

Seaways

The International Journal of The Nautical Institute

Pilot training

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Research, plan, record, reflect



Focus

Port Approaches and Operations

“ It is the duty of any professional to strive for increased knowledge, experience and improved application ”

A few years ago we published an excellent article on Parallel Indexing (PI) and received some negative comments along the lines that we were wasting publishing space on a technique that had been around since the early radar observer's courses of the 1960s. The implication was that everyone trained since then would know all about PI. We begged to differ as casualties were occurring in circumstances where the use of PI would have averted the loss. There was then and there still is now a compelling need to ensure the navigator knows about PI and how to effectively use it on the bridge equipment of today. It is good to see the subject being explored on our LinkedIn discussion forum and Captain Paul Whyte provides further detail in a helpful way (see pp 21-23).

It is certainly a technique that the bridge team should be utilising in pilotage waters to monitor the actions or advice of the Pilot who may or may not have been as well trained as those in The Netherlands (see pp 8-11). In this article, Ed Verbeek provides a concise explanation of the process of qualifying and gaining experience as a Pilot under the Dutch system which will be very helpful for those members contemplating this career move. Many training and qualification systems for pilots around the world will no doubt be similar to the Dutch system and therefore informative to potential trainees. However, to those responsible for pilotage services at national or local level it may provide pause for thought. Are your training systems comprehensive? Could they be improved? As Mr Verbeek says, "Being a Pilot is something quite different from being a Captain with local knowledge".

The importance of getting both the above professional aspects, accurate navigation and effective pilotage, right is highlighted in two MARS reports this month – see p 17 and 19. Both show the importance of good communication and integrated management of port services to meet the requirements of a safe port, including accurate hydrography information. Members are encouraged to report any discrepancies in chart data

to the appropriate Hydrographic Office.

Continuing the port services theme and again from The Netherlands, two members and a potential member report on a Working Group that was tasked to look into safe tug procedures following a fatal accident in November 2010 (see pp 12-14). Bow to bow operations are of particular concern and have featured in a number of recent casualties but the Working Group considered operations generally and came out with concise recommendations on the following indispensables:

Training – Experience – Communications – Safe Procedures.

It was ever thus and the same mantra could and should be applied to all maritime operations.

CPD Online

All of the above topics are an integral part of Continuing Professional Development (CPD) as it is the duty of any professional to strive for increased knowledge, experience and improved application. We are therefore pleased to announce the launch of the new CPD portal for members. It is simpler and easier to use than our previous attempt to provide such a service, which was withdrawn and the contract cancelled, as it was clearly not meeting members' needs as shown by its lack of use. Feedback identified its complexity and lack of user friendliness as factors and we have learned from that. The new portal has been designed exclusively for our members and is fully supported by NIHQ resources led by the Professional Development Committee. Regular articles focusing on CPD will be published to raise the awareness of the benefits of these activities to you and employers as well as how to undertake them. We have also produced a CPD Certificate to be issued for participation in all NIHQ or Branch organised events, as will be the case at the AGM Seminar in Colombo on 31st May and 1st June. Sign in to the Members' Area of the website and start using the facility today. Please also provide us with your feedback on the portal so that it too can benefit from CPD. 🌐



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p8



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Mariners' Alerting and Reporting Scheme

MARS Report No. 248 June 2013

MARS 201325

Preventable slip/fall

➔ While at anchor the engineer on watch (EOW) advised the motorman to remain in the engine control room while he went to replenish the compressor oil. Shortly thereafter the motorman heard a shout from the EOW. The motorman rushed to see what had happened and found the EOW lying at the bottom of the steps in great pain. He immediately went to the control room and raised the alarm.



An examination of the injured engineer showed that his knee and left elbow were heavily bruised. He also had severe pain in his back and was unable to move on his own. He was brought into the engine control room where first aid was administered. Arrangements were then made for him to be taken ashore for further medical treatment.

The ship's investigation found that the EOW had descended the ladder with one hand on the railing and other hand clutching a one gallon can containing compressor oil. As he descended the ladder his



foot slipped on the fourth step. The EOW tried to hold on to the railing with his free hand but was unable to control his fall and ended up tumbling 15 steps down to the next deck. The victim was wearing a safety helmet which probably helped prevent a head injury.

Corrective Action:

After the incident, all crew were assembled and the importance of properly using ladders and stairways was reiterated by the Master. They were reminded that whenever going up or down a ladder, both hands are to be used to hold the railing. Any items to be transferred should be carried in a bag that allows both hands to grasp the rails or lowered using a bag/bucket and line.

■ **Editor's Note:** I'm sure everyone reading this report can relate to the circumstances – we have all taken shortcuts at one time or another when on the job or even at home. We just want to get the job done. Most of the time, there are no unwanted consequences. But, sooner or later an accident will happen and it could be very serious. Lead by example – always undertake a task by following procedures and best practices.

