

Seaways

The International Journal of The Nautical Institute

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Focus

Professionalism and communication



It takes time, thought and effort to share ideas. We are grateful to all those maritime professionals who make this effort, and we encourage others to do likewise



Professionalism and communication are inextricably linked. An essential aspect of professionalism is to communicate to others, share ideas and knowledge, and of course to receive new ideas and knowledge. The Nautical Institute, as a professional body, has a remit to enable and foster communication between our members and the industry. We do this through traditional means such as through the pages of *Seaways*, books, Branch meetings and industry events. We also try to embrace the best of new technology and make use of our website, online forums such as LinkedIn, social media such as Facebook, Twitter and YouTube, and even video conferencing.

This issue of *Seaways* is a particularly fine example of how our members demonstrate their professionalism by sharing ideas in articles, and reports from conferences, Branch meetings and through MARS. It takes time, thought and effort to share ideas, and in this very busy world of ours we are grateful to all those maritime professionals who do take this effort and we encourage all others to do likewise.

On page 5 George Lee and Rick Janelle from the US Coast Guard share their experience of Mass Rescue Operations. They note that rescues are getting bigger and more complex, and given recent events, state, that 'What was unthinkable or unimaginable in 1980 is today's reality'. So how do you prepare for the 'reality' of rescuing thousands of passengers in adversity? You can start by discussing the scenario among fellow professionals. Capt Michael Lloyd FNI is a consummate professional: after many years at sea he dedicates himself to improving maritime safety by applying his experience and offering us ideas to discuss. In his article on Passenger Ship Safety on page 9, he applies common sense and an experienced mariner's logic to evacuation scenarios, and comes up with some alarming conclusions. Of course, being Michael, he proposes some possible solutions for fellow professionals to discuss.

This issue also contains some excellent reports

from Branch meetings and industry events where our members have been both speakers and delegates. The issues that are covered include polar operations, liquefaction of cargo, supporting offshore energy installations, ocean data gathering, CPD and pilotage. Our members cover a wide range of interests and sometimes it is not always necessary to fully understand a subject to appreciate it. One of my favourite lines was written by Capt Alan Loynd FNI, reporting from a Hong Kong Branch meeting on the absorption of energy by fenders. He reports that 'The speaker tied these [issues] together using Newton's Three Laws of Motion – the engineers in the audience responded enthusiastically while the rest of us nodded wisely.' (page 29). Thank you for that, Alan.

On the other side of the world, our Ireland Branch was discussing 'Competence and Professionalism,' (page 31) looking at the links between professionalism, integrity, and respect. They were reminded by another professional, Cadet Anna Louise Barron AMNI, that cadets are also part of the Bridge Team and should be included in discussions regarding the navigation of the vessel! Reminding us all of the power of mentoring, and the obligation we all have. In Capt Le Goubin's excellent book on mentoring he reminds us that mentoring can take as little as 10 minutes – take the challenge.

Communication of course is a two-way activity and we know how much our members and others in the industry enjoy and value the MARS reports. These reports were started 20 years ago to facilitate the sharing of important lessons from incidents or accidents in a safe and confidential environment. We know that these reports are widely distributed and used throughout the industry and we are pleased that they help improve safety. We are also grateful to the MARS sponsors and contributors – but we need all our readers to return the favour and contribute reports. Everyone has learned from an incident; please don't keep it to yourself. Be a true professional and communicate! 🗣️



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Mariners' Alerting and Reporting Scheme

MARS Report No. 261 July 2014

MARS 201436

Line thrower not ready for use

→ At a recent flag inspection in conjunction with a PSC inspection, we found that the line throwing apparatus was not armed for use.

The vessel was provided with an IKAROS line throwing apparatus. The units were found in the un-armed condition; that is, the black plastic cylinder was not fitted between the rocket and the trigger. This means that the line throwing apparatus would not activate if the trigger was pulled. The plastic cover to the line throwing apparatus has a small label which states 'For safety during transit rocket is not armed. Rocket should be prepared for use once on board ship in accordance with enclosed instructions.'

It is unknown why the rocket was not armed upon receipt on board the vessel.



Unarmed

Armed

MARS 201437

Disposal of aluminium phosphide residues

Edited from UK P&I Club Bulletin 957

→ There have been a number of accidents and injuries resulting from the release of highly toxic phosphine gas. In addition, a number of fires and explosions have been caused by the unsafe disposal of residues of aluminium phosphide following the fumigation of cargoes in transit. International guidance and recommendations on fumigation on board ships is contained in MSC Circulars 1264 and 1396 and the IMSBC Code.

