Standard Safety

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The Standard
for service and security

The Standard

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Welcome to a new edition of Standard Safety.

We have a wide variety of articles in this publication giving comment and advice on different issues encountered by our members.

In this edition

We start off with an article on MARPOL annex 1 and the severe fines levied for non-compliance with the regulations and procedures. We include guidance for crew to achieve 'zero tolerance' to pollution incidents and a checklist that can be used as a basis for environmental pollution prevention audits.

The second article is the first in a new series on breaking the error chain. Very frequently we see the following root causes when investigating incidents: competence, experience and compliance. Together, these three elements represent critical links where safety is concerned. Take one away and risks increase, leading to an unsafe environment and the potential for incidents.

The crew should be **competent** already. After all, they have to meet industry training requirements and will have been found duly competent by an appropriate authority. Many companies also go well beyond the minimum training requirements to ensure that their crew are given the best technology and an understanding of human behaviour.

Experience is undoubtedly an important factor as many of the decisions we make are based on our past experiences and knowledge gained. However, there is a fine line between experience and complacency, with the latter quite often being the cause of an accident or near-miss.

The third element is **compliance** with procedures. For many years, companies have had documented procedures (SMS). However, the incidents that occur demonstrate that these written procedures are not always complied with.

The fact is that the number of large claims which result from crew competence, experience or compliance (or lack thereof) continues to increase, meaning that:

- Port State Control detentions and deficiencies continue to increase;
- the financial impact on insurers and members continues to increase;
- the impact of these incidents on a company's reputation continues to become more serious and can also have an adverse effect on the commercial acceptability of a ship or owner;
- these incidents can lead to increased criminalisation of seafarers.

Our advice is:

- promote an active and open near-miss reporting culture – share your mistakes and learn from other peoples';
- be pro-active in regularly assessing the competence of crew, especially when they are new to the company or ship;
- pass knowledge and experience through all levels of an organisation;
- have a 'challenge and response' culture that is not just active on the bridge but throughout all operations;
- promote an active Safety Management System to ensure that procedures are fit for purpose – total compliance will never be achieved without safe yet straightforward procedures;
- ensure audits and inspections are effective, to guarantee compliance, for example, how effective can a navigational audit be if it is undertaken whilst the ship is tied up alongside?
- training and updating of knowledge is essential but is only beneficial if best practices learnt are taken outside the class room and implemented on board;
- promote greater human element awareness.

Throughout the 'breaking the error chain' series, we will look at various case studies and consider what could have been done to avoid the incident. Very often it takes only a small intervention to stop a chain of events leading to a major disaster.

The third article in this edition concentrates on a small piece of equipment, tucked away in the corner of the cargo hold and often forgotten about, but which can cause very expensive cargo damage, the cargo hold bilge system.

Lastly, we have an overview of the new regulations that have come into force recently regarding lifeboat release and retrieval systems and fall preventer devices.

We hope you will enjoy reading this Standard Safety.

MARPOL Annex 1 – Get it right the first time, every time

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Preventing accidents resulting in pollution is important, but pollution caused by operational failure is a bigger risk.

Fines as a result of MARPOL Annex 1 violations are increasing.

A 'zero pollution' culture needs to be instilled from the top down.

Introduction

Recently, the club has seen an increase in the number of incidents and fines relating to violations of the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex 1. The club does cover certain fines which could, for example, be from breaches of immigration laws, contravention of customs regulations, incorrect cargo documentation and accidental pollution. However, accidental pollution does not include deliberate acts or negligent operational discharges. Shipowners and operators should be aware that environmental offences have a high profile and many authorities punish MARPOL violations with harsh penalties.

It must be clearly understood that the club will not normally support members in the case of deliberate or negligent MARPOL violations.

In this article we highlight the problems facing shipowners and seafarers regarding the MARPOL Annex 1 requirements and how zero violations can be achieved. There is a persistent increase in the number of fines and prosecutions under MARPOL. This is particularly significant in the USA, where the Act to Prevent Pollution from Ships (APPS) applies in parallel with the U.S. Clean Water Act (CWA).The CWA states that it is unlawful for any person to discharge any pollutant into navigable waters unless a permit is obtained under its provisions.

