to existing IMO regulations related to safety (SOLAS) and protection of the environment (MARPOL) and specifically addresses issues such as hull, stability, machinery, navigation, communication, lifesaving appliances in addition to requiring an operations manual, separate procedures for voyage planning and crew competence. Classification societies may, on behalf of Flag States, issue Polar Code certificates. Such certification will, inter alia, specify vessel categories, ice-classes and temperature limitations.

Safety

Each chapter of the safety section begins with an established goal and subsequent functional requirements linked to the relevant hazards. Each of the functional requirements is then supported by prescriptive regulations as a means for compliance. These chapters address: the polar water operational manual (PWOM); ship structure; subdivision and stability; watertight and weathertight integrity; machinery installations; fire safety and protection; lifesaving appliances and arrangements; safety of navigation; communication in addition to voyage planning; and manning and training.

Pollution prevention

The second section of the Code deals with pollution prevention measures, addressing: pollution from oil; noxious liquid substances; harmful substances in packaged form; sewage and garbage. The focus in this section is mainly on operational requirements although there are also structural requirements specifically regarding oil pollution.

The Swedish Club has been a strong supporter in the development of the Code and we will continue to co-operate with our members in its implementation and follow-up.

as cool as it gets?

Polar Hazards

1. Ice affects hull structure, stability characteristics, machinery systems, navigation, the outdoor working environment, maintenance and emergency preparedness tasks and may cause malfunction of safety equipment systems.
2. Topside icing may reduce stability and equipment functionality.
3. Low temperature affects the working environment and human performance, maintenance and emergency preparedness tasks, material properties and equipment efficiency, survival time and performance of safety equipment and systems.
4. Extended periods of darkness or daylight may affect navigation and human performance.
5. High latitude affects navigation systems, communication systems and the quality of ice imagery information.
6. Remoteness and possible lack of accurate and complete hydrographic data and information, reduced availability of navigational aids and seamarks with increased potential for groundings compounded by remoteness, limited readily deployable search and rescue facilities, delays in emergency response and limited communications capability, with the potential to affect incident response.
7. Potential lack of ship crew experience in polar operations, with potential for human error.
8. Potential lack of suitable emergency response equipment, with the potential for limiting the effectiveness of mitigation measures.
9. Rapidly changing and severe weather conditions, with the potential for escalation of incidents.
10. Environmental sensitivity to harmful substances and other environmental impacts and its need for longer restoration.

Distance savings using routes such as the Northern Sea Route/Northeast Passage compared with traditional blue-water trading routes can be as high as 35%.

Crane casualties in container terminals

By Keith Charles

Shipping Technical Director,
London Offshore Consultants

A Marine Civil Engineer, Keith Charles has conducted hundreds of Fixed and Floating Object Damage surveys worldwide and has investigated and advised on ship-to-shore container crane casualties in North & South America, Europe, Africa, Middle East and Asia.

Fixed and floating object (FFO) damage claims in container terminals can be complex and their cost significant. However, when these involve ship-to-shore container cranes, the high profile nature of many incidents calls for specialist attention.

There are essentially two possible consequences arising from a crane casualty: a repairable incident, which may or may not result in the displacement of the crane off its rails; and a catastrophic incident, which will occur when a crane is toppled.

Constructive Total Loss (CTL)

A CTL will require the safe demolition and removal of the crane from the berth. This is a complex operation and can be further complicated if the crane has fallen onto an adjacent crane or if the berth's structure has been damaged and weakened. Complexities increase if the terminal is in a remote location, particularly if the required heavy lift equipment and specialised expertise is not available.

A decision must then be made whether to replace the crane with an equivalent used crane or to install a new crane. The search, assessment and cost of a used crane is time consuming and may result in little cost difference between used and new when all the additional costs for modification, transportation and installation are included.

Repairable loss

When dealing with a repairable crane accident there two key phases: the recovery phase, and the repair and re-commissioning phase.

Recovery

The first priority is to carry out an initial survey before stabilising and then isolating the crane(s) to enable ongoing terminal operations and prevent further damage to crane or berth. Once this has been achieved, the insurance and port authorities must be notified and then a more detailed structural survey and damage assessment can be carried out.