While phosphine is a well established insecticide, it is also poisonous to humans at relatively low concentrations and can form flammable gas/air mixtures. Failures to follow correct application procedures include:

- Failure to unfold or uncoil belts, blankets, blister packs and ropes. This presents a fire hazard, and possibly an explosion hazard which worsens if moisture that condenses on the upper parts of the cargo space (sweating) drips onto the fumigant product. Under these circumstances a flammable phosphine:air mixture is more likely to form. If this mixture accumulates within an enclosed space such as a cargo hold or a drum fitted with a lid, it may ignite spontaneously and cause a fire.
- Too many pellets or sachets clustered together (see picture).



Disposal of fumigant residues

MSC Circular 1264 requires that 'all waste and residues are disposed of in an appropriate manner, either by incineration or by disposal on shore, as recommended by the manufacturer. Clear written instructions must be given to the Master of the ship, to the receiver of the cargo and to the authorities at the discharging port as to how any residues are to be disposed of.' Wherever possible, the collection and disposal of fumigation waste should be carried out by properly trained contractors. If residues are to be disposed of by the crew, then note:

- Dispose of waste in accordance with manufacturer's instructions, or instructions provided by the fumigation contractors at the load port.
- Fully reacted residue is safe for disposal at a suitably approved site.
- Waste containing un-reacted material is classed as a hazardous waste and will require special care, and deactivation before disposal.
- Unless crew members have expertise in determining whether the residue contains un-reacted material, it would be prudent to treat it as though it requires deactivation before disposal, and the manufacturer's instructions for this procedure should be carefully followed.

Avoiding accidents

- **Do not** pile residues onto an open deck exposed to damp or wet conditions. This may cause a fire and toxic gas hazard.
- **Do not** under any circumstances store residues in a closed drum or other sealed container. This may result in an explosion if a flammable phosphine:gas:air mixture ignites spontaneously, accompanied by the continuing escape of toxic phosphine gas.
- **Do not** store residues in an open drum exposed to damp or wet conditions.
- **Do not** place an open drum of waste in a compartment or locker, such as a forecabin store, because of the risk of build-up of phosphine in the space.

Phosphide fumigants can be hazardous, but by carefully following the guidance and warnings in MSC Circulars 1264 and 1396, and the IMSBC Code and the manufacturer's instructions for the disposal of spent or partially spent material, accidents and injury can be avoided.

Visit www.nautinst.org/MARS for online database

MARS 201438

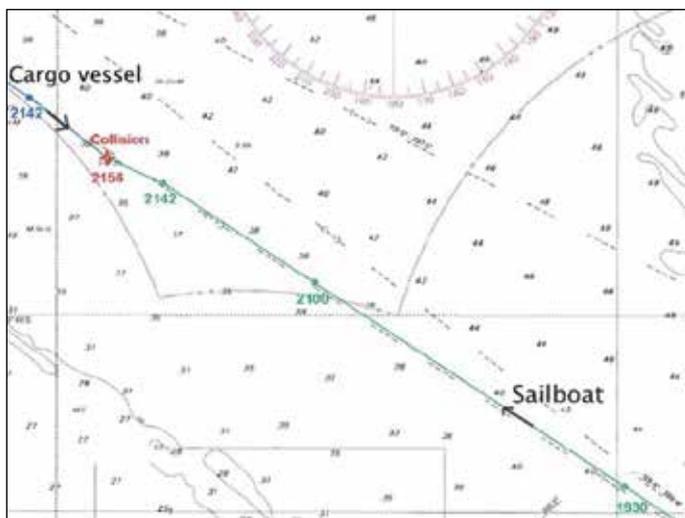
Lookout warns but OOW does not check

Edited from official ATSB Report 295-MO-2012-006

➔ While underway on a general cargo vessel, the OOW was listening to music on a personal computer and, from time to time, he hummed or sang along with the music and chatted with the lookout. The visibility remained good and they could not see any ships or other traffic nearby. The S-band radar, AIS unit and both very high frequency (VHF) radios were switched on. Shortly after 2100, the lookout reported a white light fine on the vessel's port bow. The OOW told the lookout that the light was a distant lighthouse some 30 miles away. About 18 minutes later, the lookout reported that the white light he had seen earlier was flashing. The OOW could see no radar targets in the general direction of the light and told the lookout that it was the distant lighthouse that he had previously mentioned. At 2142, the lookout reported a green light fine on the port bow. The third mate thought the green light was from an expected isolated danger beacon and he responded to the lookout that the light was a distant 'light buoy'. In fact, the green light was the starboard sidelight of a sailboat underway, about 4 miles ahead and on a collision course with the vessel.