Not only have the number of fines increased for MARPOL violations but also the level of fines and, in some cases, perpetrators have been imprisoned. These not only include officers and crew directly responsible for the misdemeanour but also senior managers of the company. A major ship operator was recently fined over $10m for deliberate violations of APPS and obstruction of justice. In another case, an operator and two engineers were convicted for conspiring not to maintain an oil record book (ORB) correctly and for falsification of records. Serious MARPOL convictions affect an organisation's reputation, resulting in it being 'blacklisted' and preventing it from pursuing commercial contracts.

Deliberately breaking the law should rightly be punished, but there can also be considerable consequential losses suffered by shipowners and crews who are *falsely* accused of illegal discharges. For example, lax record keeping can be construed as being fraudulent and can result in lengthy ship and crew detentions, mental trauma to the crew, damage to company reputation, off-hire claims and additional crew and legal costs. It is therefore vital that shipowners, operators and seafarers take steps to prevent such violations occurring in the first place. This means ensuring all crews and ships have the best equipment, training and procedures for handling and managing all environmentally impacting operations, expressly the treatment of oil and oily water waste on board.

MARPOL infringements can result in both company and seafarers being liable to criminal prosecution and imprisonment for deliberate violations or falsification of records in addition to large fines.

Achieving zero violations

To assist members to meet the operational requirements and to achieve the objective of 'no harm to the environment', we have set out the following guidelines:

Company culture

Nothing will reduce accidental and operational pollution unless the company CEO and senior management believe in 'zero pollution' and instil a culture of achieving this throughout the company. This should include providing effective resources and procedures, training and equipment. An effective, consistent and transparent approach to pollution prevention will stop the company and its staff being hit by fines and prosecutions.

Using the ISM Code

One of the core tenets of the ISM Code is pollution prevention and using the ISM Code correctly is key to ensuring that accidental, deliberate and negligent pollution incidents do not occur.

The Standard Club carries out ship risk reviews on a range of member vessels and it is apparent that a small number of ships do not deal with pollution prevention thoroughly. This is evident because of poor housekeeping; such as engine room bilges containing significant amounts of oil and oily water from leaking machinery, inappropriate pumps being used for oil discharge and oily waste transfer, oily water separators incorrectly used or calibrated, hydraulic leaks and pipework in poor condition, dirty oil tank vents, savealls containing oily residue or water ballast tanks showing evidence of oil residues, together with poor record keeping. The list is extensive and highlights that some companies do not have the culture and practices in place to ensure a 'zero pollution' goal.

Good tanker operators have made great strides towards a 'zero tolerance' to pollution incidents. This has been pushed not only by legislation but also by commercial desire to avoid fines and preserve company reputation. It is not the purpose of this article to produce guidance for tanker operators in cargo carriage operations, but the following guidance is applicable to all ships.

- Ensure that the Safety Management System is effective by conducting meaningful internal audits on environmental compliance and act upon the findings. Produce effective written audit reports and conduct transparent post-audit meetings.
- Auditors and superintendents should interview and talk to crew members, promoting the philosophy of 'zero pollution' wherever possible. Use shipboard management meetings to address environmental compliance issues.
- Actively promote a culture to minimise waste and leakage through good housekeeping and maintenance. The environmental management standard ISO 14001 may not be applicable for all companies, but it does provide a template for good environmental practices.
- Actively promote an open culture of reporting pollution incidents and near misses through the incident reporting systems. An open culture recording how a company is actively reducing pollution through learning and training can mitigate the consequences of accidental infringements. Falsifying records, particularly the ORB, is considered an offence by authorities. Proper and accurate record keeping is vital.
- Set attainable pollution prevention goals and KPIs. Analyse waste streams to determine content, volume, means and capacity for storage, and estimate realistically the cost of treatment and disposal.
- Encourage masters to view pollution prevention as imperative and support their comments in ISM management reviews and shipboard management meetings.
- Audit and review the bunkering, oil transfer, incinerator and oil waste disposal procedures. Use risk assessments for all oil transfers.
- Consider using the master to carry out pollution prevention audits. He may have the experience and objectivity to see where the risks lie.

