

RISK WATCH

Fender damage when berthing



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When deciding the ship's berthing position it is important to consider the location of port property (such as fenders) and how they are positioned in relation to any protrusions or recesses on the ship's hull. It is not just the more obvious parts of the hull such as the protruding bow flare or bridge wings that should be considered, but other less obvious areas.

In a recent case handled by the Club, a car carrier completed berthing about 15 minutes before low tide. The ship was positioned in accordance with the instructions of the port personnel but it seems that they focussed on making sure that the ship was positioned in their own preferred location for setting down the ship's stern side ramp on the berth rather than taking into account the position of a fender. Nobody on the ship noticed that the

tide was so low that the base of the stern side ramp was directly below a fender and that there was a risk of the ship's hull becoming caught on the fender when the tide began to rise. Several hours later, the inevitable happened. The ship's crew managed to adjust the mooring lines and shift the ship slightly along the berth but it was too late and the fender had by then been partially ripped away from the berth wall.

Navigation and seamanship



Fender damage when berthing (continued)

The master and crew should be aware that they are almost always legally responsible for the handling and berthing position of the ship, irrespective of the pilot or shore personnel giving guidance or instructions.

A risk assessment should be considered to make sure that the master and crew are aware of any undesirable locations in relation to port property, such as where fenders might

become damaged by the ship, either during the actual berthing or with the changing tide. The master should receive continual observations and assistance from ship's officers at the fore and aft stations during the berthing manoeuvre. A responsible officer should also be tasked to verify that the final position is safe in respect of potential protrusions on the ship or the berth before 'shutting down'.

A further precaution would be to incorporate visual reminders on the ship's hull, such as using paint to highlight any areas at risk of being caught on fenders and also using signs saying 'no fenders' near the stern area of the ship.

Republic of Congo: limit of territorial waters

A recent case handled by the Club involved the detention of a ship and crew in West Africa. The case highlights the risk of assuming that anchoring or drifting beyond the usual 12 nautical mile territorial limit can be done without approval from the adjoining (littoral) state.

The Members' ship had discharged her previous cargo and was drifting for a few days some 50 nautical miles off the coast of the Republic of Congo while she waited for instructions. Adverse weather conditions caused the master to move the ship closer inshore and anchor 23 nautical miles from the nearest coastline. After two weeks at anchor in the same position, to the master's surprise, two navy war ships appeared and ordered the ship to proceed under escort to Pointe Noire. The ship was promptly arrested and four crew members, including the master, were brought ashore and detained for interrogation by the local authorities (including the Navy and Secret Services) under suspicion of being a 'pirate ship' or preparing mercenary activities. Negotiations to obtain the release of the crew

were difficult and protracted. The master and the other three crew members spent two days in a detention centre and then a further week detained in a local hotel before they were released.

The master, believing that Congolese territorial waters only extended to 12 nautical miles, did not consider there was any requirement to notify the local authorities of their presence.

While the United Nations Convention on the Law of the Sea (UNCLOS) sets the limit of territorial waters at 12 nautical miles (Art. 3) some states still claim territorial limits greater than 12 nautical miles, including the Republic of Congo, which claims a territorial sea of 200 nautical miles.

This case serves as an important reminder of the need to check the applicable territorial limits to avoid violating the coastal states' laws when anchoring or drifting offshore.



Fish farms off Lanshan port, PR China

The Club continues to be notified of cases involving ships running into fish farms, mostly sub-surface mussel rafts, off Lanshan Port in Shandong province.

In one of the reported incidents, the ship in question arrived at Lanshan to discharge its cargo. Having reached safe anchorage off the port, the master received a port guide and a map from the local agent which indicated the fish farm areas. The second officer proceeded to plot the designated fish farm areas on the ECDIS chart and these updated charts were used to transit from the anchorage to the designated berth. During this transit no radar reflection was detected nor were there any signs or warnings received from the Lanshan vessel traffic system (VTS) nor from the fishing boats which were allegedly instructed to monitor the fish farms. Less than two days after the ship berthed, an accident notice from a fish farm owner was received via local agents.

The incident was investigated, together with other similar reported cases and the investigation revealed that most of the ships involved in such incidents had in fact, at some point, inadvertently crossed through certified fish farming areas and, by implication, had not obtained or taken note of local official notices and guidance (although it was also found that there were instances where the alleged fish farms were found to be outside the designated perimeters). It is common

knowledge that the relevant authorities allow these fish farms to be very close to the navigation channels, posing an additional risk to navigation should a ship deviate slightly from the navigational channel.