At about 2149, the sailboat's AIS unit 'target alarm' sounded. Alerted, the skipper's wife called the skipper to come inside the cabin and have a look at the AIS display. Together, they noted from the AIS data that the approaching ship was making good a course of 122° (T) at 11.5 knots. The skipper then went back on deck to look for the ship. Within a minute, he saw its green sidelight fine on his starboard bow. The skipper decided to alter course to port to a heading of about 280°, with the aim of passing well clear of the ship.

Just after 2153, the cargo vessel's lookout reported that the green light he had been observing seemed very close. The sailboat was in fact now less than one mile ahead of the ship and the two vessels were closing at a combined speed of nearly 18 knots. In response to the lookout's report, the OOW checked the radar and the AIS unit but saw no target in the direction of the green light. About two minutes later, the sailboat called the vessel on VHF channel 16 and identified themselves. The yacht was now about 200 m from the ship's bow. Alerted by the unexpected radio call to his ship, the OOW stopped humming. A few seconds later, he broadcast on VHF channel 16 that the ship's course was being altered to starboard. He then ordered the lookout to engage hand steering. He could no longer see the yacht's green light when he ordered the rudder hard-to-starboard. At 2156, with the vessel's heading at about 130°, it collided with the sailboat, the yacht scraping along the ship's starboard side.



When the Master came to the bridge after the collision, one of his first actions was to adjust the radar gain and clutter controls. The yacht (as a target) was then easily identified on the radar display. Had the OOW correctly adjusted the controls on the ship's radar, he may have determined that the green light the lookout had identified was a vessel. As a result, he would have been in a better position to make a full appraisal of the situation, the risk of collision and to take early and appropriate action.

Lessons learned

While the cargo vessel's lookout sighted the sailboat's starboard sidelight, the OOW was not keeping a proper lookout. He made a series of assumptions based on limited information instead of following a systematic approach to confirm what had been observed. As a result, he did not conclude early enough that the lookout had identified a sailboat and that the yacht posed a risk of collision.

Had the OOW correctly adjusted the controls on the ship's radar he would have been in a better position to make a full appraisal of the risk of collision allowing for early and appropriate action.

It is possible that the OOW was distracted from his primary task, the safe navigation of the ship, by his conversations with the lookout and the music that he was engaging with through his constant humming and singing.

The sailboat's watchkeeper was not keeping a proper lookout. He did not visually identify the cargo vessel's navigation lights in time to make an effective appraisal of the situation, did not set the yacht's AIS unit on a range scale that provided adequate warning of approaching vessels and, when alerted by the AIS of the approaching ship, misinterpreted that information. [Seaways Editor's note: information on correct radar settings can be found in the free NI publication *The Navigator*]

Caught between gangway and ship's rail

➔ A cargo vessel experienced heavy weather while underway resulting in damage to the port gangway. Once in a secure anchorage and in good weather it was decided to bring the gangway on deck for inspection and to prevent further damage. As the gangway was being lifted on deck via the deck crane, a crewman who was assisting the work was caught between the gangway and the ship's rail. His upper body was crushed; first aid was applied and he was quickly evacuated to hospital.



Lessons learned

- The crewman had unwittingly put himself in a dangerous situation. The management of crew for this non-routine operation was less than adequate.
- There was a lack of vessel procedures for handling/lifting heavy objects.
- The risks for the work in question were not thoroughly analysed.
- The gangway was likely improperly secured in the first place to have suffered damage.

MARS 201440

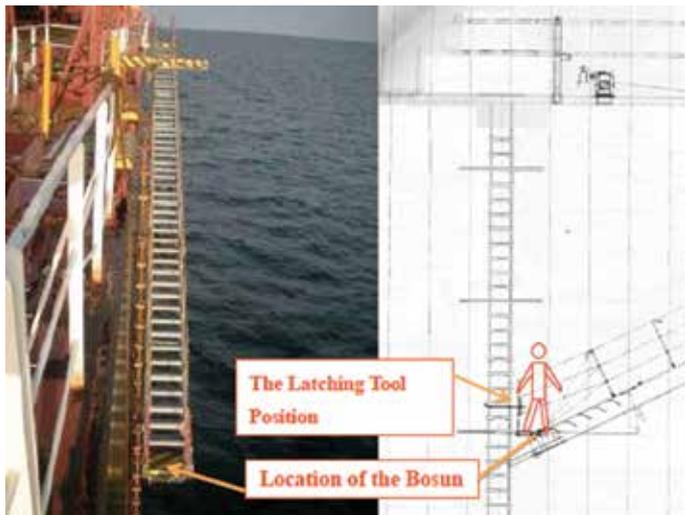
Series of mis-steps end in the sea

Edited from official report (4 June 2013) of the Hong Kong SAR Marine Accident Investigation Section

→ A vessel was underway in darkness having just disembarked the pilot. Winds were modest at B6 and there was a swell of about three metres. Air temperature was a cool 8C. The bosun, assisted by three other crew, was bringing on board and securing the pilot boarding arrangements. The bosun descended to the lower platform of the accommodation ladder to disconnect the latching mechanism which secured the pilot ladder to the accommodation ladder.