- Ensure the superintendent formally checks the oil filtering equipment, oil transfer and waste oil discharge arrangements and procedures.
- Promptly repair defective machinery or pipework likely to cause pollution.
- Fit numbered environmental tags on flanges, seals on overboard valves and cross-connections to prevent accidental use.
- Install surveillance cameras, use tamper-resistant systems to record alarms, printouts and to verify equipment operation. Fix locked boxes or cages over monitoring equipment.
- Produce formal guidance and training on how to fill in the ORB correctly.
- Many owners and crews have been prosecuted by the authorities after taking over a new ship. There have been cases where owners found that the oil discharge systems fitted were not compliant with MARPOL, including where previous owners or crew had fitted 'magic' pipes or other oil discharge bypass arrangements. When taking over a new ship, a thorough investigation of the oil discharge arrangements, including pipeline traces, should be conducted by a competent person. It is also prudent to have Class attest that the system is compliant with MARPOL and confirm that the OWS overboard discharge pipes are clean. Consider having specific procedures and guidance available for pollution prevention procedures when taking over a new ship.
- Ensure ship familiarisation takes accidental pollution into account when inducting new crew.
- Review company procedures for abnormal oil disposal. If, for example, a ship is trading in an area where there are no shore oil disposal facilities, does the ship have sufficient holding tank capacity? If a situation arises where a holding tank is not listed on the IOPP certificate, there should be procedures in place for advising Class and/or Flag and getting their approval.
- Produce procedures and guidance for ships trading to and within sensitive areas and/or before arriving in ports where authorities are strict on MARPOL violations. These checks can often prevent minor violations becoming major incidents.

The cost from an error in a bunkering operation can be significant.
Source: ITOPF

Gravest infringements

The following examples have incurred maximum fines:

- **Oil filtering equipment** – the oily water separator (OWS) malfunctioning, including inoperative 15 ppm alarm and auto stop device, illegal bypass and the fitting of 'magic' pipes.
- **Oil record book** – inconsistent or false entries.
- **SOPEP** not properly maintained or approved by the flag state.
- **Retention of oil on board** – the quantity of oily water mixture retained on board does not tally with oil record book entries and/or IOPP record of construction and equipment. The quantity of oily water waste or sludge landed ashore or incinerated does not reconcile with the expected quantity to be produced from the machinery spaces.
- **Discharge violations** – the inside of OWS discharge pipes should be clean. Indications of an unauthorised discharge pipe or flexible pipe fitted, use of portable pumps and illegal openings on the holding tanks.

To ensure compliance with MARPOL Annex 1 requirements for all ships, refer to the revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships – Resolution MEPC.107(49) adopted on 18 July 2003.

A list of equipment approved by IMO is included in the pollution prevention equipment module in the Global Integrated Shipping Information System (GISIS), available at ***http://gisis.imo.org***.

Members should review their environmental ISM procedures to ensure that the crew have proper guidance on all operations likely to pose an environmental risk. The club would also encourage a pollution prevention audit, either separate from or in conjunction with the internal ISM audits. The environmental audit should be an effective tool to improve the company environmental management system.

Summary

The issue of pollution prevention is not always given the same priority as safety or ship operations and although companies will have procedures for the key pollution prevention activities, such as bunkering and sewage disposal, these are rarely audited to the same extent. A pollution prevention culture that follows the guidelines above will help shipowners and ship managers to avoid fines and preserve company reputation.

