I must open this Focus piece with a huge shout of thanks to ‘Team Nautical Institute’ for delivering an outstanding Command Seminar in London in May. The event provided a showcase for our activities and illustrated the important contribution we make to the professional debate amongst seafarers and the issues of safety, technology and human factors that we face every day. We were honoured that Her Royal Highness, The Princess Royal addressed the delegates and we are very grateful to Trinity House for allowing us to host the event in such a special location. My thanks too, to Captain Harry Gale for his role in coordinating the events, and to the speakers and delegates who gave some challenging and sometimes confronting views on how things are and how they might look in the future.

The work continues of course, through our work at the Maritime Safety Committee at IMO, where we are actively engaged representing members’ views on lifeboat safety, security and piracy, fair treatment of seafarers and autonomous vessels during the plenary and workshop sessions. Readers should also please remember the Command Seminars to be held later this year in Cork (12-13 October) and Cyprus (3 November).

The launch of The Nautical Institute’s latest book, Collecting Maritime Evidence was a wonderful success. The unprecedented demand for this book shows the importance of our publications in providing relevant, contemporary and effective resources to our community. As we focus once again on technology, our book of the month for July is ECDIS and Positioning by Dr Andy Norris, one of the speakers at the Command Seminar. It provides an excellent source of reference for those inspired by our member survey looking at confidence and competence in using ECDIS.

As your professional body, ongoing support for Continuing Professional Development is a key element of our work. During June we were delighted to complete the delivery of the latest Navigation Assessors course and to enrol our first participants in the Command Diploma Scheme.

New initiatives being launched this month include:
- The standard for training of Technical Staff on board Dynamic Positioning Vessels;
- The standard for training in Emergency Shiphandling for Dynamic Positioning vessels.

These were developed after extensive consultation across the industry. The collective expertise of the participants in the consultation will help ensure these programmes are tightly focused on the needs of the sector and those operating our ships.

Shiphandling was a major topic of concern to our members; something which was borne out by speakers and panel discussions at the Command Seminar this month. NI HQ has put together a resource package including a presentation and background materials for any Branches who would like to organise a meeting on this fascinating and important topic. Please look out for the branch mailing from Theresa Nelson.

In June I was pleased to represent The Nautical Institute at the inaugural ‘Arctic Shipping Best Practice Forum’, a working group of The Arctic Council. The meeting was attending by representatives from the IMO, Flag States, Industry professionals and others with an interest in the controlled development and access to the region.

To complement the work of the Polar Code, The Nautical Institute is proud to formally launch its Ice Navigator Scheme. Details of the arrangements are shown in this edition of Seaways (see p 10-12). Already we have widespread interest from ‘early adopters’. My thanks to the representatives from the following countries who participated in the consultation and development process:
- Argentina; Australia; Canada; Chile; Finland; France; Norway; Russia; Sweden; United States of America; United Kingdom.

If you would like further details of any these activities then check out the website or contact me at sec@nautinst.org.

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The Command Seminar illustrated the important contribution we make to the professional debate and the issues of safety, technology and human factors that we face every day.

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**MARS 201745**

**Expect the unexpected**

➤ An inbound tanker was proceeding under pilotage in a restricted waterway. There was an outbound container vessel in the channel ahead of the tanker.

The bridge team observed a fishing trawler four points on the port bow at a distance of 1.0 nm. The trawler was not engaged in trawling and was making 8 knots over ground. Initially it was ascertained that the trawler would cross astern of the tanker with a clearance of about 0.5 miles, so no action was taken by the Master and pilot.

At the point where the container vessel had approached to within approximately 0.6 nm of the tanker, the fishing trawler altered course to port without notice. It was now attempting to cross ahead of the inbound tanker.

The pilot on the tanker cautioned the trawler over VHF and repeatedly sounded the ship’s whistle to attract attention. On seeing no change in the aspect of the fishing trawler, the Master, in consultation with the pilot, altered ship’s course to starboard and reduced speed to half ahead.

The pilot on the outbound container vessel was also concerned with the conduct of the trawler and sounded several short blasts on his ship’s whistle. At the last minute the fishing trawler turned to port to avoid collision, but it came close enough to the tanker to cause a minor contact.

**Lessons learned**

- Never assume a situation is ‘set in stone’. Be alert and expect the unexpected.
- Remain engaged with the pilot, as did the bridge team on the tanker in this report.

