

January 2018

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Seaways

The International Journal of The Nautical Institute

The Lorén turn

A new IAMSAR manoeuvre p05

Help or hindrance?

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Going green?

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Importance of dead reckoning p21



Launch and recovery of boats from ships

The Institute's new publication p08



Focus

Increasing engagement

“ I hope that during the course of the year you will have the opportunity to make the most of your membership of the world’s leading professional body for mariners. ”

To all of our readers, I wish you a very Happy New Year and very best wishes for 2018. For many, the New Year is an opportunity to think about the future and to plan for the year ahead, introducing new ideas and creating new opportunities.

Your Headquarters team in London is looking forward to the challenges of the year ahead and will be introducing new ideas for engagement with you, and the industry as a whole, as the year progresses. One example will be the launch of our next short programme for professional development. This will be the ‘Incident Investigation and Analysis Course’ which will help mariners understand the root cause of accidents and near-misses. The two-day programme will support the highly successful *Collecting Maritime Evidence* publication we launched last May and will be delivered with the support of our branches across the globe.

We will be continuing with the highly successful Navigation Assessors course, commencing in London on 15 & 16 January and progressing to other venues throughout the year. Our biggest demand in 2017 came from Hong Kong and Singapore as well as Dublin, demonstrating a truly international interest in the programme.

We will continue to grow our Ice Navigator Certification scheme using the extensive links of our President Captain Duke Snider. In fact next month I am pleased that this ‘Focus Piece’ will be delivered by the President while on a voyage to Polar Regions (he promised!!).

Membership and support

I hope that during the course of the year you will have the opportunity to make the most of your membership of the world’s leading professional body for mariners. With over 50 branches getting to a local meeting can help develop the networking

opportunities you have with peers. Your legal fees insurance remains in place as a benefit of membership. While we hope this will not be needed we are acutely aware that the criminalisation of seafarers agenda held by some authorities makes this an important contribution to your professional security.

Forthcoming events

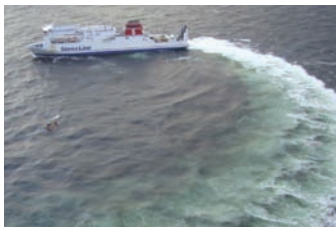
Malta will be an opportunity for a global meeting as we host the technical seminar and Annual General Meeting on 23 and 24 May. The event will attract leading specialists and experts on our key themes of superyacht operations; dealing with refugees and the impact of automation. We would be delighted to have your contribution, so please find time in your diary if you can.

2018 will be another year in which our leading publications will help guide our mariners to safer operations. A number of new and updated books will be launched including *Polar Ship Operations – A Practical Guide* and later this month *Launch and Recovery of Boats from Ships* by Dag Pike. This is a very important book that is especially relevant in an era that sees so many seafarers injured or killed looking after equipment designed to keep seafarers safer – as several of the articles in this month’s *Seaways* make clear. There will also be books focusing on watchkeeping and best practice.

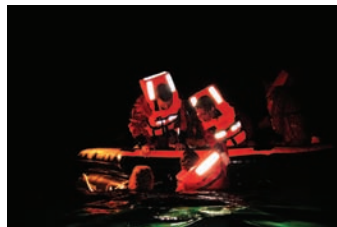
Please stay in touch with your local branch and with the NI in London through our *Seaways* correspondence pages and on-line. It is always great to hear from you. If you want to contact me directly, do not forget I can be reached on sec@nautinst.org

With very best regards

John 🌐



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Mariners' Alerting and Reporting Scheme

MARS Report No. 303 January 2018

MARS 201801

Slip on stairs – two month recovery

→ While at sea the crew were mustered for various emergency drills, including the shipboard oil pollution emergency plan (SOPEP), followed by an abandon ship drill and then a fire drill.