In some instances there is evidence of these certified fish farms not being identified in the port information supplied by local agents, nor marked in the available charts. Furthermore, all the fish farms involved in the various incidents were not sufficiently marked with navigational warnings. Despite owners of fish farms being obliged to set up adequate warning marks around the farms, often only small flags are utilised, without any other indications such as radar reflectors, light buoys, etc. This makes it very difficult to determine their presence, especially when visibility is poor.

Even in circumstances where owners of fish farms were in breach of their obligation to set up adequate warning, or even when they placed all or part of their fish farms out of their certified designated area, it is very unlikely that ship owners could escape liability in full as long as it can be proved that the ship deviated from the navigational channel.

In view of these circumstances, Members are reminded to exercise caution at all times and consider applying amongst others the following measures:

- When entering and sailing off the port of Lanshan (and subject to other navigational requirements) to follow the defined routes without altering course even if the charts indicate that the water either side of the route is clear of obstructions.
- At the passage planning stage, to seek the latest information from their local agents, port authorities and VTS on the position of fish farms.
- To follow the navigation warnings issued by the Maritime Safety Administration (MSA) closely and to seek their assistance, especially if the information received from agents is in doubt.
- To place an adequate look-out at all times and maintain safe navigation speed appropriate to the risks of unmarked or inadequately marked fishing nets.

Containers and cargoes

Cargo damage: inadequate packaging

In a recent case reported to the Club, a consignment of pressure boiler parts was physically damaged during moderately heavy weather whilst en route from Hong Kong to Houston. The ship encountered high seas and winds of Beaufort scale 9. The master had adjusted speed and course so as to minimise rolling and pitching but despite his actions, inspections carried out by the master in the cargo holds revealed the cargo stowed in hold no. 2 had been damaged.

Investigating surveyors attended discharging operations at Houston to ascertain the nature and extent of the damage. The stowage and securing of the cargo was found to be in good order and the Cargo Securing Manual (CSM) instructions had been followed. The conclusion was that the cargo packaging and protection (carried out by the shippers) which consisted of a framework of small dimension steel angles, was found to be insufficient for an ocean voyage.

The cargo loading and stowage had been monitored by the chief officer throughout the process, but he had not paid attention to the packaging and protection of the cargo. The design of the steel structure and the dimension of the steel structurals (angles) used to protect boiler pipes were clearly inadequate for the forces to be expected at sea and was clearly designed only to accommodate inland transportation and shore storage purposes.

The shipper is under a duty to package cargo in a manner sufficient to withstand the rigours of an ocean voyage. Although the master (owners) may not be responsible under the terms of a charter for stowage and securing and the cargo damage resulting therefrom and will rarely be responsible for the consequences of inadequate packaging, nevertheless, the master and/or party responsible for loading and stowage of such cargo should endeavour to note the adequacy of packaging/protection for the intended voyage and should put charterers and/or shippers on notice of any obvious concerns. In any event, the master has a duty to ensure that cargo is packed and protected so as to ensure no damage or hazard to the ship and other cargo loaded on board can result from the failure of that packaging.



Phosphoric acid cargoes from India

There have been recent incidents where stainless steel cargo tanks of chemical tankers have been damaged following the carriage of phosphoric acid cargoes from the east coast of India.

The extent of the damage to the stainless steel cargo tanks ranges from mild pitting on the tank surface to more extensive corrosion, causing the tank surface to peel off as shown in the photographs on the right. Repairs can be labour intensive and time consuming and there is the additional risk of contamination of the cargo being carried. To minimise these risks, the following issues should be considered:

Crew knowledge

It is important that the crew are familiar with the type of cargo being carried and the type of stainless steel within the ship's tanks. Food grade phosphoric acid is not corrosive to stainless steel but fertilizer grade acid is far more aggressive. The crew must familiarise themselves with the Safety Management System (SMS) which should contain information on the dangers of

carrying phosphoric acid and include guidance on the maximum temperature of the cargo to be loaded on board.

Tank resistance tables

The levels of fluoride and chloride, together with the cargo temperature, will influence the extent to which the cargo may react with the stainless steel cargo tanks. Cargo tank resistance tables, usually provided by the manufacturer, provide information on the safe temperature levels for carriage.

Maintain a temperature log on loading

Cargo can sometimes be loaded at an excessive temperature. The crew should be aware of the location of temperature gauges and monitor the cargo temperature at the beginning and during loading. If the temperature is excessive, loading should be stopped.



