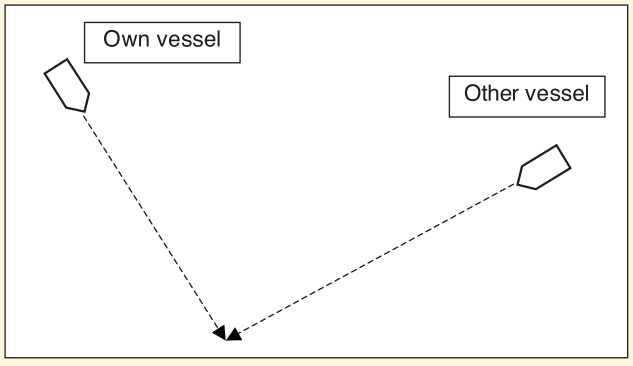
The Nautical Institute
Marine Accident Reporting Scheme
MARS Report No 197 March 2009

MARS 200912
Colregs violation

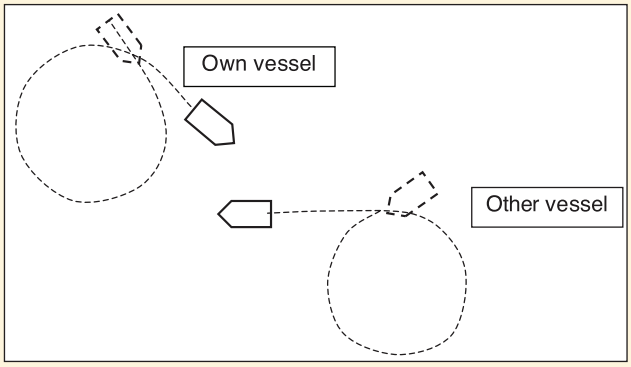
Our vessel, a VLGC in loaded condition, was on a course of 146° (T) at 18 knots in clear weather. We observed a container feeder vessel about five points on port bow at a range of nine nautical miles on a course of 255° (T), speed 12.5 kts, with a CPA of 0.0 nm. At a range of six nautical miles, we established radio contact with the said vessel and requested her to alter course to starboard and pass astern of us. The container vessel did not comply, seeming to convey that it was our obligation to alter course to port. Even after careful explanation and quoting the appropriate Colregs rule, the OOW on the container vessel, seemed to be taking no action. At this time, the vessel was three nautical miles away.

Own vessel began altering course to starboard with the intention of turning 360° and passing around the stern of the container vessel. While our vessel was engaged in this manoeuvre, and still turning to starboard, we noticed that the container ship had suddenly and inexplicably started altering her course to port. We re-established VHF contact with the vessel but could not understand the muttered response. Soon, both vessels began to converge once again, negating own ship's avoiding action. However, due to our reduced speed, now 11 kts, we now had the container vessel four points on our starboard bow at a range of 2.2 nm, on a course of 270° (T) and we managed to pass around her stern with a CPA of 0.5 nautical miles. She was clear, resumed our course, now about 1 nm off our original track.

The full incident lasted about 30 minutes. The OOW on the other ship could not communicate properly in English but it was clear to us that he genuinely did not know the Colregs and was not even aware that he was the give-way vessel. The sudden alteration of course to port by the vessel apparently re-created a new collision situation, but because of the relative changes in positions and speeds, the other vessel was able to cross ahead by a safe margin.



▲ Figure 1: Developing collision situation, other vessel clearly being the give-way vessel



▲ Figure 2: Situation after other vessel's inappropriate alteration to port, safely resolved by own vessel letting other vessel cross ahead.

MARS 200913
Port state control detention

One of our vessels was detained by port state inspectors at a northern european port. As a result of the time required for rectifying the deficiencies and subsequent re-audit of the safety management system (SMS), not only were four commercial days lost, but the vessel also missed the cancelling date for her next cargo fixture.

The major deficiencies recorded were:

1. House-keeping standards inadequate;

2. Defective plumbing in showers and toilets;

3. Galley and provision spaces dirty;

4. Several oil leaks from steering machinery;

5. Machinery space and emergency fire pumproom floor plates covered with oil and bilges containing large quantity of oily water;

6. Bilge, ballast, fire and GS pump glands leaking;

7. Emergency drills conducted in the presence of PSC did not demonstrate sufficient crew preparedness and awareness;

8. Lifeboat bowsing tackle fitted with a shackle instead of an open hook;

9. Tricing-in pendant was too long for the davit;

10. Life boat engine started with difficulty and tended to overheat;

11. Pneumatic lifeboat hoisting motor unable to recover the boat;

12. Some fire detectors in machinery spaces and accommodation were missing and some others were not working;

13. Breathing apparatus mask not maintained properly.

Even though adequate spares for the lifeboat engine and the air motor were available on board, the ship's staff was unaware of its inventory and location.