After the abandon ship drill, a crew member was proceeding to his fire muster station on the poop deck, with his lifejacket in his hand. He was using the external companionway ladder, as this was the shortest route. On his way down one flight of stairs, he slipped and fell along the stairs and to the deck below. The vessel was rolling slightly and pitching due to sea and swell and there was salt deposit and moisture on the steps and railing of the companion ladder.

He was given first aid on board the vessel and after several days sent ashore for more examinations. He was diagnosed with a contusion of the left shoulder and repatriated. The injury was expected to take about two months to heal completely.

Lessons learned

- Carrying a lifejacket in one hand while coming down the stairs means you probably cannot maintain a three-point contact with the companionway ladder.
- Outside stairs on vessels are often slippery because of dampness and salt deposits. Caution and deliberate attention to safe technique is required.
- While emergencies and drills can be stressful and by their nature require immediate action, this does not mean one should rush impetuously and forget best practices.

■ **Editor's note:** This relatively innocuous event happens more often than we care to admit. Most times the consequences are not serious, but in this case it cost the seaman two months recuperation. Why roll the dice when it comes to your safety on stairs? Use both hands and both railings.

MARS 201802

EGE fire

→ While at sea a crew member aboard a container vessel noticed sparks coming from the main engine funnel. The exhaust gas economiser (EGE) gas outlet high temperature alarm activated shortly afterwards. An EGE fire was declared and the main engine was stopped.

After an adequate cooling down period, crew opened the inspection door of the EGE and found extensive damage to the tubes, tube support and fins of the upper steam generator. Some of the tubes were cracked and deformed, and the fins were melted (see picture). Although temporary repairs were carried out to maintain operations, a large-scale permanent repair was scheduled for the next dry dock.

The company investigation suggests that inefficient soot blowing probably caused soot accumulation on the tubes, resulting in the soot fire. It appears that soot blowing was often carried out using air pressure but without increasing the engine load.



Fire damage to EGE

Lessons learned

- Regular soot blowing should be carried out on board vessels with EGEs.
- When carrying out soot blowing, best practice is to increase engine load.
- Monitor soot accumulation on tubes by opening the manholes at regular intervals. Additionally, review the operational data on a daily basis (EGE draught loss, outlet temperature, steam damp valve openings, available power, etc).

MARS 201803

Chain sling breaks, strikes stevedore

→ A vessel was at berth discharging a steel cargo and then loading containers. The containers were being lashed with chain slings. While one of the containers was being secured, a chain sling broke at its hook and hit the stevedore on the head; his helmet was cracked by the impact. The victim fell to the deck and was treated for his injuries. He received several stitches and 11 days of medical leave.

The chain was not very old, but on investigation it was found that no schedule of inspection or maintenance of the lashing equipment was available.



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Lessons learned

- Ships' crews need to adopt safety systems that allow inspection and documentation of tackle such as chain slings.
- It is good practice to visually examine a sling before using it.

MARS 201804

Touch bottom in uncertain waters

➔ A tanker was loading at a river location. The Master had requested confirmation of the maximum allowed sailing draught as well as the actual depths of the river, taking into account the peculiarities of the season (river flood) and a recent tropical storm that could affect water depth. The information received was that they could safely load up to a draught of 13.72 metres. Due to the cargo nomination they loaded to 13.55m before departure.

Once loading was completed, the vessel began the outbound passage under pilotage. After almost 10 hours underway the vessel temporarily touched bottom. The ship's speed was reduced to zero and then regained. Only after several extreme helm applications was the vessel kept in the channel.

It continued to anchorage for an underwater inspection and class attendance. The underwater survey showed that all four propeller blades had minor strike damage to their leading edges.

Several days after the incident, local authorities reduced the maximum allowed draught to 13.41m and limited traffic to one-way passage at the area of the incident.

The company investigation found, among other things, that:

- The touch bottom incident was quickly realised and the corrective actions were made immediately.
- The effectiveness of the bridge team was paramount. An inappropriate response to the incident could have led to grounding and/or severe damage to the propeller and the rudder.