Liquefaction: shippers to develop sampling and testing to control moisture content

With effect from 1 January 2017 the IMO has introduced a revision to the International Maritime Solid Bulk Cargoes (IMSBC) Code on 'Guidelines for developing and approving procedures for sampling, testing and controlling the moisture content for sold bulk cargoes which may liquefy'.

The objectives of the guidelines are:

- To assist shippers in preparing procedures for sampling, testing and controlling moisture content as required by the IMSBC Code.
- To assist competent authorities at loadports when approving or checking the implementation of such procedures in accordance with the IMSBC Code. Liquefaction may occur when the moisture content of certain bulk cargoes exceeds the defined transportable moisture limit (TML). These cargoes are identified as Group A cargo in the IMSBC Code. Therefore, unless the ship is designed to carry a liquefied cargo such as an oil bulk or ore carrier, it is very important to ensure that the moisture content is less than the TML of the cargo. Should solid cargoes liquefy on a normal bulk carrier the results can be catastrophic as the ship will rapidly lose positive stability and can be lost in a very short period of time.

The IMSBC Code sets out to determine by testing the acceptability of consignments for safe shipment. Thus the IMO has developed the guidelines for shippers under MSC .1/Circ. 1454/Rev. 1 to establish procedures for sampling, testing and controlling moisture content. These procedures are to be approved and their implementation checked by the competent authority of the port of loading. The guidelines outline the requirements imposed on the shipper and the competent authority.

The shipper

The shipper is required to develop the following sampling procedures which include identifying the:

- consignment to be sampled
- material (type, particle size, composition)
- time and frequency and place of samples
- method of sampling
- equipment used for sampling
- responsible persons for sampling and their training

- technical supervisor responsible and their training

- records to be kept on training, internal reviews, traceability of subsamples and maintenance of sampling equipment

The guidelines also set out the requirements for testing procedures to be drawn up by the shipper which should include:

- a description of the adopted testing method for determining moisture content and acceptability of consignment
- a list of the recognised international and national methods for various materials as referred to in the IMSBC Code
- a protocol to implement the testing method

The testing method must:

- be reproducible
- give compatible results at ship level
- be consistent with feedback
- be capable of providing a safety margin with respect to liquefaction
- ensure that the moisture content is less than the TML

The guidelines also require a procedure to be drawn up by the shipper for controlling the moisture content of the cargo. The important thing is to ensure that once the moisture content has been measured it remains below the TML. This procedure should be based on the factors that may influence the moisture content between the production area and the ship. The procedure should address the following :

- geographic configuration of the production area
- location of the stockpile
- methods of transport from production area to stockpile and then to ship
- precautions to be taken in the stockpiling area

- loading methods from shore to ship and protection from precipitation

- sampling at different stages of the transport/storage operation

- procedures for identifying when cargo is not authorised for loading

- periodic internal controls

- training of personnel involved

- record keeping

The competent authority

The competent authority of the port of loading is required to:

- provide an initial verification to the shipper. This must be done before the document stating that the shipper's procedures have been approved (as required by section 4.3.3 of the IMSBC Code) is issued to the master or his representative. This should ensure that the procedures comply with the provisions of the IMSBC Code and that personnel involved have received appropriate training.
- A renewal verification of the shipper's procedures at intervals specified by the competent authority of the port of loading but not exceeding 5 years.
- An intermediate verification before the first anniversary of the document required by the IMSBC Code.

The competent authority should scrutinise any changes to the procedures prior to approval. They should also provide a document stating that the shipper's procedures have been approved after the initial and renewal verification in accordance with the IMSBC Code. This document is signed by the competent authority to state that the procedures outlined in the guidelines MSC.1/Circ. 1454/ Rev. 1 have been complied with and a copy of this document should be provided to the master or his agents in accordance with the IMSBC Code.

It is hoped that the implementation of these regulations in the IMSBC Code will help prevent further cases of liquefaction.

Pollution

Oil spills in Brazil – How to avoid small spills becoming large claims

Despite a great reduction in the number of larger oil spills worldwide, numerous smaller, operational oil spills occur each year. However, just because a spill is relatively small does not mean it should be considered to be less serious: small spills do not necessarily correspond to small claims.

In Brazil, the policy of the Federal Prosecution Office is to treat small oil spills as seriously as large ones because of the perceived potential long-term effects. Small spills may result in large environmental and 'moral' damage claims which are not commenced until many years after the event. Records and information about the facts of the case might have been sent to the archives and witnesses may no longer be available. Therefore, whilst a relatively small claim might appear to be at an end after payment of any fines imposed, closing the file might not, in the longer term, be the correct thing to do.