After the crane structure has been made safe it must be decided what repairs are necessary. The repair and re-commissioning of a damaged crane will require a number of activities and involve parties representing both the vessel and terminal.

There are essentially two possible consequences arising from a crane casualty: a repairable incident, which may or may not result in the displacement of the crane off its rails; and a catastrophic incident, which will occur when a crane is toppled.

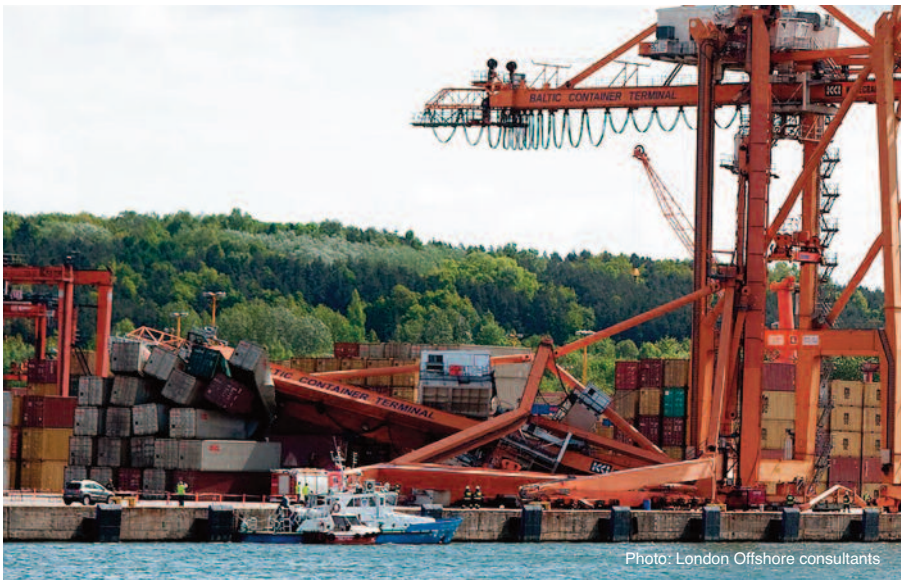


Photo: London Offshore consultants

If the crane can be repaired the decision must be made whether to repair it on the rails or move it. Having reviewed the options the surveyor will advise the client if the terminal's proposals for where the crane is to be repaired are reasonable.

Cranes are not designed to withstand horizontal impact forces and in order to understand the behaviour of a crane damaged in a major allision, it may be necessary to perform a Finite Element Stress Analysis (FEA). This will identify the extent of the structure that has been affected in the incident, any points of damage previously unseen and the correct points of support required during the repair. Also the remaining useful life of the crane will be assessed to determine whether repair is commercially viable.

Crane repair

If the crane can be repaired the decision must be made whether to repair it on the rails or move it. Having reviewed the options the surveyor will advise the client if the terminal's proposals for where the crane is to be repaired are reasonable.

If the crane is to be moved, temporary supports will be required to reinforce it for the move and a system for moving the crane from its damaged location to the place of repair will need to be installed. Here again, care needs to be taken to avoid further damage to the crane or berth.

Repairs to the crane's structure normally involve cutting away and replacing the damaged plating. This operation will allow the distorted structure to recover its original form; but jacking or heat application may also be needed. These repairs are frequently carried out at height on the crane's leg, which is a slow and costly operation.

If the crane's leg or frame is twisted/deformed the leg(s) will need to be supported from a tower to relieve the load in the legs whilst the corrective repairs are undertaken. However, if the leg is straight an expensive tower support is not required and local structural support (stiffening) can be used to transfer the loads across the damaged section of the leg.

The most frequent crane damage incident is to the boom, which can be costly and problematical if the boom needs to be taken down for repair, as the boom's positional height and weight will require the mobilisation of a large mobile or floating crane.

Damage to a crane's electrical system is normally confined to the power supply trailing cables being pulled out of their protective trench (Panzerbelt) and over-stretched or broken if the crane is derailed, or the cable reel being hit directly and crushed or bent. These items have long delivery times and to avoid delay in re-commissioning the crane an order for a new cable or cable reel should be placed early in the repair process.

The final stage in the repair and re-commissioning process involves the nondestructive testing (NDT) of the repaired areas and other critical weld joints that may have been affected in incident. Crane geometry dimensional checks will also be performed for perpendicularity, diagonal tolerance and boom hinge alignment.