Environmental Pollution Prevention Audit Check List

ISM Code

- Have scheduled pollution prevention audits and inspections been carried out and findings acted upon?
- Have the Master's Review comments been appropriately addressed by the company?
- Can management of change issues effect pollution risks? For example, new crew changes, bunkering, oil transfer or waste oil disposal problems.
- Have pollution near-misses been reported and acted upon?
- Have oil and oil waste transfer procedures been checked? For example, bunkering, fuel oil transfer, waste oil incineration, waste oily water disposal, sewage disposal, if applicable?
- Have risk assessments been used for oil transfers?
- Is maintenance being properly conducted on equipment likely to cause pollution?
- Is the oil transfer record keeping, including ORB entries, up to date and correct?
- Is the on-board environmental management towards CFC/ Halons, NOX/SOX emissions, high sulphur fuel usage carried out correctly?
- Is the SOPEP equipment appropriate and functional; are SOPEP drills carried out?
- Have company/ship pollution prevention goals been achieved?

Equipment

- Is the oil filtering equipment properly maintained, in good working order and free of leaks?
- Are the alarms, gauges and stopping devices installed correctly, in good condition and regularly tested?
- If a stopping device/alarm is not installed or is non-operational has this been reported, recorded and all bilges prevented from being pumped overboard?
- Has the OWS filtering system and pipework been modified without class approval?
- Can a zero reference reading be confirmed when the equipment is flushed with clean water?
- Are there visible traces of oil in an effluent sample taken from the discharge side of the OWS?
- Is the OWS maintenance manual in the relevant language?
- Have warning signs been posted at the oil filtering equipment discharge valve to prevent accidental opening?
- Are records of inspections, tests and maintenance available and up to date with suitable spares on-board?
- Does the equipment 'type approval' certificate match that noted on the IOPP certificate?
- Can officers operate oil filtering equipment correctly, including a demonstration of the 15ppm bilge alarm?
- Are there any operational restrictions relating to oil filtering equipment installed and are these rigorously observed?
- Are operations with oil residues correctly recorded in the ORB?
- Are oil residues and oily water retained on-board consistent with quantities expected to be produced during voyage and consistent with ORB entries?
- Check sludge tanks do not have any direct connections overboard, other than MARPOL standard discharge connections and piping does not have fittings and connections allowing unauthorised discharge.
- Confirm that sludge tanks equipped with drain valves are operational, are of self-closing type and do not connect directly to the bilge pumping system.
- Ensure that where drains are fitted to bilges, the tank oil/ settled water interface can be visually monitored.
- Confirm incinerator, auxiliary boiler or other approved disposal methods are correctly recorded in the ORB and consistent with the equipment capacity.
- Confirm correct, dedicated holding tanks are used for oily water and oil residues retention on-board.
- Check the incinerator or auxiliary boiler installed on board is type approved for burning oil residues.
- Check whether the option to burn sludge in the ship's incinerator or auxiliary boiler is confirmed in the IOPP certificate supplement and the correct capacity is entered.

Breaking the error chain, part 1

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Collisions entering or leaving a traffic separation scheme.

The human element as part of the error chain.

Introduction

Throughout many issues of Standard Safety we have discussed claims that have been caused by errors and mistakes. We have said that, had someone acted differently during the events that led up to the incident, the incident would have been avoided.

Breaking the error chain is when someone intervenes to stop a chain of events that, if allowed to continue, would ultimately result in an incident. Mistakes do occur from human error, but ships that have a sound and robust safety management system have procedures in place that, if properly followed, will prevent this mistake from escalating into a collision, injury or pollution.

Throughout a series of three bulletins we will look at human error and what could have been done to break the error chain. In this first instalment, we consider three collisions, which occurred while entering or leaving a traffic separation scheme (TSS).

Case study 1

In this first example, our member's VLCC had been anchored in the designated anchorage southeast of the eastbound traffic lane, while they awaited berthing instructions. They had arrived in the early evening after a short voyage. The master had joined the ship at the previous port and everybody was keen to enter port and load cargo.

The award winning book '***The Human Element:*** a guide to human behaviour in the shipping industry' was published in 2010. In 2013 a DVD was created, using concepts from the book to create realistic scenarios. Further information, including how to order, is on The Standard Club's ***website***.

Instructions to proceed to the pilot station were received at around midnight. Anchors were heaved in and the ship navigated towards the traffic separation scheme (TSS) and pilot station. The ship entered the TSS at a shallow angle and increased to full manoeuvring speed. The bridge was manned by the master, chief officer, second officer and a lookout.

