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Seaways

The International Journal of The Nautical Institute

Making anchorages safe

What does a Master look for? p8

The Nautical Institute

Philip Wake MSc, FNI Chief Executive

Focus

Mentoring and CPD

> Providing a budget, as well as time, for CPD gives a strong message that it is fully supported and important but there are plenty of opportunities for CPD and mentoring which do not cost money

There are many ways of receiving knowledge: from a teacher/trainer in a formal classroom or lecture hall; from paper exercises through to the use of simulators in the modern era; self-study using books, computer based training (CBT), videos or the internet; and personal interaction with experienced people ie coaching or mentoring. Many of the articles in *Seaways* are, in effect, mentoring as they are passing on experiential learning from the author to the reader, even though there is no direct personal contact, as in most mentoring. Such articles are of course also Continuing Professional Development (CPD) if read, reflected and acted upon.

The author of the excellent book on *Mentoring at Sea – the 10 minute challenge*, Captain André Le Goubin, which the Institute was delighted to publish, provides a very practical and helpful article on Safe Anchorages and their use (see pp 8-10). This should be required reading for all Masters and chief officers as well as their employers, Harbour Masters and other port officials. It also ties in with a MARS report (see p 19) where the ship's staff remained in control of the situation by being alert and professional to avert a sub-standard equipment problem which they had no way of discovering.

More reports for MARS from seafarers and companies would be most welcome as they are such a rich source of learning for all mariners. They do not need to be long with all lessons learned identified and they are disidentified to ensure complete confidentiality. We have all been involved in countless hazardous incidents and probably we have all had some experience of accidents, so please take a little time to report them to the Editor of MARS (mars@nautinst.org). Far better that we learn from 'near miss' reports rather than having to wait for actual accident reports and the results of an official investigation, many of which take a long time to be completed and barely see the light of day. Similarly, we need your input on container weights as we try to assist the IMO in tackling misdeclaration and dangerous practices (see p 11).

Another excellent contribution from a member of the Professional Development Committee, Captain Reuben Lanfranco, focuses on the need for trainers to engage in CPD for themselves (see p 12). He correctly identifies that this CPD needs to cover teaching/training practices and requirements but he also emphasises that keeping up-to-date with changes in the maritime profession is equally important.

This would probably seem obvious to most of us but over the years HQ staff have had many discussions at nautical colleges on this very subject and been told candidly that their staff will only do what is mandated, which tends to be the CPD to keep their teaching licence. The colleges felt unable to make maritime professional CPD a requirement or even to build it into an appraisal system. We are sure that such an attitude does not apply to many dedicated professionals in many colleges – but that it applies at all is a poor reflection on our industry and a disservice to the people we are tasked to bring into the industry and train. So, if you are working in a college or other training provider, please read this article and reflect on whether you are doing enough CPD to be really effective in your role. Similarly, if you are the Principal or Head of Department, are you doing enough to promote and enable CPD for your staff?

Providing a budget, as well as time, for CPD would of course be helpful and it certainly sends a strong message that CPD is fully supported and important. Nevertheless, there are plenty of opportunities for CPD, and indeed mentoring, which do not cost money. The activities of our branches are a shining example of this (see pp 29-32) and not just at the seminars, meetings, or visits they arrange. The small team of volunteers on the committee gain a good deal of professional development and useful contacts in running the branch, organising events and working with other professional bodies, maritime businesses, and local or national authorities. We greatly appreciate this work for the Institute. A current prime example is the team organising the AGM Event in Sydney (16/17 June – see p 14) where we look forward to seeing many members.

Career development may well result from such voluntary work, and there is almost certainly no better example of this than the late Len Holder (see Obituary p 36) who had such a profound influence on the Institute, its Secretaries, and was a mentor par excellence. He will be greatly missed but his influence will live on.