Editor's note: Assuming that the company's SMS meets the minimum requirements of the ISM Code, and is working reasonably well on the remainder of the fleet, it would be advisable for the company to determine and rectify the root causes for such poorly motivated crew on board this particular vessel. The listed deficiencies can also serve as a useful checklist for ships crews preparing for inspections and surveys.

MARS 200914
Unsafe gas cutting

▲Figure 3: Drydock employee wearing inadequate personal protective equipment (PPE) – right hand glove and helmet missing, eye protection does not appear to be of approved type.

Another unsafe situation: gas hoses lying directly under falling sparks.

MARS 200915
Unsafe door fitting

▲ Figure 4: Doorknob fitted too close to doorway frame, risking crush injuries to fingers. Lever-activated door latches will keep fingers away from the door edge.

MARS 200916
Flooding due to valve failure

Official report: Source: IMO FSI Committee Report 11th Session

A bulk carrier was on a ballast passage and conducting ballast exchange operations when a large gate valve in the engine room on the ballast/bilge system failed, causing severe flooding. Further flooding occurred when the crew attempted to de-ballast and trim the ship, until eventually the flooding in the engine room was more than eight metres deep. Having lost all propulsion and electrical power, the vessel had to be taken in tow as a salvage operation.

Root cause/contributory factors

1. The valve failed due to a high pressure surge, possibly caused by other hydraulically operated valves in the ballast system closing too fast, as their actuators were out of adjustment;

2. On this ship, it was regular practice to press up tanks above full capacity, imposing very high loads on tank boundaries and associated valves and piping;

3. Further flooding during attempts to control the situation was caused by insufficient knowledge of the ballast system on the part of the crew;

4. No ballasting procedures had been developed for the ship;

5. Poor communications between bridge and engine room personnel during the crisis.

Lessons learned

1. The ship's staff must have a thorough knowledge of the vessel's tanks and piping systems. Drawings of these systems must be correct and readily available on board.

2. The principles of bridge resource management (BRM), such as consultation and cross-checking, are equally applicable to engine room operations, particularly during an emergency.

3. The ship must have established procedures (as required by the ISM Code) for safely conducting routine operations such as exchanging ballast. These must be known and followed.

MARS 200917
Flooding and listing due to water ingress

Official report Source: IMO FSI Committee Report 11th Session

A fully-laden bulk carrier lost steerage in heavy seas due to flooding of the steering gear compartment by sea water. The ship drifted for more than seven hours while attempts were made to control the flooding and restore steering. While not making way, the vessel rolled heavily in starboard beam-on seas and green water was taken over the main deck and hatch covers. As a result of the seas and rolling, the fuel oil service tanks took in sea water and the vessel assumed a port list due to shifting cargo.

Root cause/contributory factors

1. The tightening devices for the hatch cover to the aft rope locker had not been properly maintained and sea water flooded the aft rope locker.

2. The bulkhead separating the rope locker from the steering gear compartment was not watertight and progressive flooding of the steering gear flat occurred.

3. Steering was lost when the steering gear motors became submerged in sea water.

4. The fuel oil service tanks took in sea water due to poorly maintained tank vents.

Lessons learned

1. The condition of the aft rope locker hatch securing devices and fuel oil tank breathers should have been checked during a recently conducted load line survey.

2. The installation of bilge water alarms may have given an early warning that water was accumulating in the steering gear compartment.

3. Shipboard personnel should not rely solely upon these surveys to ensure adequate watertight and weathertight integrity of the vessel.

MARS 200918
Power cable damaged

A vessel at a repair berth was on shore power. The heavy electrical cable was led parallel to the shore gangway that was hooked on to the ship's side bulwark on the main deck. During the night, due to the ship's small surges alongside and tidal movements, the power cable slid into a small gap between the ladder and the ship's gunwale. At a certain stage of the rising tide, the cable got severely pinched under the now steep ladder with sufficient force to cause the breakdown of the internal insulation, causing a fiery short-circuit. Fortunately, the breakers on the shore distribution box tripped automatically and there was no fire or injury.

▲ Figure 5: View of the damaged power cable soon after the incident.

Lessons learned

1. Power cables must be carefully routed, away from accesses and other obstructions, and secured against movement.

2. The gangway watch of a ship under repair must include continuous monitoring of power cables, besides moorings and shore fire mains, as applicable.

MARS 200919
Scalded by hot fuel oil

A ship's engineer received first-degree burns to his face when hot fuel oil escaped from the fuel oil purifier as he slackened back the filter casing in order to clean the cartridge. Fortunately, the vessel was near the coast and medical evacuation was effected promptly, and he was repatriated home after a brief hosptalisation.