At the same time, a liftboat was westbound. It had asked port control for permission to leave the TSS early and permission was granted. This involved a sharp 90-degree turn to port and crossing the eastbound lane. It also involved crossing ahead of our ship's bow.

The liftboat altered course, whilst our ship continued on its course and speed and drove into the liftboat as it crossed our lane. Our bridge team failed to identify the approaching hazard.

The action by the liftboat was the primary cause, but a number of errors made by our bridge team had contributed to the collision.

Errors made:
- entering the TSS and immediately increasing speed to full manoeuvring;
- failure to keep a proper visual lookout;
- failure to identify an approaching target's navigation lights;
- failure to plot an approaching target on the radar;
- failure to keep a proper VHF watch

Questions should be asked about the conduct of our bridge team. If any of those present had completed a diligent navigation watch, then the approaching hazard would have been identified and avoiding action taken.

Breaking the chain
The error chain would have been broken if the watch officer had plotted the approaching target on the ship's ARPA radar and set the CPA alarm.

Case study 2
In the second incident, which occurred in almost identical circumstances, two container ships collided during a rain squall.

Our ship was westbound and entering the TSS, while the other ship was eastbound and leaving the TSS. The master on the eastbound ship decided to leave the TSS early and made a 90-degree alteration of course to port, so their ship would cross ahead of our ship. We failed to notice the manoeuvre and the other ship struck our portside at 90 degrees.

The principal cause of the collision was the action taken by the other ship, whose watch officer enacted a dangerous manoeuvre without due attention to approaching traffic. However, at any time before the collision, our watch officer could have prevented the incident.

Errors made:
- failure to keep a proper radar watch;
- failure to plot the track of an approaching target;
- failure to call the master during a period of reduced visibility;
- failure to reduce speed during a heavy rain squall;
- failure to take emergency action in good time.

Breaking the chain
The error chain would have been broken if the lookout had alerted the watch officer to the ship approaching on the port side.

Case study 3

In the final incident, our ship left port around midnight in almost perfect weather conditions. We were westbound and had to join the traffic lane between two westbound ships. This is not a difficult manoeuvre for an experienced master, but our master did not execute it correctly and almost collided with a ship in the westbound lane, then overshot the westbound lane and collided with a ship in the eastbound lane.

Errors made:
- entering the TSS at 90 degrees, rather than at a shallow angle;
- failure to use the AIS and to communicate their intention to the westbound ship;
- failure to evaluate the course and speed of the approaching ships;
- failure to work as a bridge team.

Breaking the chain
The mistakes were made by the ship's master; however, the incident could have been prevented if the watch officer had been assertive and suggested a reduction in speed while the situation was evaluated.

Summary

In all three incidents, had a proper visual lookout and radar watch been maintained, by any member of the bridge team, avoiding action could have been taken and a collision avoided.

This concludes our first review of how human error can lead to a chain of errors and how the chain can be interrupted to avoid an incident. In the next bulletin we will discuss two crew injuries and a fatal injury to a stevedore. In the third and last bulletin we will discuss a cargo overflow and a total loss.

Cargo wet damage – back-flow through the bilge system

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The club frequently handles cargo claims that can be attributed to back-flow through the cargo hold bilge system.

Case study

A recent claim involved a cargo of Potash loaded in bulk. On arrival at the discharge port, a significant amount of cargo was found to be wet.

The investigation concluded:

- although there was double valve segregation between the bilge and ballast pump line, one butterfly valve had a damaged seal and was leaking, while the other valve was not closed properly. It was blocked with residues of the previous cargo;
- the ship's officers were not familiar with the cargo hold bilge system or where the bilge and ballast systems were common;
- there were no cargo hold bilge high-level alarms;
- soundings had not been taken throughout the voyage.

The cost of the claim for the damaged cargo was €300,000.

Outputs/learning points

It is essential that ships' officers are fully aware of how the bilge system functions. Of particular importance is the knowledge of the valves, especially isolating valves and cross-over connections between the bilge and ballast system.