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Mariners' Alerting and Reporting Scheme

MARS Report No. 260 June 2014

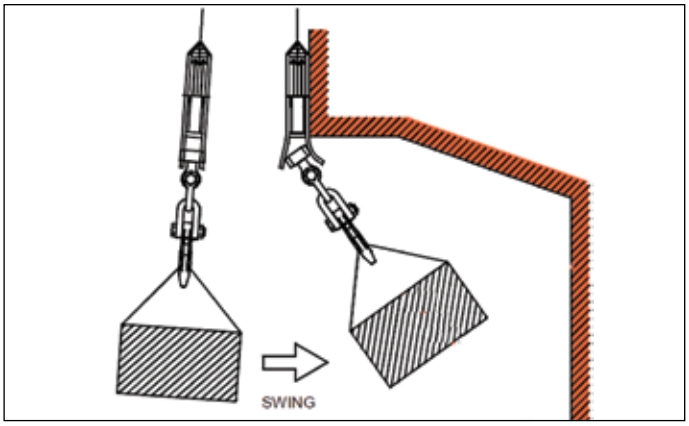
MARS 201430

Cargo block opens

➔ During various cargo operations, two different manoeuvres have recently caused close calls where the cargo hook and associated equipment have fallen free.

In one, the crane operator continued lowering even though the cargo block became snagged on a structural plate in the corner of the hatch coaming. This damaged the cargo block by opening the cheek plates and could have caused serious consequences.

In the other case, the crane operator swung the lift, which subsequently caused the cargo block to impact the cargo hold. This subjected the cargo block to excessive force and deformed the cheek plates.



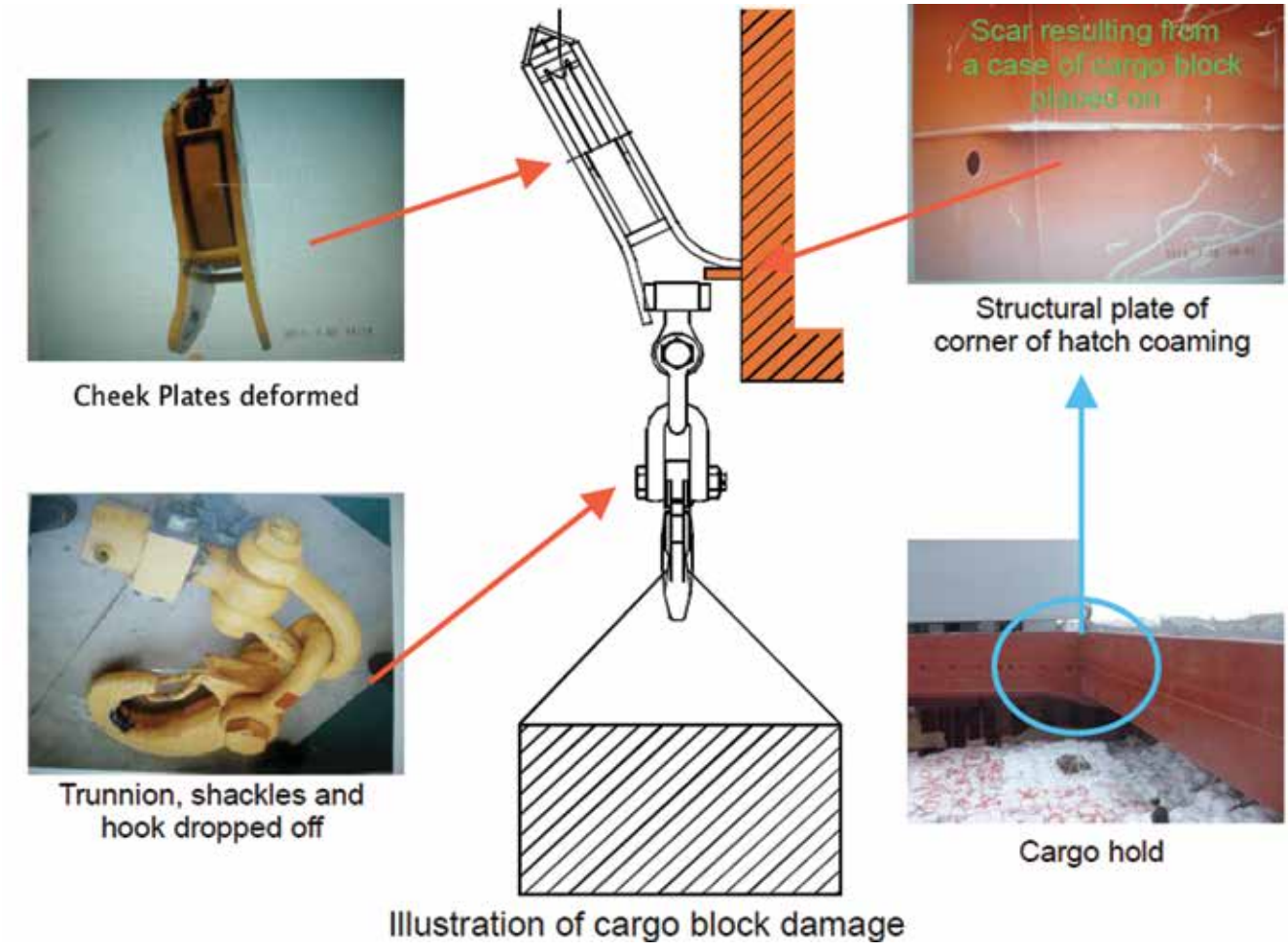
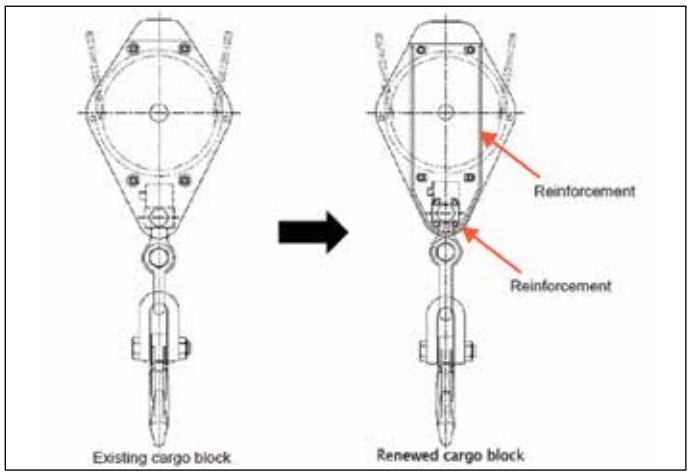


