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Joining a ship for the first time or taking up a new appointment should always be accompanied by a frisson of excitement at a new opportunity, adventure and sense of anticipation. It is part of what makes our industry and career so special. In taking up my role as Chief Executive the feelings are no different. A new passage, a new chance to build on foundations laid by others, and the prospect of nurturing and leading The Nautical Institute in its next period of development.

I acknowledge and admire the great achievements of Philip Wake during his tenure and offer thanks to him on behalf of all the staff, the members and industry stakeholders for his unrelenting commitment to helping The Nautical Institute grow. The reward for his efforts has been to see the NI become increasingly influential as the organisation to approach for maritime expertise. We will be marking Philip’s departure with a Gala Dinner at Trinity House attended by guests from all over the world including IMO Secretary General Kitack Lim.

The depth and breadth of our influence is demonstrated in many ways, not least its invaluable contribution to risk management, such as the opportunity to learn from the MARS reports published every month after careful review by our MARS editor, Captain Paul Drouin, and technical manager, Captain Harry Gale. Our publications have an international impact, illustrated by the huge demand for The Navigator magazine and the frequent references to the Alert! series used in colleges and training centres globally. To those individuals and organisations who have helped Philip realise the dream of reaching out to the world’s seafarers and engaging them in discussions about safety, risk and professionalism I extend my grateful thanks.

The Nautical Institute has many strengths; undoubtedly greatest of these is the depth of knowledge and professionalism of our people. This will be very much evident throughout this year’s series of Command Seminars. As we go to press we are in the final stages of preparation for the London Command Seminar, which will be graced by the presence of Her Royal Highness, The Princess Royal. We will hear thoughts from some of our experienced members and guests about maritime accidents and their causes – an excellent opportunity to launch our latest publication, Guidelines for Collecting Maritime Evidence.

Our strength and expertise is demonstrated in the technical books we produce, as well as through the conferences, seminars and the branches we support worldwide. It is made visible, too, through the professionalism of our members, who take their skills to work every day at sea and on shore, helping to ensure safety through the whole maritime logistics supply chain. These, along with the dedicated team we have at Headquarters in Lambeth Road, help us to deliver a world-class service.

It is important we are visible and demonstrate to colleagues in our community that we are part of a special group of maritime professionals. So I encourage you to use the post-nominals to which you are entitled. You have earned them as recognition of your professional status – let others know you are proud of that professionalism and that you live by those standards promoted by The Nautical Institute. We will continue to make every effort to support our members in their work and the development of their careers. Many of you will have read articles by our President Captain Duke Snider about ice navigation and his hopes for the future. I am proud to announce that on 1 July 2017 The Nautical Institute will launch its Ice Navigator Certification and Accreditation Scheme.

This scheme will help employers and individuals identify those who have demonstrated particular skills in this specialised area. We are pleased to be part of establishing a cadre of high-quality, well-trained individuals in this specialisation.

There are other initiatives in development and I am sure you too have ideas about how we can meet your needs and help your advancement. So I invite you to contact me with these ideas using the email address provided on the website and repeated here: sec@nautinst.org

I look forward to hearing from you.
With best wishes
John
MARS 201738

Mystery collision reveals GPS anomaly
Edited from official BSU (Germany) report 276-14

In the early morning darkness and in good visibility two small cargo vessels were navigating within the confines of a river port. One was outbound, the other inbound, and both were under self-pilotage. Both vessels were equipped with the same electronic chart by a reputable equipment manufacturer. As the vessels approached their meeting point at a bend in the waterway, some crew on the inbound vessel’s foredeck reportedly saw, at close range, the masthead lights and red sidelight of an oncoming vessel that appeared to be quickly closing on a collision course.

The investigation uncovered that both electronic charts showed that the vessels had never made contact and were separated by a reasonable distance. Yet, incontestably, a collision had occurred.

The crew members on the inbound vessel had only enough time to run for cover before a glancing collision occurred. The investigation uncovered that both electronic charts showed that the vessels had never made contact and were separated by a reasonable distance. Yet, incontestably, a collision had occurred.

Lessons learned

- Electronic navigation charts greatly increase the situational awareness of the bridge team, but ENCs must not be relied upon exclusively for positioning or collision avoidance.
- Keep double-checking your position and targets with other instruments and, especially in pilotage waters, be sure to look out of the front window.