Lastly re-commissioning load testing will be carried-out before the crane can be approved for operation.

The Deadly Dozen – A mirror on MRM

The 'Deadly Dozen', a list of the 12 most important factors in maritime safety, was recently published by the UK Maritime and Coastguard Agency (MCA). The Marine Guidance Note was based on analysis of near-miss reports for 2003-15 by CHIRP, the UK Confidential Reporting Programme for Aviation and Marine, and is particularly welcomed by The Swedish Club – because it echoes so many of the issues covered in the Club's Maritime Resource Management (MRM) training courses.

'Situation awareness' took top place on the list – 22.5% of the reported incidents were attributed to lack of situation awareness, according to the analysis. This was followed by 'Alerting' (15.3%), 'Communication' (13.4%) and 'Complacency' (12.6%).

"When I saw this analysis I quickly realised: this IS the MRM syllabus," says Martin Hernqvist, TSC Academy managing director. "We have long focused on situation awareness, and on alerting - we call it 'challenge and response'. Communication and culture are, of course, key elements of the MRM course, and we cover the issue of complacency as part of the attitude training we carry out.

Martin Hernqvist,
Managing Director,
The Swedish Club Academy

"Reading through the Deadly Dozen list, it is very encouraging to feel we have this kind of support."

The CHIRP Deadly Dozen

- Situation awareness - 22.5%
- Alerting - 15.3%
- Communication - 13.4%
- Complacency - 12.6%
- Culture - 11.4%
- Local practices - 7.4%
- Teamwork - 6.8%
- Capability - 4.9%
- Pressure - 1.9%
- Distractions - 1.8%
- Fatigue - 1.2%
- Fit for duty - 0.8%

“We aim for real cultural change in companies and that can only be achieved when top management are involved.”

“This is further external evidence that proves we have been on the right track for a very long time.

The launch of MRM

When we pioneered the MRM concept in the early 1990s, it was a definite struggle to get the industry’s attention, says Martin Hernqvist.

“The ‘human side’ was a new idea and it took flag states and companies a long time to shift their focus from traditional technical training to human factor training. With technical training, you can have a test at the end of the course, whereas MRM training is longer term, aiming for attitude change, a willingness to work as a team and to communicate.“

The human factor

In a highly regulated industry, the emphasis is usually on seafarers attending the training courses that are required by STCW, points out Hernqvist. “We could see that a different approach was needed. When we saw accident reports then – as now – most of these accidents were very much related to the human factor and human error – a lack of teamwork, lack of communication, and making assumptions.

“We encourage people to speak up if they see that something isn’t correct or information hasn’t been noticed, and we want them to get a positive response. We emphasise that you need to have good communication to avoid mistakes.

“Accidents are by definition unexpected and unwanted – it is when everything feels fine and you least expect it that the worst can happen, and complacency is really a part of that.”

Real results

The companies that sign up to The Swedish Club’s MRM training understand what it is all about, he says: “The industry is very much certification-driven with the ‘we need to revalidate the certificate’ being the priority. But in the early days, there were those that were not interested in just getting a piece of paper – they knew they could get real results from the training.”

STCW now incorporates some elements of management, leadership and teamwork training, he says, and that is to be welcomed.

“However, we aim for real cultural change in companies and that can only be achieved when top management are involved.”

Speaking the same language

Accidents cannot be prevented if the causes have not been understood, he points out. “I believe we are on the way towards a new culture. This is what we have been talking about and pushing for all these years. Reading through the Deadly Dozen list, it is very encouraging to feel we have this kind of support from another source.”

MRM facilitator training online at your office

Last year the Club’s MRM team ran MRM ‘Train the Trainer’ sessions in 13 different locations throughout Europe and Asia. We have already held three successful events this year in Limassol, Mumbai and Manila but it is apparent the Academy is still not meeting worldwide demands when urgent training is required and diary dates do not coincide.

The Swedish Club Academy has now launched the new MRM Facilitator Training Online, designed to allow our clients to take the course whenever they choose and wherever they are located. It is time efficient, easy to get started and requires no travel or accommodation expenses. It also reduces your carbon footprint, making it an environmentally friendly choice.