Illustration of cargo block damage

Lessons learned

- The crane operator should always watch the cargo lift and loose gears carefully, and should not make contact with the hatch or other structures.
- Stevedores should always watch cargo and loose gears carefully during slinging work and crane operation.
- As an added safety measure, the manufacturer recommended reinforcing the block with plates and bolts:



MARS 201431

Improvisation is a slippery slope

Edited from official Australian Transportation Safety Report 301-MO-2013-009

➔ The vessel was in port undergoing cargo operations. The stevedores stopped work for a shift change, and in the quiet period between the two shifts, one of the ship's seamen decided to grease the hatch landing pads around the open cargo hold (Figure 1). The chief mate and the bosun were apparently not advised of the work and permission had not been obtained.

As the new shift of stevedores began to make their way into the cargo hold, the seaman was seen moving around the hatch coaming greasing the hatch lid landing pads. Suddenly, he slipped and fell, landing about 8.5 metres below on top of a container in the cargo hold (Figure 2). The seaman was admitted to the local hospital and provided with medical attention, being discharged and repatriated home afterward.

According to the ship's crew, the greasing was normally carried out using an extended handle roller, allowing the work to be performed from the walkway. In this way, the crew are not exposed to the risk of falling from the hatch coamings.

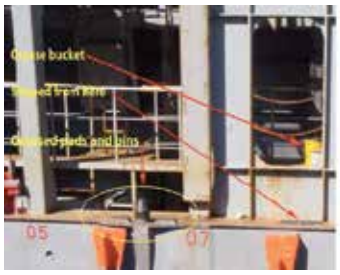


Figure 1

Figure 2

Of interest in this accident

The seaman decided on the spur of the moment to grease the hatch pads. Choosing to grease the hatch landing pads during the period between stevedore shifts indicates that he may have identified the hazard of containers moving past his position.

While he was showing initiative, the task was not appropriately planned, and he had not identified and mitigated the associated risks. Furthermore, the fall hazard was magnified by the application of grease to areas of the hatch coaming that he would be walking over.

Good communication requires a flow of information in both directions of the management structure. This is particularly important on board a ship where a number of independent work groups can be engaged in multiple tasks.

Safety message

This incident highlights the fact that people undertaking seemingly simple tasks with the best of intentions often overlook the planning and risk assessment stages. This is particularly the case when the task is undertaken when an unexpected and opportune moment arises to complete the task.