MARS 201739

Collision at anchorage

A tanker (shown in black on the diagram below) was at anchor outside a traffic separation scheme (TSS) awaiting instructions. The OOW noticed another tanker (shown in red on the diagram) at 1.7nm making about 5 knots and approaching for pilot boarding. He monitored the movement of the red tanker. When the vessel was 1.0nm away he made contact and asked about their intentions. They replied that they would be altering to starboard. A few minutes later the OOW of the black tanker contacted the local vessel traffic services (VTS) to inform them of the situation, which he considered worrisome.

The VTS then called the red tanker telling them to keep clear of the anchored black tanker. Personnel on the red tanker replied that they were altering to starboard. Over the course of the next few minutes both the OOW of the anchored black tanker and the VTS made repeated warnings to the approaching red tanker. The OOW of the black tanker realised that the approaching vessel was still on a collision course so he called the Master.

The Master raised the general alarm and made an announcement to all crew members to take precautions and stay clear of the starboard side of the vessel. Engines were on standby so the Master gave half ahead and put the wheel hard to starboard about one minute before contact to try and reduce the consequences of the now impending collision.
Lessons learned

- Being in a secure anchorage does not mean one should lower one’s vigilance. Always keep a good lookout, as did the team on the black tanker.
- If a collision is imminent, raise the alarm and make an announcement.

MARS 201740

Rocket debris falls close to ship

- A car carrier, far from land, was making way towards its destination. Suddenly, parts of a previously launched rocket fell into the water quite close to the vessel. After investigation it was found that the rocket debris ‘fall prediction area’ had been published in a NAVAREA message. Unfortunately, the ship’s crew had neglected to position the area on the chart and were unaware they were running into danger.

MARS 201741

Too little, too late, too fast

Edited from official Australian Transport Safety Bureau (ATSB) report MO-2015-002

- In the early morning hours the inbound vessel picked up a port pilot. When the pilot came to the wheelhouse the usual information was exchanged and the pilot showed the Master the Master-Pilot-exchange (MPX) form. The ship was on hand steering and the OOW was on the bridge plotting positions while the Master was at the engine telegraph. There was no outbound traffic and as they made way the pilot and Master continued discussing the pilotage.

Over the next 35 minutes, the pilotage progressed as planned. However, as the ship exited the deepwater channel, the pilot conducted the ship to the east of both the planned track on the ship’s chart and his own intended track on the MPX form. At no stage did the ship’s bridge team members challenge the pilot regarding this deviation from the plan. As the vessel approached the inner harbour entrance they were still making over 14 knots.

The pilot became concerned that they would arrive at the inner entrance before the two harbour tugs were in position. After some radio communications with one of the tug Masters, the pilot decided to try and delay the ship’s entry into the channel by taking the ship outside, and south of, the channel and then enter between the starboard hand buoy No. 1 and beacon No. 2. A few minutes later the Master informed the pilot that the depth under keel was showing 1 metre. The pilot noted the depth and ordered the bow thruster full power to port. The vessel's speed was now about 7 knots. In the course of the next minute or so the ship slowed and came to a gentle stop as it grounded on the sand and mud bottom to the south of the entrance channel.

Some of the findings from the official report were:

- Bridge resource management (BRM) was not effectively implemented on board; the bridge team members were not actively engaged in the pilotage and they did not effectively monitor the ship’s passage.
- The port’s pilotage association had published information to help ships’ Masters prepare a berth-to-berth passage plan, but this has been found to be inadequate. The information provided was essentially a list of waypoints, and often was not followed.
- The pilot’s procedures did not include any contingency plans, including abort points, for risks identified for the pilotage.
- Procedures for harbour tugs to meet inbound ships and for their coordinated movement in the pilotage area were not clearly defined. In this instance, inadequate coordination of the tugs and poor communication between the pilot and the tug Masters resulted in both tugs, the second one in particular, arriving much later than their expected time on station.

Editor’s note: All too often mariners leave the pilot 100% of the task when in fact they should be actively engaged in the pilotage and ready to assist, inform and challenge if necessary. In this case the pilot came in too fast. Because the tugs were not in position, he was then forced to improvise. The crew, meanwhile, were no more than bystanders.