The advice from Brazilian lawyers Siano & Martins Advogados Associados is to treat a small spill carefully, even if initially it may appear logical to close the file after initial penalties have been paid to authorities and the clean up costs have been dealt with. There are several specific legal issues which create a problem for ship owners:

- Large civil public actions may be filed, alleging contamination of habitats or organisms and seeking substantial environmental damages. These may be further increased by the application of 'moral' punitive damages, interest and inflation.
- Recent Brazilian Superior Court of Justice decisions have held that there is no time bar limitation for civil public actions (based on the long-term nature of the environmental damage).
- It may be possible for prosecutors to claim for damages to the environment without proving loss. This is enabled by the application of an exponential formula for the quantification of claims, produced by the São Paulo Environmental Authority: Value (US\$) = $k [10 (4.5 + x)]$ (commonly known as the CETESB formula). (K is the number of previous incidents for the party (being $k=1$ for a first-time spiller, $k=2$ if it is a second timer, and so on) and x considers the sum of five variables which are to be rated between 0.1 to 0.5: quantity spilled, vulnerability, toxicity, oil persistency, and organism mortality).

This seemingly arbitrary formula for calculating a loss is controversial. ITOPF has recently commented that; 'the basic assumption of theoretical models that a release of oil will inevitably result in

damage to environmental resources of a defined nature or scale is scientifically inaccurate... most notably, the formula does not give any consideration to clean-up conducted following an incident. Well managed clean-up operations invariably accelerate the rate of natural recovery of affected areas and, in doing so, help to mitigate the impact on the environment'.

It is essential to base the defence of any such claim on solid evidence, properly preserved. The scientific assessment of material damages to the environment will be the best way to challenge presumed damages calculated by hypothetical mathematical models. Actions which may need to be undertaken include:

- finding out the potential source or sources of pollutants in the vicinity of the incident through field sampling;
- determining the scale and extent of any pollution release including the nature of any shoreline oiling and the habitats potentially impacted; and
- investigating the potential impact on local fisheries and tourism.

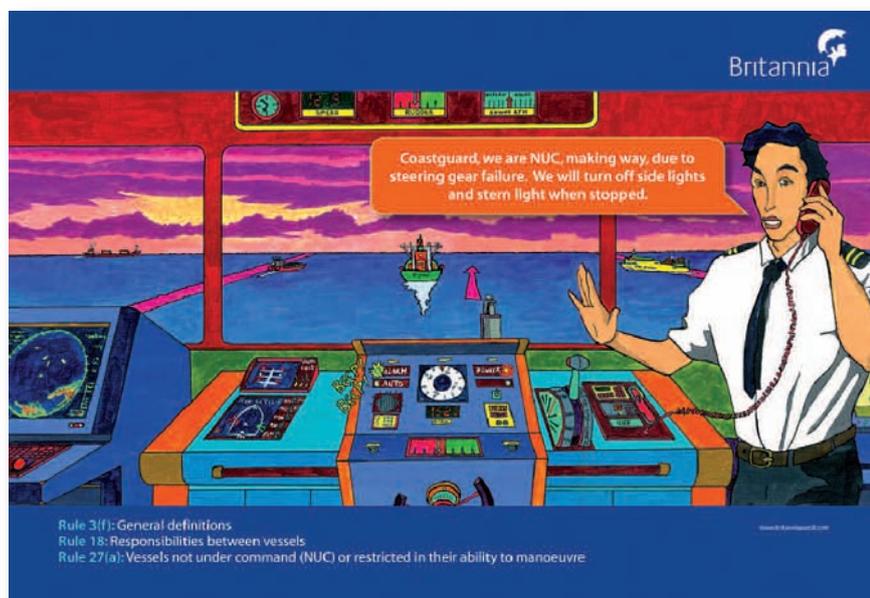
In conclusion, it is recommended that the above actions are considered even for smaller pollution incidents in Brazil. The costs of focused field surveys and sampling is generally quite modest and such actions may help to avoid liability and also to protect any potential rights of recovery against third parties for what are commonly very sizeable environmental damage-related claims.



Loss prevention

Loss prevention poster campaign: COLREGs 3(f), 18 and 27(a)

Several ships have recently been questioned for incorrect use of 'not under command' (NUC) signals whilst drifting and waiting for a pilot to board.