MARS 201432

1/2 an anchor = 1/2 your holding power

➔ A two-year-old Panamax tanker was at anchor awaiting berth space to discharge a last parcel of cargo. The anchorage area was clear of obstructions and far from shore, the sea bed consisting of mud. During the night the weather conditions were good with a NE'ly winds force 3 and currents were not very strong. These conditions led us to believe that the anchor would hold well.

However, during watch handover the 2/O informed the relief that the vessel had dragged about half a cable to the SW. Subsequent monitoring of the vessel's position confirmed a slow drag but luckily the pilot was due on shortly. As the anchor was lifted the bosun informed us that one fluke was missing. Everyone was amazed that a fluke from an anchor weighing 10,500kg had been broken in such benign conditions.

Once the anchor was on board everyone was very surprised to see the condition of the steel. Incredibly, we even found small pieces of rags trapped by some cement or plaster within the cast metal. A few weeks later, after the suspect metal had been analysed in a laboratory and a follow-up investigation done, we were informed that some anchors produced for the shipyard where our vessel was built had casting failures so bad that they were 'corrected' prior to final inspection and delivery to the shipyard.

■ **Editor's note:** Even at a safe and benign anchorage a watchkeeper must always be vigilant and check the vessel's position often. Also, use your anchor alarm if so equipped. Anchors and chains, even relatively new ones, can break at any time due to bad assembly or manufacturing faults.

MARS 201433

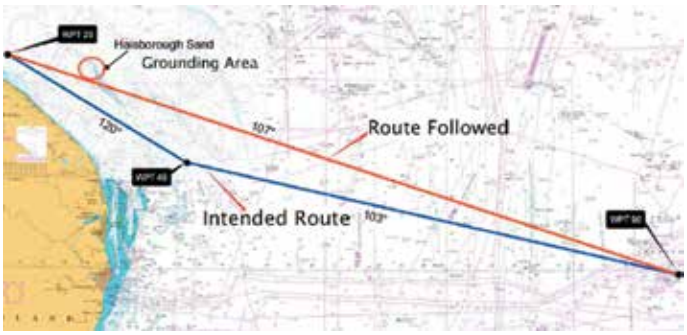
6-on 6-off strikes again

Edited from official UK Marine Accident Investigation Branch report 4/2014

➔ A small general cargo ship was in ballast and bound for Amsterdam, the Netherlands with a speed over ground (SOG) of approximately 7.5 knots. At 2355, the chief officer took over the bridge watch from the Master, both sharing the watch-keeping duties using a 6-on, 6-off routine. At this time the vessel was on autopilot and heading 110°. An AB was also on watch but he was told by the chief officer that he was not required on the bridge so he returned below. The vessel was rolling in the rough seas and the chief officer predominantly remained seated, monitoring the vessel's progress against the navigational track on the radar. During his bridge watch, the chief officer completed some administrative tasks on the ship's computer but did not plot the vessel's position on the paper chart. At 0256, the vessel's speed decreased rapidly as the vessel started to take the ground. Soon after, the chief officer had put the main engine to full astern but the vessel was now stationary. The Master was quickly on the bridge and moved the engine telegraph to stop. He noticed the GPS was indicating that the vessel's position was close to the track on the display. He also noticed that the destination was waypoint 90, not waypoint 48 as he had expected. The Master plotted the position displayed on the GPS receiver onto the paper chart and thus confirmed that the vessel was in very shallow water on Haisborough Sand.

In the incident report forwarded to the ship's manager after the vessel was re-floated and had anchored, the Master stated that the chief officer had experienced a problem keeping the vessel on course. He reportedly had changed from autopilot to hand-steering to emergency steering, but this did not solve the problem. The chief officer had called the Master to the bridge, sent the chief engineer to check the steering system, sent seamen to open the ventilation flaps to allow the use of the bow thruster and to prepare both anchors for letting go. The Master also stated that when he arrived on the bridge, he checked the steering but the vessel was drifting onto a shallow bank. The incident report also included the chief officer's account, which accorded with the Master's description of events and a report from the AB on watch which stated that he had been on duty on the bridge between 0000 and 0400.

Subsequent investigations proved this story to be false.



Some of the conclusions from the official report:

- The vessel departed from the intended route because the waypoint selected as the destination in the GPS did not follow the sequence of waypoints detailed in the voyage plan.
- The chief officer did not notice that the vessel had deviated from the intended route because he relied solely on GPS and did not verify the course the vessel was following or plot the vessel's position on a paper chart.
- The chief officer probably fell asleep for an extended period; he was alone on the bridge and the bridge watch alarm was switched off.
- The circumstances of this accident together with the lack of integrity shown by the Master and chief officer in trying to hide the true sequence of events indicate a lack of a safety culture on board.