Lessons learned

- Remain ever vigilant even under pilotage, as quick, decisive action may be necessary to avoid bad outcomes.
- In river areas affected by a variety of factors that can influence water levels in unpredictable ways, even local authorities can sometimes be outside the envelope of safety.

MARS 201805

Collision in plain sight

As edited from official TSB Canada report M13L0123

➔ A bulk carrier was down-bound in a river waterway. While the vessel was in a lock, there was a change of pilots. During the exchange, the disembarking pilot mentioned that it was difficult to communicate with the bridge crew because of their lack of proficiency in English.

After the arriving pilot had exchanged information with the Master, the vessel left the lock. The pilot requested the assistance of a police patrol boat from vessel traffic services (VTS) in order to clear any pleasure craft in the area below the lock exit, as many small boats were present for a fireworks show. As they progressed downriver, the Master left the bridge. The bridge team now consisted of the pilot, the officer of the watch (OOV) and the helmsman.

At about the same time, a port tug left its berth down-bound to assist another vessel. VTS granted authorisation for the tug and gave information on up-bound vessel traffic, but did not mention the down-bound bulk carrier exiting the lock.

As visibility was good, the tug Master navigated visually and did not turn on the radar. The ECS was not used either. The bulk carrier, now making way at a speed near 12 knots, was upstream and behind the tug

at a distance of approximately 0.9nm. The tug was visible to the pilot.

On the bulk carrier the pilot asked the OOV to turn on the forward deck lights to make the vessel more visible to the pleasure craft and to have someone posted forward on the forecastle deck to stand by at the anchors. The OOV appeared not to understand; at any rate the requests were not acted on. The pilot asked for the Master to come to the bridge. When the Master arrived, the pilot again requested that the forward deck lights be turned on. The Master turned on the lights.

The pilot, now on the port side of the bridge, observed three pleasure craft ahead of the bulk carrier moving towards the vessel. Two of them altered course to starboard in order to meet port to port. The third altered its course to port; in doing so, it disappeared from sight behind the bulk carrier's cranes. The pilot went to the starboard side of the bridge in an attempt to see the third pleasure craft but then lost sight of the tug. Not being able to see the pleasure craft, the pilot altered to port.

When the pleasure craft became visible on the starboard side, the pilot ordered starboard 20° and then hard to starboard. Once the swing of the vessel was stopped, the pilot ordered that the vessel be kept steady at 357°. By this time the tug was less than 100m away on the port side, and the pilot was on the starboard side of the bridge – still without a view of the tug. As the pilot walked back to the port side of the bridge, there was a screeching sound. The pilot now saw the tug on the port bow moving away from the bulk carrier. The Master on the tug had, at the last minute, become aware of the bulk carrier behind him and had engaged both engines in order to move away from the approaching vessel.

Following the collision, the tug's engineer checked for water ingress. The pilot on the bulk carrier and the Master on the tug spoke over VHF radio and confirmed that they had collided and VTS was informed.

The damage sustained by the tug was sufficient to merit a dry dock and it was out of service for almost seven weeks. The bulk carrier was not damaged, but traces of black rubber from the tug's fenders were apparent on the hull.



Some of the findings of the official report were:

- The pilot on the bulk carrier was not monitoring the tug at the time of the collision. The bridge crew was not assisting the pilot by maintaining a lookout or using navigational equipment to advise the pilot of relevant traffic.
- The language barrier between the bridge crew and pilot contributed to communication difficulties and led to ineffective BRM at a critical time during the voyage.
- The VTS officer's high mental workload at a critical time probably caused him to omit the down-bound bulk carrier when reporting traffic to the tug.
- The Master on the tug was unaware of the bulk carrier for a variety of reasons:
- VTS had not reported the down-bound vessel.
- The Master was not using all available navigational equipment such as radar.
- No effective lookout had been posted.