There had been indication on the previous day that the filter element needed cleaning. With the assistance of other crew, the engineer proceeded to remove the motor to gain access to the filter casing and the cartridge. As he slackened the filter casing nut, hot fuel oil sprayed from the casing directly on to his face.

What went wrong

1. Before opening the casing, the pressure gauges seemed to indicate that the internal pressure had been relieved. However, it is considered that the pressure gauges were not capable of indicating that all residual pressure had been released and the casing was fully drained.

2. It is quite likely that the officer was experiencing some element of fatigue and was under some time pressure to complete the task before the end of the working day.

3. Insufficient thought had been given to the use of personal protective equipment such as a face mask to protect against any release of hot fluid or vapour on opening the filter casing.

4. The investigation also revealed that the usual cleaning equipment was not operational, and that the supply of kerosene onboard was exhausted. These may have been contributing factors to the fact that the filter cartridge's last cleaning had not been fully effective.

What went right

1. Prompt first aid in consultation with medical advice minimised the effects of the scalding.

2. Quick notification of the accident and coordination with the shore resulted in a successful evacuation to shore based medical facility and subsequent repatriation.

Root cause/contributory factors

1. It is considered that lack of planning lay at the root of this incident – work commenced without proper assessment of the hazards or a clear procedure to establish that the purifier was properly drained and free from residual pressure.

2. Contributing to the above was a lack of compliance – work began without completing the pressure vessel section of the company's work permit checklist to verify that all steps had been taken to remove sources of pressure.

Lessons learned

1. Ensure all work, even that considered routine, is planned with care and the hazards identified. Clearly some complacency existed in this case.

2. Compliance with written procedures to consider the potential hazards and prevent injury to personnel is not a personal choice, but compulsory.

▲ Figure 6: Scald injuries on engineer's face.

3. Foster greater awareness of the hazards associated with the opening of any equipment likely to be under pressure with hot liquids or vapours.

4. In general, pressure gauges are not suitable for confirming the absence of residual pressure.

5. Good engineering practice includes the prevention of injury.

MARS 200920
Fake HRU Alert

Source: UKHMA – HAMMAR press release 16 December 2008

It has recently come to our attention that someone is producing fake copies of our hydrostatic release unit, the Hammar H20. To an untrained eye, the copy is almost identical to the original product, with Hammar's logo and address on the labels. The fake might look almost like the original product, but there is one very important difference: the copy does not work!

We have tested several of them and not a single one worked properly according to the Solas specification. The fake H20 will definitely not release a life raft or an Epirb.

We see this as a very serious situation. There may be a number of ships at sea currently sailing with fake hydrostatic release units. If any of these ships were to sink, there will definitely be no life rafts or Epirbs that will help to rescue the seafarers in danger.

How can you quickly check that you have the original Hammar H20?

1. Always purchase your products through approved distributors or authorised service points for liferafts and Epirbs.

2. Make sure that you receive the Hammar multilingual product manual and a raft label with each unit for liferaft H20 or Hammar marking instruction for Epirb H20 (Figure 7).

3. If you check on the underside of the Hammar H20 you should be able to find five fabrication marks on all units produced since April 2006. Units produced before that date have only two fabrication marks. (Figure 8)

4. The serial number and production date can always be verified by contacting CM Hammar at info@cmhammar.com

5. The fabrication mark on the upper side of the unit must always point directly towards the rope. (Figure 9)

Further queries can be addressed to: Jan Calvert, Sales and Marketing Director, email: jan.c@cmhammar.com Tel: +46 31 709 65 61, Cell +46 708 49 92 60

H20 unit with the multilingual product manual and raft label

▲ Figure 7

▲ Figure 8

▲ Figure 9

MARS: You can make a difference!

Can you save a life, prevent injury, or contribute to a more effective shipping community? Everyone makes mistakes or has near misses but by contributing reports about these events to MARS, you can help others learn from your experiences. Reports concerning navigation, cargo, engineering, ISM management, mooring, leadership, ship design, training or any other aspect of operations are always welcome.

MARS is strictly confidential and can help so many – please contribute.

Editor: Captain Shridhar Nivas MNI
Email: mars@nautinst.org or MARS, c/o The Nautical Institute,
202 Lambeth Road, London SE1 7LQ, UK

The Nautical Institute gratefully acknowledges sponsorship provided by:
North of England P&I Club, The Swedish Club, UK P&I Club, The Marine Society and Sea Cadets, Britannia P&I Club, Lloyd's Register-Fairplay, Safety at Sea, Sail Training International

www.nautinst.org/mars
Search the MARS database online