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# Seaways

The International Journal of The Nautical Institute

## Taking Command

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# Focus

## Signing Off

“During my 14 years as Chief Executive, I have worked with many members and their dedication to the Institute has been a constant inspiration. Our standing in the industry is high, with safety and professional development as our watch words”

**O**n 17 May at the Institute's AGM and Command Seminar in Trinity House, London I will hand over to the new Chief Executive, Captain John Lloyd, who wrote the Focus piece last month as part of his induction into the role. There is a nice symmetry about the venue as I organised my first AGM as Chief Executive there 13 years ago, when Her Royal Highness The Princess Royal attended to receive the Honorary Fellowship of the Institute. We are delighted that she is again honouring us with her presence on the second day of the Command Seminar.

### Institute goals

So as I sign off from the crew of the good ship that is The Nautical Institute it is appropriate to look back a bit, review the present and consider the future. Our passage plans are of course the 5 Year Strategic Plans devised with input from the membership. Within those there are issues to address industry-wide and within the Institute itself. We can be proud of contributing to the industry's knowledge and implementation of human element principles which is hopefully leading to better designed ships, particularly their bridge layouts and integrated navigation systems so that they are not merely an accident waiting to happen. Similarly, we have been and will continue to be unremitting in our message about the need for carefully selected, well trained and properly supported officers and crew to ensure that ships are efficiently and safely operated. This is clearly still a work in progress although there does seem to be a growing consensus that the STCW Certificate of Competency really is the minimum required standard rather than the zenith of one's qualifications, especially as too little experience is built into its requirements. While we will continue to make the case for higher standards and more sea time in STCW, the key role for the Institute is to promote and provide Continuing Professional Development and mentoring to take people beyond those minimum standards. *The Navigator* magazine is part of delivering on this strategy, together with our range of books written by professionals for professionals. Use of these and the people network of the Institute will deliver a long, satisfying and safe maritime career with diverse opportunities opening up along the way.

These work areas are long term goals of the Institute and each year there are various projects being implemented to help achieve them. Last year's work is set out in the Trustees' Annual Report (see pp 11-16) which, with the Annual Accounts (see pp 21-25), shows that activity levels have remained high despite

the recession in most shipping markets. Stormy conditions indeed, and we are not immune to them, but due to prudent management in the good times, we are well placed to trade through the downturn. Sadly, it remains a fact that the first budget to be cut in a recession is training and the industry will again find itself facing a shortage of qualified personnel when they need them in the eventual upturn.

### Membership and recruiting

As a professional body and charity, the governance of the Institute at international and local level is in the hands of members volunteering their time and expertise. Those in the central governance roles last year are set out on page 26 while the Branch and Development representatives are shown on the inside back cover as usual. All deserve the thanks of members for their efforts as they are crucial to the effectiveness of the Institute. The Command Seminar report from Singapore (see pp 6-8) and the reports of other branches (see pp32-33) are inspirational for what can be achieved and it is particularly pleasing to see the interest generated by the formation of the Indonesia Branch. The Institute needs membership growth to ensure we have the resources to be even more influential in the industry. It is regrettable that we are still stuck in the 7,000 region despite many strategies to break out. There are hundreds of thousands of potential members so each of us recruiting just one would double the membership and make a huge difference.

### Thank you

During my 17 years or so on the staff and 14 as Chief Executive I have worked with many members and their dedication to the Institute has been a constant inspiration. They have provided wise counsel when it was necessary but have also trusted me on the process of evolution that I was tasked with, although some viewed a change or two as revolutionary. Our standing in the industry is high and we have real influence in the IMO Working Groups and other decision making bodies in the industry, with safety and professional development being our watch words as ever. All this has been achieved by teamwork, mutual respect and trust between the governance bodies and staff of the Institute. It has been my pleasurable task to ensure that we have the right staff in place to take the Institute forward and I thank them all for being the dedicated, hard-working and diverse, international group of people that they are. I commend them and thank you all. 💰



# Mariners' Alerting and Reporting Scheme

MARS Report No. 295 May 2017

MARS 201732

## Threading the needle - then grounded

Edited from official TSB Canada report M15C0006

➔ A bulk carrier was inbound to load in a very restricted waterway under self pilotage, as is the practice at this port. The Master was informed of the relevant local knowledge, and the shallow area within the channel between buoys YC5 and YC9 was added to the vessel's chart.