MARS 201742

Collision while both OOWs sitting in their chairs

As edited from UK Marine Accident Investigation Branch (MAIB) official report 27-2016

- A small oil bunker barge was loaded and underway. Manned only by the Master and a deckhand, the vessel was proceeding on autopilot at 9.5 knots with the Master on the bridge. He observed several AIs targets on the vessel’s ECS display and noted the nearest CPA was predicted to be one nautical mile. He adjusted the autopilot to 350° and then left the bridge. Once on the stern deck he noticed a general cargo vessel

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approaching from astern but was neither surprised nor alarmed. Soon after, he returned to the bridge and sat on a chair on the port side of the wheelhouse.

Meanwhile, the general cargo vessel was approaching the barge's port side at a speed of 14.5 knots with the autopilot set to 034°. The OOW was sitting in the bridge chair on the starboard side of the bridge. There was good visibility and smooth seas.

After about eight minutes, with each OOW sitting in their respective chairs, the cargo vessel's bow struck the bunker barge's port side. The bunker barge was driven sideways and within seconds had heeled over 90° to starboard. Seawater rushed into its bridge, accommodation areas and engine room through the vessel's open weathertight doors.

The Master escaped from the flooded bridge through an open window; meanwhile, the deckhand, who was in the mess room, was fully submerged in seawater. About 15 seconds later the barge broke free, rolled back upright and passed down the cargo vessel's port side. As the barge came upright, the Master found himself clinging to the bridge roof. The deckhand was washed out of the mess room and over the ship's side as the floodwater rushed back out through the open door. He grabbed hold of the top edge of the bulwark to prevent himself being swept completely overboard. Soon the deckhand was able to climb back over the bulwark onto the vessel's upper deck.

The barge, in danger of sinking, was eventually towed to a nearby port.

Some of the findings of the official report include:

- A proper lookout was not being kept on either vessel.
- Complacency and poor watchkeeping practices were systemic on board the cargo vessel. A lack of mentorship and direction from the vessel's Master contributed to this situation.
- Lone watchkeeping was a normal practice for both vessels. The risks associated with this had not been properly assessed.
- The bunker barge's crew did not have the competence necessary to operate a small coastal tanker; the vessel was also not provided with an effective safety management system.

Editor's note: As noted in past MARS reports, the wheelhouse chair can be an OOW's worst enemy.

MARS 201743

Entering unlabelled hold = fatality

As edited from Japan Transport Safety Board report MA2016-10

The cargo ship had loaded maize and after a voyage of approximately six weeks arrived at the discharge port. Holds 3 and 4 were opened. A shore manager measured the oxygen content of hold 4 and found it to be normal. He hung a sign on the hold booby hatch entrance that indicated ‘Inspected – OK’. Before he could measure the oxygen content of hold 3 he was called to the ship's office to discuss discharge details.

Meanwhile, a grain inspector had boarded the vessel and proceeded to enter hold 3 via the open booby hatch with the intention of taking the temperature of the cargo. He descended first a vertical ladder and then a spiral staircase. Once on the surface of the maize he collapsed and was spotted shortly afterwards by a stevedore on deck. The alarm was raised. While preparations for rescue were undertaken the shore manager measured the oxygen content in hold 3 and found it to be about 12%.

Later, rescue teams exited the hold with the unconscious grain inspector but the victim was declared dead.

Lessons learned

- Even if the hold hatch has been opened, keep booby hatch access doors locked and sealed to prevent entry until the hold atmosphere has been tested and certified safe by a competent person.
- Never enter an enclosed space before it has been tested for oxygen content.
- Even once tested and found acceptable, always wear a personal gas detector when entering an enclosed space.
- Enclosed spaces are inherently dangerous and procedures for entry need to be followed. A person should be assigned to act as a watchman outside the space while entry into the space is attempted.

MARS 201744

H2S seeps into cargo control room

The tanker was discharging a cargo of Maya crude oil when the cargo officer noticed a suspicious gas smell inside the cargo control room (CCR). He immediately took gas measurements and informed the Master. The gas measurements showed zero hydrocarbons but about 2ppm of hydrogen sulphide (H2S). Immediate action was undertaken to investigate the cause and source of the H2S infiltration.

It was soon discovered that the source was a relief air pipe located in the CCR console. An automatic unloading system was being used for the stripping work. A damaged O-ring in the system's gas extraction valve, located in the pump-room, had allowed the infiltration of the H2S. The cargo vapours passed through the valve's seat and piston, into the air pipe and subsequently to the CCR through the relief system.

The investigation found:

- The relief air pipe of the system terminated in the CCR console and therefore any potential failure of the system would allow gases into the CCR space.
- There was no secondary installation or fitting to prevent the release of gases into the CCR.