By Lorraine M Hager,
Strategic Development Executive
The Swedish Club Academy

The online training serves as an additional service that complements our regular MRM Train the Trainer events held at various locations worldwide. It is not designed to take the place of these events where face-to-face discussions and sharing experiences are an essential part of MRM training. That is why we highly recommend that if you receive your facilitator certification online that you make an effort to attend one of our user seminars when you find a date and location that suits you.

If you have any questions regarding the MRM Facilitator Training Online please feel free to contact: Lorraine Hager at lorraine.hager@swedishclub.com

Notice board

Update on French Environmental Law

Concerns were raised in the shipping industry when, late last year, France adopted a new law on compensation for environmental damage. Article 4 of French Law No 2016-1087 entitled 'For the recapture of nature, biodiversity and landscapes' introduced a new set of articles in the French Civil code which created a new claim category for 'ecological damages'.

The new Law is a codification of the Erika case issued in 2012 by the Court of Cassation (the highest jurisdiction in France) that had already introduced the concept of 'pure ecological damage' in the French legal system. These new provisions aim at endorsing the Court of Cassation's decision and avoiding the lack of compensation in cases where damages are not sustained by a private party but by the environment as a whole (e.g. the extinction of a bird species, or an oil spill in the high seas).

Specifically, article 1246 of the French Civil Code states, 'any person liable for an ecological prejudice is obliged to repair it'. An 'ecological prejudice' is defined as 'sizeable damages to the elements, or to the functions of the ecosystem or to the collective assets of environment from which men benefit'.

Some in the industry fear its impact on the limitation of liability system in case of pollution, as set in the 1992 Civil Liability Convention (CLC) or the Convention on Limitation of Liability for Maritime Claims (LLMC) for example. However the main concern rises from the absence of an express disposition in the Law ensuring that the caps will be respected by the French courts.

The industry should, however, be reassured. The absence of an express exception for the shipping industry does not mean that the international conventions will be set aside and that the shipping industry will not be able to limit their liability. France is bound by the different international conventions it ratified, under article 55 of its Constitution, without having to express it in the Law.

The awareness of the French judges on this issue should not be feared either. Notably, in the Erika case, both the Court of Appeal and the Court of Cassation applied the CLC to the liability issues arising from 'pure ecological damages'. And it was in accordance with the CLC that the defendants in the Erika Case could not limit their liability. The analysis of the facts led the Court to believe that defendants had been reckless and that such a behaviour was assimilated to a personal fault, which constitutes grounds for unlimited liability under the CLC.

Therefore, the introduction of an ecological claim in the French Civil code should not disrupt the shipping industry concerning liability issues. French jurisdictions should be trusted when applying international conventions for marine ecological damages despite the absence of an express mention in the Law.

Martha fatigue report is launched at the IMO

A new report into fatigue on board ship has recently been published by InterManager together with The Warsash Maritime Academy. The Project MARTHA report highlights growing levels of fatigue, particularly among Masters and watch keepers, and notes that motivation is a major factor in fatigue experienced by seafarers.

Project MARTHA confirmed that a Master's place on a ship is central to its performance, and identified that not only did a Master have more work hours than his crew, but also that they are more fatigued at the end of a contract, that they suffer from mental fatigue, compared to physical fatigue suffered by other seafarers, and also, surprisingly, are slightly more overweight compared to others on board.

The study also found that almost half of seafarers interviewed felt stress was higher at the end of a voyage. Interestingly levels of fatigue varied little during the voyage, suggesting there are opportunities for recovery while at sea.

Project MARTHA also brought up some interesting cultural differences, with a clear divide found between European and Chinese seafarers. European seafarers worked fewer hours than their Chinese colleagues: for example Chinese seafarers on dry bulk carriers worked an average of 15.11 hours a day compared with European seafarers who worked an average 10.23 hours a day. Unsurprisingly there is evidence of higher levels of fatigue and stress in Chinese seafarers than European seafarers.

Nairobi International Convention on the Removal of Wrecks (WRC)

The Convention applies to vessels above 300 GT and adopts strict liability and compulsory insurance, regulating that the registered ship-owner has an obligation to locate, mark and remove a wreck considered to pose a hazard within the area covered by the Convention. The Convention that entered into force on 14 April 2015 is currently ratified by 34 member states.