On the inbound voyage winds were northwest at 35 knots and blowing snow reduced visibility. The inner portion of the channel was ice covered, which helped limit the set of the vessel due to wind. A tug met the vessel at the outermost buoys and the vessel followed the tug inbound through the channel. Loading was commenced immediately after docking.

Once loaded, the bulk carrier proceeded outbound at a speed of five knots, following the tug and the track through the ice-covered water. The wind was now from the west-northwest at 25 knots, gusting to 30 knots, and visibility was good. The officer of the watch (OOW), the Master and a helmsman were on the bridge.

The Master was standing at the centre console and monitoring the vessel's progress visually using the buoys. From the centre console, an electronic chart repeater monitor was visible to the Master which he used as a check. The OOW was monitoring the vessel's progress on the port radar using parallel indexing while also monitoring the buoys on either side of the vessel as they passed.

In the vicinity of buoy CB8, the bulk carrier exited the ice and entered open water, while the tug turned back toward the dock. The bulk carrier's speed was now seven knots. Upon passing the western tip of the island, the OOW ceased parallel indexing as there were no prominent features to use. The Master continued to navigate visually using the buoys, and the OOW was asked to assist by monitoring each buoy as it approached and giving a distance off and all clear once the vessel had passed it.

A few minutes later the Master advised the OOW that the electronic chart was indicating that the vessel was outside the channel. After checking the depth sounder, which indicated 0.7 metres beneath the keel, and visually verifying that the vessel was aligned between the next set of buoys, YC11 and YC12, it was concluded that the electronic chart was not displaying the vessel's position accurately. No further verification of the electronic chart was made at this time, nor was the vessel's position plotted on the chart.

At buoys YC11 and YC12, the Master completed a course alteration to port, bringing the vessel onto a course of 189°. To compensate for the winds, the vessel's heading was 195°, with a course made good of 189°. In preparation for the upcoming alteration to starboard, the Master closed the buoys on the starboard side in order to maximise sea room on the port side and account for the set to port. The turn was to be initiated once the vessel was approximately 1.5 ship lengths from buoys YC9 and YC10.

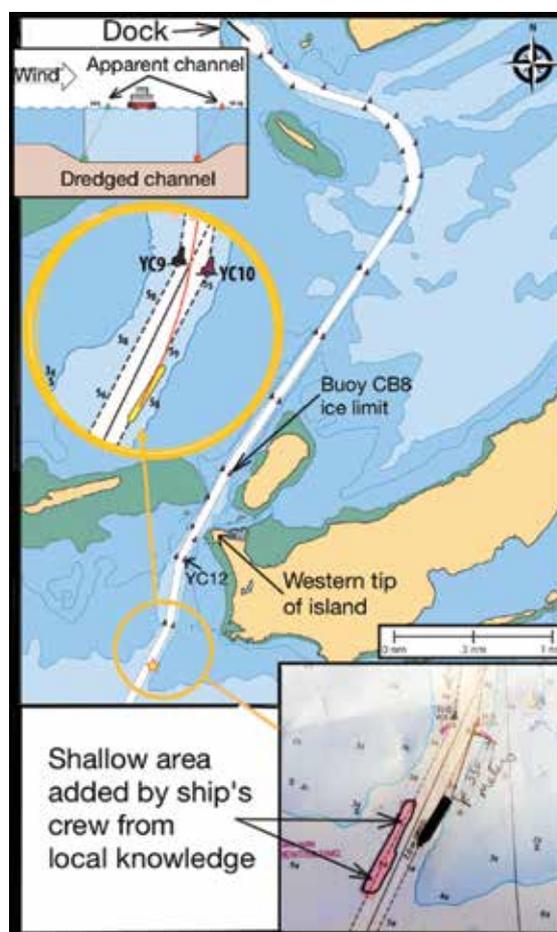
A few minutes later the electronic chart displayed the vessel's position as re-entering the navigation channel. To determine the wheel-over point for the upcoming starboard turn, the Master then estimated the distance back from the buoys visually, and verified it by using the electronic chart to estimate the distance back from the buoys relative to

the length of the vessel icon displayed on the electronic chart screen.

The Master gave a helm order of 10 degrees to starboard to make the new course of 207°. After approximately 20 seconds, there was no change in the vessel's heading, so the Master ordered 20 degrees to starboard, followed very closely by hard to starboard. The Master also increased the telegraph to full ahead to assist the vessel in turning. As the vessel began to turn to starboard, the Master asked the OOW to watch buoy YC10 on the port side and advise of its distance off as the vessel passed.