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**MARS 201746**

**Automatic shutdown of main engine**

➤ An outbound tanker was transiting a restricted area at the port entrance. Suddenly, the main engine shut down. The Master quickly ordered the forward manoeuvring station to let go the starboard anchor. Meanwhile, the pilot ordered the escort tug to assist the ship while the Master ordered the port anchor dropped in sequence.

In spite of the actions of the crew and pilot, the vessel made contact with several channel markers before the main engine could be restarted and the tug made fast.

An investigation of the incident revealed that the oil mist detector had shut down the main engine due to a false detection of oil mist in the crankcase. The system was configured to allow only one second between the detection of oil mist (or other anomaly) and a shutdown. No human intervention was possible.

**Lessons learned**

- While automation is desirable for safety, so too is the possibility of human intervention if needed.
- Current class rules allow automation systems to be manually overridden (except in cases where manual intervention will result in a total failure of the main engine, for example in case of over speed), given a manned engine room and alarms advising of the override.
- Certain models of oil mist detectors can be programmed with varying delays for shutdown such that when navigating in restricted waters the delay before shutdown is longer than when in open sea, thus giving time for emergency action.

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**MARS 201747**

**Earth fault means trouble**

➤ In the early evening hours the fire alarm sounded showing an alarm on B deck. Smoke was also reported on the port side of B deck. The fire source was localised in a cabin and first attempts to extinguish it with portable extinguishers were inconclusive. Meantime, emergency teams were mustered. Crew donned fire suits and breathing apparatus (BA) sets to attack the fire, while boundary cooling was started from outside the cabin bulkhead. The fire was extinguished, but thick smoke was still prevalent.

Boundary cooling was continued for the next 30-45 minutes while bulkhead temperatures were continuously monitored. It was observed that the ceiling tube light in the cabin along with all fittings appeared to be the most severely burnt area, so was possibly the origin of the fire. Upon closer inspection it was found that molten plastic from the ceiling light had probably ignited the chair and other objects below the light.
Further investigation found the alarm logs in the engine room had recorded a low insulation alarm 10 minutes before the fire had started. This earth fault was probably the first indicator of the light fixture deficiency that started the fire.

Lessons learned
- Earth fault alarms should be investigated as they occur and the ship searched for any unusual activity.

MARS 201748

Mooring rope caught in thruster

A chemical tanker in ballast was unmooring from a river berth with a strong current. The forward breast lines had been simultaneously let go ashore but were still in the water and being winched on board. Suddenly the bow thruster stopped functioning. This event did not affect the manoeuvre and the unmooring was safely completed.

It was discovered that one of the forward breast lines floating on the water surface had become caught in the thruster’s propeller. This caused an overload on the thruster which then ceased functioning. The mooring rope was successfully removed some days later by divers.

Lessons learned
- Always be aware of mooring ropes in the water and their proximity to thrusters.
- If possible, single up lines first so that the number of lines to be retrieved from the water at the moment of leaving the berth is reduced.
- Clear, concise communication between the bridge team and the mooring crew is a necessary component in safe berthing and de-berthing operations.

MARS 201749

Classic foggy collision

As edited from the Republic of Cyprus report 115-2014

A loaded bulk carrier, vessel A, was heading 022° in very restricted visibility. The Master and Chief Officer (CO) were in the wheelhouse with a helmsman and lookout. The engine was put on stand-by and the vessel speed was reduced from 13 to about 11 knots. The bridge team noticed a vessel (B) on the radar at a distance of about six nm on a near reciprocal course approaching at a speed of six knots. The Master ordered a course alteration from 022° to 050°. The distance to vessel B was now 3 nm with a CPA of only 490m. Once on a heading of 050° the Master ordered ‘Steady’. About this time the CO called vessel B on VHF radio and agreed to a port-to-port meeting, although the communication was hampered by language difficulties and ambiguous statements. Soon after the Master of vessel A ordered a course of 060°.

A few minutes later vessel B started turning to port, instead of turning to starboard as was expected for a port-to-port passing. The Master on vessel A ordered 070° and then 080°. Shortly thereafter a green light was spotted ahead and they felt the vibration of an impact. The engine was stopped and the alarm sounded. Once the vessels disengaged, vessel B sank while vessel A had water ingress into its forepeak tank.

Since the vessels were close to shore the local coast guard rendered assistance to the crew of vessel B who had abandoned into a life raft.

Lessons learned
- As per the Colregs, in restricted visibility (Rule 19) avoid altering course to port when there is a vessel forward of the beam.
- Use clear and unambiguous communication when making meeting arrangements with other vessels, especially in restricted visibility.
- When altering course for collision avoidance use bold course alterations instead of a series of relatively small course changes. This will make your actions more apparent to the other vessel’s bridge team.