The most recent states to ratify the convention were Finland (effective as of 27 January 2017); China (effective as of 11 February 2017); and Belgium, which as the 34th state ratified the Convention on the 17 January 2017, (effective as of 17 April 2017). The Convention is not extended to the territorial sea and will only apply from Belgium's territorial sea limit to the outer edges of its EEZ.

Further information on the WRC can be found at our website **www.swedishclub.com**

Sanitary dispositions in Argentina

The Club has recently received a number of enquiries related to regulation in Argentina by the Sanitary authorities (Disposition 74 E/2016), by which a mandatory cleaning and disinfection programme would be requested from the vessels prior to gaining 'free practique'.

In fact, this disposition is not new and it has been in force since November 2016. However it did not affect cargo ships because the disposition applies to 'any means of passenger international transport with place for more than 14 people'.

Recently however, the Health Unit based in San Lorenzo Port seemed to include extend the provisions of such disposition to cargo ships, creating some uncertainty on its implementation. Apparently, the intention of San Lorenzo's Health Unity was for all ships - passenger and cargo vessels - to be fumigated prior to issuing the 'free practique' unless there was a valid fumigation certificate from the previous calls.

We are pleased to say that the Sub-secretary of Policies, Regulation and Control of the Ministry of Health has issued an internal note clarifying to the Unit based at San Lorenzo that such regulation does not apply to cargo ships but passenger vessels only. Please see Member Alert dated 15 February 2017 at **www.swedishclub.com**

Electronic Track Data – new Admiralty rules

On 28 February 2017, amendments to Part 61 of the Civil Procedure Rules and its associated Practice Direction came into force. The changes concern the procedure to be adopted in Collision Claims in which Electronic Track Data (as defined in the new rule 61.1(m)) is available.

The changes essentially acknowledge that the increasing availability of Electronic Track Data in the form of various sources (for example, ship or shore-based AIS, ECDIS, or voyage data recorders) can be of great assistance in bringing about the prompt and efficient disposal of disputes over liability for the collision, potentially saving significant time and costs in resolving collision.

The relevant changes include the following:

* The court will seek to adopt fast track procedures for the determination of issues of liability as part of its duty actively to manage cases.

* The court may consider it appropriate to (i) limit witnesses to those most closely involved with the collision, (ii) dispense with oral evidence, and/or (iii) dispense with an oral hearing altogether.

* A party to an anticipated collision claim should take all reasonable steps promptly to preserve and/or procure the original and/or copies of any Electronic Track Data in its control (this will include saving VDR data).

* Each party to an anticipated collision claim will generally be expected to:

a. Disclose to one another any Electronic Track Data, which is or has been in its control.

b. If each party has Electronic Track Data in its control, thereafter exchange copies of and/or permit reciprocal inspection of such Electronic Track Data, during the course of pre-action correspondence. A failure by one party so to disclose, exchange copies of, or permit reciprocal inspection of, Electronic Track Data at the request of another party to an anticipated collision claim prior to the commencement of proceedings without good reason is likely to attract a costs sanction from the Court.

It is anticipated that the early disclosure, and provision or inspection, of Electronic Track Data will facilitate the rapid and cost-effective resolution of many disputes, or potential disputes, concerning liability for collisions without recourse to formal proceedings.

Out and about

The Swedish Club cements its relationship with the Cefor Academy

Last month, The Swedish Club hosted this year's intake of the Cefor Academy at its Gothenburg headquarters. Professionals from all areas of the industry came together to complete the fifth module of the Nordic Marine Insurance Education Programme, benefitting from the expertise of The Swedish Club's P&I specialists.

At the back of the room, paying attention as she always does, was Helle Hammer, Managing Director of Cefor and founder of the Cefor Academy. She has rarely missed a module since Cefor founded the Academy in 2008, and believes that seeing the training run first hand is key to the success of the programme: "To maintain the effectiveness of the programme it is important to get a feeling for what does and doesn't work. We undertake a process of continuous improvement throughout individual sessions – actually as they are running – which we immediately feed back to the trainers, enabling us to shape and improve the training as it progresses."