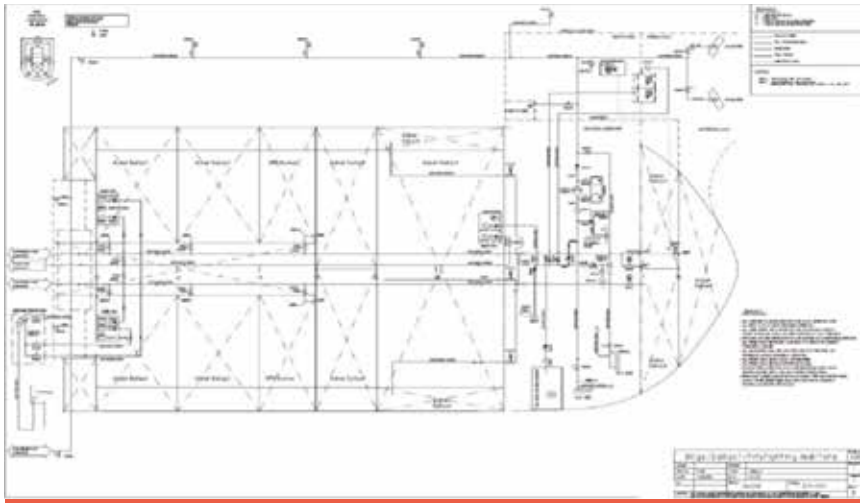
Water ingress via a faulty bilge valve will cause cargo damage

One of the most important tasks in hold preparation is to ensure that bilge wells, lines and valves are clean and in operational condition. Bilge lines must be tested by an experienced crew member to ensure that non-return valves are functioning correctly and not allowing back-flow into the cargo hold. If fitted, the bilge high-level alarm must be tested and confirmed as operational.

For ships loading water-sensitive cargoes, the following loss prevention checks are recommended:

- regular inspection of the bilge line, by pressure testing and checking for back-flow into the cargo holds;
- check the effectiveness of bilge non-return valves to ensure they are operating correctly and free of cargo residues/debris;
- ensure cargo hold bilge wells are clean, dry and free of any previous cargo residues;
- ensure bilge suctions have an efficient strainer;
- when the cargo hold bilge system is not in use, ensure all valves are effectively shut to prevent water ingress into holds. Valves should be closed, with measures in place to ensure that they stay closed (visible signs).
- test before each loading that bilge high-level alarms are fully operational. It is recommended that cargo hold bilge high-level alarms are fitted even if this is not mandatory;
- regular bilge sounding is good seamanship practice. Hold bilges should be sounded daily at sea, weather permitting;
- when water is found in the cargo holds, a systematic investigation must be carried out immediately to identify where it is coming from. Support and advice should be provided by shore management.

Masters are reminded of the importance of properly loading, stowing and caring for cargo, so that the cargo is delivered to the consignee free from damage.



Get to know your bilge system

Release and retrieval systems: a recap

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A number of accidents have reduced confidence in release and retrieval systems.

New requirements were published by the IMO on 1 January 2013.

Fall prevention devices vital to safety during interim period.

A traumatic introduction

Lifeboat on-load release and retrieval systems (RRS) were introduced by SOLAS in the wake of the *Alexander Kielland* disaster, which cost the lives of 123 people. In 1980 the *Alexander Kielland*, a Norwegian offshore platform, suffered a series of catastrophic structural failures that caused it to list and eventually capsize. Whilst the platform was equipped with lifeboats, the lifeboat falls were not sufficiently long enough to reach the water. With no way of releasing the lifeboats 'on load', they were nullified as a viable means of escape. The result was that, of the 212 persons manning the platform, only 89 survived, many of whom resorted to life rafts or swimming to safety.

In order to prevent a similar tragedy from occurring, in 1986, the IMO made it mandatory for all new vessels to be fitted with on-load RRS. However, since their introduction, there has been a steady stream of accidents which have caused death and serious injury to a number of mariners.