When buoy YC10 passed amidships, the rudder was returned to amidships to slow the turn to starboard and settle up on the next course, which was marked by a set of ranges. Once the vessel was past and clear of buoy YC10, the OOW advised the Master. The Master now determined that the vessel was on the port side of the channel and setting further in that direction. The ranges marking this leg of the channel, which were located astern of the vessel, were not referenced.

The Master ordered the helmsman to apply starboard helm and soon the bulk carrier's rate of turn began to increase. Approximately 15 seconds later, the vessel made contact with the bank southeast of the buoyed navigation channel at a speed of 7.5 knots. The rate of turn and the vessel's speed began to reduce and then the vessel grounded just outside the navigation channel about 1.5 ship lengths away from buoy YC10.



Visit [www.nautinst.org/MARS](http://www.nautinst.org/MARS) for online database

Some of the findings and lessons learned from the official report were:

- The buoys were being set off their charted positions by the prevailing wind and current. By using these buoys as the primary method for navigating, the bridge team lost awareness of the vessel's actual position within the channel.
- The vessel was using an outdated electronic chart, which no longer displayed the channel or buoy positions accurately. Using this to verify the wheel-over position probably led the Master to initiate the turn later than intended.
- The bridge team did not use all available navigational equipment to verify and monitor the vessel's position, limiting their ability to identify human or equipment errors.
- Although a passage plan had been developed, it was missing certain information (wheel-over positions, frequency of position fixing). Despite the complexity of navigation in the channel, the passage plan contained the same degree of detail as when the vessel was sailing in open water.
- Several steps to ensure safe navigation had not been taken, despite being marked as complete on the passage planning checklist (eg ensuring the electronic chart was up to date, inserting wheel-over points and parallel index data on the chart).

## MARS 201733

### Poor storage practices for steel cargo

→ A port superintendent reports having witnessed many vessels arriving to discharge steel coils and bars with very poor stowage. No consideration has been given to the difficulty of slinging during discharge, as the gaps left between the cargo units are not sufficient.

While tight stowage is desirable for the voyage, it can present dangers to stevedores if cargo is not properly secured for the discharging operation using adequate dunnage and efficient chocking. This problem appears particularly acute when cargo is loaded by shore cranes and has to be discharged by the ship's cranes.

Also, discharging such cargo from under the coaming presents more problems; a very risky and accident prone procedure.



### Lessons learned

- Cargo should be loaded in such a way that it can be discharged safely with ship's cranes.
- Sufficient gaps should be arranged between cargo units so that slings can be safely and properly installed at the discharge port.

■ **Editor's note:** Check the charterparty details for the consignment of cargo you are loading. Usually, it is the vessel's responsibility to ensure the cargo be 'brought into the holds, loaded, stowed and/or trimmed, tallied, lashed, and/or secured'. But in any case, as the carrier, the vessel's crew must ensure safe and efficient stowage because ultimately this affects the seaworthiness of the vessel. When in doubt, contact your P&I Club for guidance.

## MARS 201734

### Boiling water sprays engineer

→ While at sea, it was discovered that the economiser circulation pumps were leaking. In order to rectify the problem the main engine was stopped. The economiser inlet and outlet valves and the boiler circulation inlet and outlet valves were closed, while the economiser drain valve was opened.

Once the economiser was empty, the economiser safety valve was dismantled, among others, and work started to correct the defect. After corrective action was taken, the boiler circulation pump was being re-installed when the engineer received hot water on his face, neck, chest and left arm. The boiler operates at 9-12 bar with water heated to 160-175 degrees Celsius.



### Lessons learned

- Always adopt a lock-out, tag-out procedure that will ensure risks are acceptable. In this case the barrier between the crew member and the hazard was not 100% secured.
- Every task that presents risks should be documented in a procedure.
- Always wear appropriate personal protective equipment (PPE) when undertaking a task.

## MARS 201735

### Unsafe act leads to fatality

As edited from official UK Marine Accident Investigation Branch (MAIB report 1-2017)

→ While in port, the vessel's crew needed to shift some heavy steel crankshaft webs and steel pipes from hold two to hold one in order to put the vessel on an even keel and specific draught for its next port. Before the work began, the Master briefed the vessel's crew on the shifting manoeuvre, including the method, sequence, safety and roles of the crew during the task. He emphasised the importance of slinging each crankshaft web at equal distances either side of the mark indicating the centre of gravity of the unit.

The holds were illuminated by internal lighting and the deck and

quayside were floodlit. The crankshaft webs were lifted using two 12m endless webbing slings. Each unit was landed on the quay, the slings transferred to the forward crane's hook, and then the units were brought into the forward hold and lowered onto 15cm high pieces of wooden dunnage.