Helle Hammer is passionate about the success of the course. "Within our industry it really does mean something", she says. "We have had people fly in from as far as Singapore and Brazil to attend the course. "

The Cefor Academy was established as the result of discussions with members which reaffirmed the levels of satisfaction of Cefor members with the organisation, but unanimously requested more education provision.

Traditionally it took years and years of experience to know and understand the business. "But this process needed speeding up," explains Helle. "More and more people are entering the industry with non-maritime or non-insurance backgrounds and traditionally they had been expected to learn slowly and on the job.

Helle Hammer, Managing Director of Cefor and founder of the Cefor Academy

"But all members have different sized organisations – this training enables those in smaller workplaces to have access to same education and experience as if they were in a larger company."

The Swedish Club was part of the development of the course in the beginning, and have continued to support the programme ever since. This is the tenth course intake and the Club has not only hosted the P&I section of every course, but also regularly sends its own people for training.

"The Swedish Club has always been the first choice for the P&I focus," says Helle Hammer. "They understand the two-way nature of the way we work and are very accommodating and receptive to the evolution of the programme. Our trainers have provided extremely good feedback.

"Not only that," she adds, "but it should be said that The Swedish Club looks after the course attendees and tutors extremely well. When we are with the Club there is a fantastic attention to detail with amazing little touches."

Cefor students visiting The Swedish Club head office

Tord Nilsson, The Club's Director Underwriting, Reinsurance & Risk Control is a member of the Cefor board.

A record turnout at Team Norway's Breakfast Seminar

Team Norway held its annual Breakfast Seminar at Tjuvholmen Sjømagasin on 15 March. A record turnout of some 40 guests, representing the Norwegian maritime cluster in general and the marine insurance industry in particular, were treated with food for thought as well as for body.

The event was opened by Area Manager Tore Forsmo, giving his reflections on challenges and opportunities in the Norwegian market, followed by Managing Director Lars Rhodin sharing The Swedish Club's state of affairs as well as his thoughts on global market developments.

Finally, the morning was rounded up by Peter Stålberg, who has just returned to the Club after some nine years working on large technical and engineering projects in the oil and gas industry. Peter spent fifteen years in The Swedish Club in various technical and loss prevention positions and returned in February this year. An interview with Peter can be found on the following page of this issue of Triton.

Thank you to all participants and we look forward to meeting you at the next Club event.

The Swedish Club welcomes the WMU to Gothenburg

Twenty students from the World Maritime University (WMU) visited The Swedish Club's headquarters in Gothenburg in March for a marine insurance whistle stop tour.

Students from around the world spent the day with the Club, where they were given an insight into key areas of the marine insurance business, and were able to quiz staff on some of the complexities of the insurance sector.

Johan Kahlmeter, The Swedish Club's Head of Claims, Marine, hosted the visit and applauded the work of WMU in the field of maritime education. "We have been pleased to welcome students from the WMU for the last 18 years and we value the close relationship we have built up with the organisation during that time."

The WMU is based in Malmö, Sweden, and is a postgraduate maritime university founded by the International Maritime Organization (IMO). In addition to offering a unique postgraduate educational program, it undertakes wide-ranging research in maritime and environmental studies.

Staff news

A new perspective: **Peter Stålberg**

It's great to be back, says Peter Stålberg, who has returned to The Swedish Club after spending nine years working in the offshore sector.

Peter, whose main discipline is marine engineering, previously worked for the Club from 1993 to 2008 – during which time his various roles included Technical Manager, Staff Surveyor, Director Technical and Risk Assessment, and Area Manager. His career since then has focused on construction and project engineering roles across a wide range of offshore installations for Shell, Statoil, Chevron and BW Offshore, amongst others.

Having rejoined The Swedish Club as Senior Technical Advisor, Strategic Business Development & Client Relations, he says: "Having worked in the offshore industry for the past nine years, I can bring a particular technical capability to the Club. I will be available to support all of our offices where they might need technical support of any kind – including, of course, in Oslo, which is more focused on the energy and offshore business.

"I am looking forward to focussing on broader strategic business relations and also assisting with Loss Prevention projects and issues. When I left the Club, I was heavily involved in risk assessment – to an extent, I will be picking up where I left off, taking a closer look at our internal systems. For example, I have already embarked on a project reviewing our internal technical risk assessment system."