After the bosun had pulled up the lower section of the pilot ladder and placed it on the accommodation ladder, he asked one of the assisting crew to heave up the accommodation ladder. Each time the crew tried to hoist the ladder, it descended rather than moving up. After a few attempts, the crewman stopped the operation, but at this time a noise was heard and the crew realised the accommodation ladder was now hanging vertically down. The bosun could not be seen; he had not been wearing a lifejacket or a lifeline. A life ring and light were thrown into the water and the bridge informed.

Despite many hours of searching using their rescue boat, the vessel itself, the pilot boat and other boats in the area, the bosun could not be located. His body washed ashore three weeks later.



The investigation found it probable that when the ladder was mistakenly lowered (instead of raised), the weight of the ladder transferred from the hoisting wire to the latching mechanism. The mechanism failed under a load that it was not designed to hold, and the resulting shock load on the wire caused failure and free fall of the lower end of the accommodation ladder, leaving it in the vertical position.

The investigation also found it probable that the non-permanent air hose connections for powering the hoist/lower function of the accommodation ladder, which were unmarked, were mistakenly inverted when connected initially, hence the lowering action achieved when the crew wanted to hoist.

Additionally, it was found that the wire on the failed accommodation ladder was in fact only 55 metres long instead of the manufacturer's recommended 67 metres. This probably caused undue stress and further undermined the wire's integrity, especially considering that at least two wraps were needed on the drum at maximum payout.

The investigation further found that the bosun was working in contradiction to the company procedure for this operation, having no lifejacket nor safety line. None of the other crew working with the bosun had interjected to advise him of these shortcuts.

■ **Editor's note:** As with almost every accident, a series of unsafe acts and unsafe conditions conspired to bring about a very serious consequence. Had any one of these been absent from the sequence of events, the accident may very well not have happened. But first and foremost I see an absence of safety culture here. Had safety been a true value of the crew, the bosun would never have gone over the side without a lifejacket and safety line. But also, had he wanted to do so nonetheless just to get the job done quickly, the other crew would have called him out on those dangerous shortcuts.

READER'S RESPONSE: MARS 201408

Lost anchor a mystery

→ In the reported case, close examination of the surface of the material where the anchor shank failed could perhaps determine the cause of the failure. Depending on the importance of the matter, the shank could be lab tested to find out the exact cause. The Master/owners could refer to the certificate of the anchor and take up the matter with the suppliers of the anchor. Obviously the classification society would also like to establish the cause of the failure and take corrective action.

Vilas Salukhe

MARS needs you!

Reports from mariners' experiences of incidents and near-misses are one of the most valuable tools the shipping industry has to help prevent such incidents in future. But The Nautical Institute can only share these incidents if they are reported to us in the first place. www.mars.nautinst.org

Visit www.nautinst.org/MARS for online database

MARS: You can make a difference.

You can save a life, prevent injury and contribute to a more effective shipping community.

Everyone makes mistakes or has – or sees – near misses. By contributing reports to MARS, you can help others learn from your experiences. Reports concerning navigation, cargo, engineering, ISM management, mooring, leadership, design, training or any other aspect of operations are welcome, as are alerts and reports even when there has been no incident. The freely accessible database (<http://www.nautinst.org/mars/>) is fully searchable and can be used by the entire shipping community as a very effective risk assessment, loss prevention and work planning tool and also as a training aid.

Reports will be carefully edited to preserve confidentiality or will remain unpublished if this is not possible.

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The International Maritime Human Element Bulletin

Issue 32 of **Alert!** begins with the all too familiar story of an Officer of the Watch whose career is blighted by a grounding that may have been avoided had the ship been properly manned.

This was a ship with a crew of 6; there was no lookout; the OOW was fatigued; he was working a 6-on-6-off routine with the Master; he was behind on his paperwork; and he was conscious that the Master had no sympathy with complaints about tiredness or overwork.

In Issue 32 of **Alert!** we argue that 'safe' manning is not just about numbers; it is also about ensuring that all seafarers are properly rested, and that they can understand and mitigate the effects of fatigue and other risk factors on crew endurance. We offer some thoughts on safe manning, fatigue management and the use of riding gangs aboard ship.



Issue 32 is now available from www.he-alert.org