After three hours, the ninth crankshaft web was being lowered into hold No 1, but it did not land square to the hold's port side bulkhead as intended. The crane driver had slackened the slings but the chief officer (CO) informed him via his VHF radio that the crankshaft web needed to be repositioned. The CO climbed onto the top of the crankshaft web, held one of the slackened slings with his right hand and instructed the crane driver by radio and then by hand signals to heave up slowly. Meanwhile, another crew held the slings on the inboard side of the crankshaft web to prevent them from moving out of position. As the slings tensioned and the crankshaft web started to lift, the web and/or one of the slings suddenly jolted causing the CO to fall into the hole in the centre of the crankshaft web. The crane driver was alerted via VHF and he slackened the slings; the victim was quickly attended to.

The victim received medical attention in a timely manner, but he nonetheless died as a result of numerous injuries.



Simulation of CO just before fall



Simulation of CO after fall

### Lessons learned

- Standing on top of the crankshaft web was inherently unsafe and unnecessary.
- In the heat of the moment and with a 'can-do' attitude, the risks of standing on a load under tension were not recognised or intentionally flouted.
- When events start speeding up, step back and slow them down.

### MARS 201736

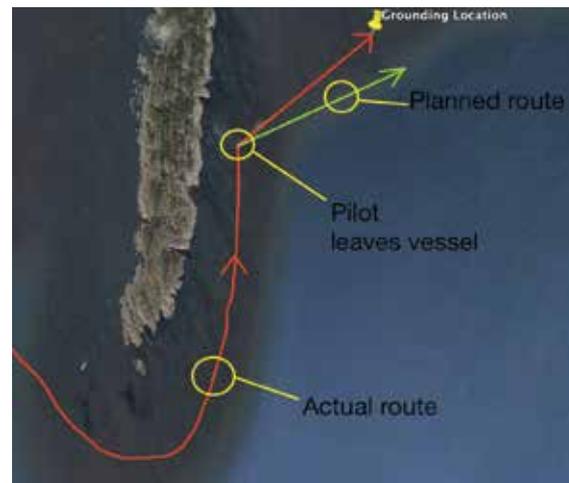
## Vessel grounds on reef at 10 knots

Edited from Swedish Accident Investigation Authority official report no. RS 2016:10e

➔ Outbound in the darkness of early morning, with strong westerly winds and seas, it was decided to disembark the pilot on the eastern shore of a peninsula that would offer a good lee for the pilot transfer

operation. Just before disembarking the pilot instructed the Master to steer 045° when he disembarked to shelter the pilot boat on the leeward side of the vessel. The pilot did not inform the Master of the new heading the vessel should steer once he had disembarked, although this was self evident from the vessel's position and planned route.

The OOW accompanied the pilot down to the pilot ladder while the Master was left alone on the bridge. Shortly after the pilot had embarked the pilot boat it was noticed that the vessel had not made the necessary turn to starboard and was instead continuing on a north-easterly heading. The pilot boat issued a warning that the vessel should turn immediately to starboard and come onto an easterly heading. The vessel responded that they intended to turn to 060° but the pilot boat again warned them to come to 'heading 090°'. The vessel repeated 'OK 090°' and the pilot boat then set a course north towards shore.



The vessel turned to a heading of 067° and then, some minutes later, grounded hard at a speed of nearly 10 knots on a known and charted reef.

The vessel suffered severe damage to the bottom of her hull and tank top, including her frame and bottom beams and girders. Damage was so severe that following re-floating and temporary reinforcement work in port lasting several weeks the vessel was considered a total loss; the vessel was towed to a nearby shipyard and scrapped.

### Lessons learned

- When navigating near land, reefs and other dangers, the top priority is knowing your position and your course made good versus the navigational dangers.
- If you are unsure of your position, slow down or stop.

### MARS 201737

## Crew member loses part of thumb by ignoring LOTO

➔ A lone crew member was about to do some maintenance on a ventilation duct fire closure for the hold. As he started to open the ventilation door the cargo hold ventilators were switched on by someone else in another location. This caused the ventilation door to suddenly be sucked closed. The crew member's thumb was trapped between the handle of the cleat and the door frame causing the thumb to be severed above the first joint.

### Lessons learned

- Always lock out, tag out (LOTO) before attempting a job. LOTO, in this instance, may not be self evident but any job that risks a potential release of energy should be LOTO.

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