Lessons learned

- It bears repeating that all navigational aids should be used not only to help position a vessel but also to give the bridge team the most complete situational awareness possible.
- If there are communication issues within the bridge team that is the time to redouble one's vigilance.
- Vessel bridge crew and the pilot are a team and need to work together for a safer voyage.

MARS 201806

No one saw anyone

As edited from official ATSB report 311-MO-2014-006

➔ A container vessel was under pilotage in coastal waters in darkness at about 17 knots. Besides the pilot, the bridge team included an OOW, a junior officer and a helmsman. The vessel was being conned by the pilot in a buoyed channel while the junior officer was plotting positions and the OOW was observing the radar. Visibility was good.

Meanwhile, a 13.4m steel sailing yacht was transiting the area under power, making about 4.5 knots. With a crew of two, the yacht was not

using a radar nor AIS receiver so lookout possibilities were restricted to visual means. The route of the yacht cut across the buoyed shipping channel and the crew did not see the oncoming container ship. Only at the last minute did the yacht helmsman see the vessel. He quickly put the rudder over to port and the engine throttle to full in an attempt to get clear of the ship. The yacht remained alongside the container vessel for about 30 seconds, bumping and scraping against its hull, until clear of the stern.

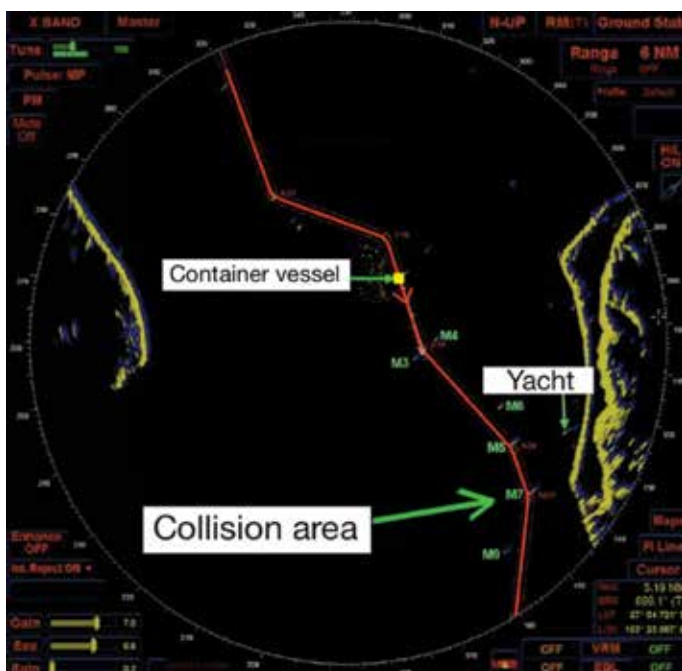
On board the container vessel no one had observed the yacht, either visually or by other means, and the crew were unaware of the collision. Yet, the investigation showed that the steel yacht appeared on the container vessel's radar at least 20 minutes before the collision, as shown below.

Although the steel yacht was showing on the radar and was visible to the eye, the official investigation identified many factors why the yacht was not observed by the bridge team, including;

- No dedicated visual lookout was posted;
- Background shore lights made it difficult to distinguish the yacht;
- The bright lights of a nearby dredger caused distraction;
- Relatively low visual and radar detection range of the yacht;
- Yacht's radar echo was not identified and actively monitored;
- Bridge team workload (four course changes in 22 minutes before collision and watch change);
- Bridge team members focused on individual tasks during that period of high workload;
- Inattentive lookout for small craft, although these could reasonably be expected in this area.

Lessons learned

- Small craft are notoriously difficult to detect on radar, but if constant and diligent attention is applied these vessels can usually be detected at the 2–3nm range.
- While some small craft are fitted with AIS transceivers, not all have them, nor are they required to do so.



Radar image 20 minutes before collision

Thank you to all our Nautical Affiliates for their continued support

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