Peter has experienced first-hand the significant differences between traditional shipping and the world of offshore and energy – not only from the technical point of view but also seeing how different employers organise and approach their business in different ways.➪

"I am looking forward to focussing on broader strategic business relations and also assisting with Loss Prevention projects and issues."

“There will be a steady flow of new faces in any office but when you are away for nine years you really notice!”

“Both sides can learn from each other. In shipping, it is all about cost. In oil & gas, it has traditionally been all about uptime – but that has changed somewhat while the oil price has been lower, so that there is more focus on cost and standardisation in that sector too. There are more regulations and stricter safety regimes in oil & gas, which has learned from some high-profile accidents.”

What, then, has changed since Peter has been away from his Swedish Club ‘roots’?

“A lot of ships are slow steaming and the pace of the shipping industry has gone down – and consequently we see fewer claims, particularly in H&M. All of that is positive, of course – fewer claims is good for everyone – but, on the other hand, it can make judging risk more difficult.”

In the office, Peter notes: “There will be a steady flow of new faces in any office but when you are away for nine years you really notice! We have a lot of competent new people. My priorities are efficiency in the way we work, and making sure we focus on the right things. A new perspective is always valuable. It is great to be back and it is a wonderful place to work – you really understand that when you have been away!”

Miran Marusic
Team Gothenburg

Miran joined the Club’s Loss Prevention department in January 2017 as Claims & Loss Prevention Controller. He has a masters degree in Maritime Law and has previously worked in New York and London as a claims handler.

Pierre-Louis Merer
Team Gothenburg

Pierre-Louis joined Team Gothenburg in January 2017 on a one-year traineeship as Assistant Claims Executive. He is a French lawyer with an LL.M in Maritime Law from the University of Southampton.

Ann Pettersson
Team Gothenburg

Ann is working as Claims Support Officer in Team Gothenburg. She holds a BSc in legal science and has extensive previous experience in claims consultancy.

Martin Olofsson
Team Piraeus

Martin joined the Club’s Piraeus office in March 2017 as Senior Claims Executive. His previous career includes roles such as Cargo Claims Adjuster and Marine Hull Claims Handler. He also held the position as Managing Director for Krogius/Marconova AB and P&I Scandinavia AB in Gothenburg.

Club Quiz

1. What is the US/Canadian name for who the rest of the world call "stevedores"?

1. Lifters
X. Longshoremen
2. Dockworkers

2. What is the premium paid to a P&I club called?

1. Rates
X. Calls
2. Collection

3. What does the term IACS stand for?

1. International Association of Clog-dance Societies
X. International Association of Certification Societies
2. International Association of Classification Societies

Mail your answer to
quiz@swedishclub.com
The first correct answer pulled out of the hat will win a prize.

Winner of Club Quiz 3 – 2016

Congratulations to winner of Club Quiz No 3-2016, Mr Rakesh Sethi of Anglo-Eastern Ship Management Ltd, Hong Kong, who has been awarded a Club give-away.

The right answers to Club Quiz No 3-2016 are:

1 **Electronic Chart Display Information System**
(What does ECDIS stand for?)

2 **From the French phrase M'aider – meaning "Help me"**
(What is the origin of the term "mayday" for an emergency radio call?)

2 **Very Large Ethane Carrier**
(What does the shipping term VLEC stand for?)

Club Calendar 2017

3 May	Club Evening Hamburg
4 May	Club Evening Bremen
10 May	Lunch Reception London
8-12 May	Marine Insurance Course Gothenburg
8 June	Open House Piraeus
14 June	Board Meeting Gothenburg
14-16 June	AGM events Gothenburg
15 June	**Annual General Meeting Gothenburg**
5 October	Board Meeting Dubai
7 December	Board Meeting London

SVERIGES ÅNGFARTYGS ASSURANS FÖRENING
The Swedish Club
Est. 1872

The Swedish Club is a mutual marine insurance company, owned and controlled by its members. The Club writes Protection & Indemnity, Freight, Demurrage & Defence, Charterers' Liability, Hull & Machinery, War Risks, Loss of Hire insurance and any additional insurance required by shipowners. The Club also writes Hull & Machinery, War Risks and Loss of Hire for Mobile Offshore Units and FPSOs.

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