■ **Editor's note:** The navigation practices on this vessel leave much to be desired and as indicated in the official report, the safety culture was demonstrably weak. But the fact that the vessel was staffed with only two watch-keepers using a 6-on 6-off routine was not the fault of the ship's personnel. Following an accident or incident it may be tempting to try and re-work the facts in order to save face, but this is not a service to anyone, especially yourselves. The unsafe conditions that are at the root of every accident can only be discovered if you tell the truth. Most often, these unsafe conditions are not the fault of the vessel's crew but ultimately stem from management and company leadership.

MARS 201434

Costly mis-communication

Edited from Norwegian Club Casualty Letter No 94

➔ Some 20 minutes after departure the cargo vessel's main engine oil mist detector alarm sounded while the engine was at full ahead. The oil mist detector could not identify the cylinder unit causing the alarm and it was not connected to a shut down function. Hence, the engine crew tried to identify which unit was the problem while maintaining full ahead RPM. Subsequently, the main engine low lube oil alarm sounded. After communicating these problems to the bridge, the Master considered it inconvenient for the vessel to stop and the vessel sailed for approximately two hours before they finally stopped the main engine. It was subsequently found that the main engine had suffered severe damage to the big end bearings and required renewal of the crank shaft; repairs that cost in the order of $1 million and left the vessel off-hire for more than 40 days.

The same vessel suffered a similar occurrence a few years earlier and sister vessels have also suffered similar crank shaft failures.

Lessons learned

From a technical point of view, the engine crew appears not to have taken the proper action when the oil mist detector alarm sounded or when the low pressure alarm sounded later as they maintained the engine RPM and load. There may well be specific reasons for their actions, but what would you do on your vessel in a similar situation? Would your engine crew be able to see the possible consequences of their actions?

Do your engine crew communicate openly and with reasonable clarity for a non-technician on the bridge to appreciate the situation they are facing in the engine room?

Does your chief engineer effectively communicate the criticality of his engine condition in order for you to balance this information with considerations for the safety of the vessel (location, currents, weather, traffic)?

Do your Technical Managers inform you of relevant situations on other vessels in your fleet, or of sister vessels with problems that may well happen to you?

MARS 201435

Water mist problems – revisited

➔ A 1600 GT vessel built in 2006 was fitted with a MARIOFF high pressure water mist fire suppression system throughout the vessel. At a routine maintenance and test programme, 22 of the 'wet pipe' system sprinkler heads were found to be faulty and would not have operated had the system been activated in an emergency. A photograph of a typical head is shown, with an example of a contaminated spindle.

Investigations identified:

- The manufacturers had issued a bulletin in June 2012 identifying risks of contamination of the spindles and heads due to poor water quality, but this was not appropriately disseminated or shown on their web site. Water dosing and testing was recommended.
- The manufacturers had issued a second bulletin, also in June 2012, recommending that at least two heads from each section should be tested annually but again this was not appropriately disseminated or shown on their web site. Investigation showed that the manufacturers' own technicians did not always follow the bulletin, often only testing the pressure drop on the system by using a drain valve rather than testing a head, or removing heads ashore for testing (this would not always identify failures as the heads would be disturbed as part of removal etc).
- The manufacturers had issued a third bulletin in May 2013 recommending increasing the standby water pressure from 25 to 40 bar to ensure that the spindles were operated when the system operated. Again this appears to have not been appropriately disseminated.
- Certain flag authorities had issued information highlighting other failures, up to 50%, found on water extinguishing systems and the need for regular testing/maintenance.
- IMO MSC.1/Circ.1432 does provide some guidance on this issue.
- It is considered that there is a high risk that the system will not work as required in an emergency unless all sprinkler systems, including the water within the system, is correctly maintained and tested.

■ **Editor's note:** MARS 201414 was also on the topic of inoperable water mist suppression systems, although in that report the problem was due to many systems having been found with their main water supply valve closed.

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.

Editor: Captain Paul Drouin AFNI

Email: mars@nautinst.org or MARS, c/o The Nautical Institute, 202 Lambeth Road, London SE1 7LQ, UK

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