New requirements

The IMO responded to these incidents by conducting research into the causes of RRS accidents. Its findings prompted it to issue new requirements for existing and future on-load RRS, designed to reduce the incidence of failure and to rebuild seafarer confidence. The new requirements took the form of amendments to SOLAS III/1.5 and the LSA Code. All existing and new on-load RRS were to be evaluated to determine whether they complied with these new requirements. The procedure for evaluating and replacing on-load RRS was detailed in MSC.1/Circ.1392, entitled 'Guidelines for evaluation and replacement of lifeboat release and retrieval systems'.

The key dates for shipowners are:

1. 1 January 2013
   Date upon which the amendments to SOLAS III/1.5 and the LSA Code concerning RRS entered into force.

2. 1 July 2013
   Date by which all RRS were to have been tested and evaluated in accordance with guidelines stated in MSC.1/Circ.1392.

3. 1 July 2014
   Existing systems which have been deemed compliant with the new requirements should be subject to a (one-time) overhaul examination by the manufacturer or by one of its representatives no later than the first scheduled dry docking after 1 July 2014.

   Systems which have been deemed non-compliant with the new requirements shall be replaced/modified no later than the first scheduled dry docking after 1 July 2014, but not later than 1 July 2019.

Full details of the procedure for the replacement of non-compliant lifeboat release systems and overhaul examinations can be found in MSC.1/Circ.1392.

Fall preventer devices

MSC.1/Circ.1392 urged the use of fall preventer devices (FPD) during the interim period prior to the replacement or modification of an existing RRS. FPD are intended to mitigate the risks posed to seafarers by RRS which have not been found compliant but may not be replaced/modified until 2019 (at the latest).

FPD are designed to prevent the lifeboat from falling in the event that the RRS hooks are inadvertently released or fail. FPD come in two main forms, strops/slings designed to provide an alternative load path and locking pins which prevent the physical movement of the RRS mechanism.

Fall preventer device tips

Strops/Slings

- do not use wire or chains;
- strops should be made from synthetic fibre;
- strop strength should be six times the total weight of lifeboat when loaded with its full complement of persons and equipment;
- strops should be properly certified for tensile strength;
- FPD should be inspected every six months;
- FPD must be permanently marked with the date of entry into service;
- do not use strops with spliced eyes;
- do not attach the FPD directly to the hooks;
- FPD should be tight with no slack for best effect.

Locking pins

- there should be clear operational instructions near point of insertion;
- pins to be colour coded;
- pin should be designed to avoid inadvertent insertion in wrong place;
- locking pin and release handle to be prominently marked with warning;
- pin removal should be achievable quickly/easily;
- pin removal should not expose operating crew to further danger;
- pins should not be used for any other purpose.

Launching

Crew members should be thoroughly trained in the use of FPD and how they fit into the scheme of the lifeboat drill. The FPD should be included in the pre-launch checks. During the drill, the FPD should remain attached until the lifeboat is a safe distance above the water line (less than 1 metre) or has reached the water. At this point, the FPD should be removed before the on-load release and retrieval system is operated.

Whilst FPD were originally intended to improve the safety of lifeboat drills, their use in an actual emergency abandonment situation is a matter of debate within the maritime industry. A ship's master must weigh the advantages (greater safety for crew) against the disadvantages (increased launch times) and decide which scenario is best suited for their vessel and the operating conditions they may experience in the future.

Recovery

Prior to recovery, the RRS should be reset and the boat manoeuvred, in the usual manner, to a position below the falls. FPD should be rigged after the hooks have been reattached to the falls but before the lifeboat is hoisted to the embarkation deck. All other checks on the RRS should be conducted in accordance with normal procedure, such as a check on the emergency release, once the vessel has been hoisted just clear of the waterline.

Conclusion

Members should take steps to ensure that they comply with the 1 July 2014 deadlines for both compliant and non-compliant RRS. Crew on board vessels fitted with non-compliant RRS should be properly trained in the use of FPD as a means of maximising safety until such time as the RRS are fully compliant.

Web alerts
The Standard Club issues a variety of publications and web alerts on topical issues and club updates. Keep up to date by visiting the News section on our website **www.standard-club.com**

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