MARS 201750

Simple repair becomes deadly

As edited from UK MAIB report 17-2016

A dredger was on site and in the process of dredging when the engineer of the watch (EOW) smelt diesel oil in the engine room. He found a small leak in the low pressure diesel oil supply line to the main engine. Physical evidence indicates that he was attempting to make a temporary repair while the main engine remained running, without informing the bridge team or the chief engineer.

It would appear that during the repair process the engineer’s overalls became soaked in fuel. When he subsequently used a portable angle grinder, sparks from the grinding disc probably ignited the atomised fuel from the leak as well as his diesel soaked clothing. This resulted
in his overalls catching fire and igniting a fire in the engine room. The EOW was nonetheless able to exit the engine room and reach medical assistance.

The fire in the engine room was extinguished using the fixed CO₂ smothering system. The EOW's burns were so severe that he ultimately succumbed and was later pronounced dead.

Some of the findings of the official report were:
- The EOW informed neither the chief engineer nor the bridge OOW of the fuel leak and his apparent intention to repair it. His reason for not doing so is likely to have been influenced by the onboard culture of routine lone working and absence of regular and frequent communication.
- The fact that sparks generated by using fixed and portable angle grinders produce a hot work hazard is not currently acknowledged in marine industry guidance.
- The EOW would have been aware that isolating the fuel system would have involved stopping the main engine which, in turn, would have interrupted the loading programme. It might have been his professional pride and confidence in his ability to successfully complete the repair that drove him to carry on with the task.

Lessons learned
- Safety should be a personal and company value that takes precedence over commercial activities or professional pride. Undertaking a repair on the fuel system while the vessel continued to work and without informing other crew or the bridge team was a major failing that ultimately cost the EOW his life.
- Sparks from an angle grinder can be sufficient to ignite a fire given the right conditions.

**MARS 201751**

**Reporting of close calls – some examples**

Reports of accidents and incidents received by the editor of MARS are then edited and formatted for Seaways. Our hope is that our readers can learn the lessons of these events and hence increase their own safety awareness and risk appreciation. From time to time we receive summaries of close calls that, taken individually, are not conducive to a single MARS report but are nonetheless very good indicators of a healthy safety culture. We would like to reproduce here a sample of these summaries with the view of displaying what a robust reporting culture looks like.

<table>
<thead>
<tr>
<th>Description of Near Misses</th>
<th>Action taken</th>
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</thead>
<tbody>
<tr>
<td>During mooring operation, Captain saw deck crew running in a hurry without thinking that he might slip on the layer of ice on deck and might injure himself.</td>
<td>Captain immediately instructed the crew not to run on deck. Ice on deck in the mooring area must be removed. The same day all deck crew were instructed to pay extra attention while working on deck.</td>
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<tr>
<td>During bunkering operation, engine personnel was spotted not wearing a safety helmet.</td>
<td>The second engineer corrected him on the spot and briefed him as per the SMS. The near miss will be discussed during the next monthly safety meeting.</td>
</tr>
<tr>
<td>During inspection of the chemical locker in the steering gear room, an engineer was found to be handling chemicals without using the proper eye protection goggles. This could result in serious injury to the handler’s eyes if they came in contact with the chemical or the fumes it produced.</td>
<td>Stopped the engineer from working, advised him of the serious consequences of his action and ordered him to wear proper protection goggles before resuming his work.</td>
</tr>
<tr>
<td>During fire / safety patrol, a set of weight lifting equipment was found improperly placed on the floor of the gym, bumping on the wall due to the low swell.</td>
<td>The weight lifting equipment was immediately secured in order to avoid free movement in the area. All the equipment was checked to be properly secured and confirmed to the OOW that everything was under control. Luckily no injuries nor damages had occurred. The day after, all crew were thoroughly briefed about the matter during coffee break and a formal warning was given. It was also pointed out that small mistakes can result in injuries and damages that could have been avoided just by taking common sense actions and employing good seamanship. Posters are to be placed into the area in order for everyone to bear in mind that it is unprofessional and dangerous to leave such equipment improperly placed.</td>
</tr>
</tbody>
</table>

**Editor’s note:** Weight training equipment is a great addition to on-board amenities but free weights can be a problem if not properly stowed after each use – not to mention the possibility of injury while using the equipment due to vessel motion at sea. Rack-based weights would appear to be a better and safer alternative for ships.