The circumstances illustrated in the poster are; it is dusk and the ship is proceeding in heavy traffic; the red flashing instrument panel alarm notifies the bridge team that the rudder gear has failed; the engine room telegraph has been put to 'stop engines'; the ship is making 12.5 knots; NUC lights (two all round red lights in a vertical line) and the port and starboard sidelights together with the white stern lights are being displayed. The officer of the watch is calling the local coastguard to appraise them of the situation, he also explains his intention to switch off the stern and sidelights (leaving the two all round red lights displayed) when no longer making way.

COLREGs Rule 3 – General definitions – states that a ship which is NUC is a ship which, due to exceptional circumstances, is unable to manoeuvre as required by these Rules and is therefore unable to keep out of the way of another ship. This would be justified as a result of a main engine or steering gear failure, or another exceptional cause, but would not be justified if the ship was merely drifting whilst waiting for the pilot to board. In the context of a collision between a ship wrongly exhibiting NUC lights or shapes and a power driven ship, administrative action may result against the master and/or officer of the watch.

As soon as the main engine, steering gear or other deficiency is repaired the ship should turn off NUC lights (or lower the daytime signal – two black balls in a vertical line) and proceed with normal 'power driven vessel' lights in accordance with collision regulation steering and sailing rules for a power driven vessel.

Rule 3

General definitions

f) The term 'vessel not under command' means a vessel which through some exceptional circumstance is unable to manoeuvre as required by these Rules and is therefore unable to keep out of the way of another vessel.

Rule 18

Responsibilities between vessels

Except where Rules 9,10 and 13 otherwise require:

- a) A power-driven vessel underway shall keep out of the way of:
 - i) a vessel not under command;
 - ii) a vessel restricted in her ability to manoeuvre;
 - iii) a vessel engaged in fishing;
 - iv) a sailing vessel.
- b) A sailing vessel underway shall keep out of the way of:
 - i) a vessel not under command;
 - ii) a vessel restricted in her ability to manoeuvre;
 - iii) a vessel engaged in fishing.

- c) A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:
 - i) a vessel not under command;
 - ii) a vessel restricted in her ability to manoeuvre.

- d) (i) Any vessel other than a vessel not under command or a vessel restricted in her ability to manoeuvre shall, if the circumstances of the case admit, avoid impeding the safe passage of a vessel constrained by her draught, exhibiting the signals in Rule 28.
- ii) A vessel constrained by her draught shall navigate with particular caution having full regard to her special condition.

- e) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with the Rules of this Part.

- f) (i) A WIG craft shall, when taking off, landing and in flight near the surface, keep well clear of all other vessels and avoid impeding their navigation;
- ii) A WIG craft operating on the water surface shall comply with the Rules of this Part as a power-driven vessel.

Rule 27

Vessels not under command or restricted in their ability to manoeuvre

- a) A vessel not under command shall exhibit:
 - i) two all-round red lights in a vertical line where they can best be seen;
 - ii) two balls or similar shapes in a vertical line where they can best be seen;
 - iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a stern light.

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Loss prevention

Britannia produces bridge operations video



A 22 minute film has been created by Britannia by using a full mission, bridge simulator at Warsash Maritime Academy, Southampton, UK and further films are in production.

The film is based on a number of incidents that have been investigated as part of the Club's extended root cause analysis into fixed and floating object claims.

The film illustrates the everyday behaviour of a bridge team and their interaction with third parties during a routine operation that ends in disaster.

Members are invited to integrate this video and workshop into their own training programmes. The film is suitable for crew and shore based staff as it raises awareness that everyone has a role to play in creating a safety culture within their organisation.

Members will be able to watch the film on the Britannia website and can download an

overview for facilitators, including main learning points for each of the three modules and also the film script.

www.goo.gl/NFTO10

If Members would like to receive a copy of the film, please email:

info@britanniapandi.com

Miscellaneous

Social media: do not post images of incidents

A recent fire on board a Member's ship has highlighted the issue of photographs being taken by crew members and being posted on social media sites straight after the incident.

In this case, the photographs posted by a crew member were found and used by a shipping media website, which attached the images to an article giving details of the ship and the incident.

Photographs making their way into the public domain can cause difficulties for Members and the Club in the following ways:

- Cargo interests or charterers can become aware of an incident which can lead to increased requests for lawyers or experts to get access to the ship when it arrives at the next port of call.

- The images have the potential to prejudice a Member's position in respect of claims arising from an incident.

It is recommended that the master requests the crew not to take photographs during or after an incident but if they do, to try to ensure that the photographs are not uploaded to social media platforms where they could potentially be used by third parties.