MARS 201326

Port buoyage and pilotage issues

➔ The Master of a vessel calling at an important port in southeast Asia reported the following worrying observations about his experience:

Although the chart has a warning regarding accuracy of surveys and use of GPS, many of the navigational aids are either missing, unlit or different from what is marked on the chart. There are also some cardinal buoys and fairway buoys which are either missing or unlit. During our night time departure the Pilot advised to keep a lookout for an unlit fairway buoy to avoid colliding with it. Ultimately, this required altering course to pass through the anchorage and between other vessels rather than around the anchorage. Also during departure, communication between the Pilot and tugs broke down due to faulty radios.

Communication with the Pilot was found to be difficult and fraught with miscommunication and confusion. As if this was not enough, due to a nearby busy navigational bottleneck area, both the port and pilot use VHF 16 as their working channel; needless to say there is a lot of chatter and undesirable communication on this frequency. It was also found that the tugs in use at the port are old and unable to perform adequately. Finally, being open to the bay, certain berths at the port are not adequately protected from the predominant winds and tide rips.

■ **Editor's Note:** Even the best of passage plans could not have foreseen all of these stumbling blocks. Yet, a detailed passage plan allows for the best situational awareness under the circumstances and the ability to better judge risks, even as events occur.

While the name of the port concerned has been redacted from this MARS report for the sake of confidentiality (to respect the MARS mandate), industry officials have been advised by the NI in the hope that the major non-conformities and safety concerns revealed here can be addressed or mitigated. Masters and mates are reminded of the importance of informing the hydrographic authority responsible for the charts used of any discrepancies between actual conditions observed

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and those reflected on the chart, such as buoy positions or soundings. Contact information for the hydrographic authorities can usually be found in the Notice to Mariners or the website. The mariner is a vital link to ensure that charts are kept up to date.

MARS 201327

Lack of 'Safety Leadership' leads to a confined space close call

Report edited from a Health and Safety Executive (HSE) Press release, March 2013.

→ Two men, one aged just 17 and both untrained in enclosed space entry, had been tasked to carry out cleaning and welding work prior to repair work going forward in a small vessel's fuel tank. The tank, 4.5m long and 2.25m deep, was accessed through a small manhole from the vessel's net store. The two men were told to use buckets to empty the tank's residual seawater and diesel (approximately 600 litres), and then rags to clean the inside in preparation for the welding repair.

On the first day, the two workers wore normal work overalls and had no face masks. In order to provide some respite from fumes and the cramped working space they swapped roles regularly in the tank. One recalled having a heavy feeling in his chest and finding it difficult to breathe when he was in the tank. He said he felt dizzy and faint.

The next day, the two men prepared the inside of the tank for welding work. One man used a grinder, causing sparks to fall on his workmate, who was holding a lamp to illuminate the work. This grinding created significant amounts of fumes. At one point the two men, finding the working conditions less than adequate, abandoned the job and contacted staff at the port harbour office for advice. The Harbourmaster visited the vessel and halted further work after the company failed to provide documentation and permits to show the tank was safe to work in.

Findings:

- 1 A gas monitor was not used before and during the work to measure available oxygen in the tank and no gas-free certificate was obtained before beginning the task.
- 2 An ordinary electric fan was used inside the tank to blow the fumes out (on the second day) but was ineffective. A second fan was also put outside in the net store. Neither of these fans had an extraction hose fitted, so were ineffective and just blew the fumes about.
- 3 Both men were unsupervised, largely untrained and unfamiliar with the tank work they were undertaking.
- 4 The company had not considered the need to provide any rescue equipment such as harnesses, lifelines or lifting equipment or other appropriate emergency arrangements.
- 5 No safety watchman was stationed at the entrance of the confined space while work was ongoing.

Lessons Learned

- 1 Lack of preparation for the work could have led to tragedy. The tank should have been thoroughly steam cleaned or jet-washed instead of being bucketed out and mopped with rags.
- 2 Only good luck had prevented an accident in this case. Had the diesel fuel residues been sufficiently heated they would have created fumes which could have led to an explosion or fire.
- 3 All employers involved in confined space working must consider their activities properly, train and equip staff sufficiently, and reduce and control risks as much as possible. Any confined space work should be considered high risk.
- 4 One of the workers was a young man just beginning his working career. Young people at work need extra training, supervision and guidance and sometimes restrictions on what they are allowed to do.

- 5 When in doubt, stop work and seek help and advice. If your direct supervisor is not of any help, try and consult his boss or an outside authority. In this case it was the Harbourmaster but on a vessel at sea, the Master or DPA can be consulted.

■ **Editor's Note:** In this case no serious consequences resulted but confined space casualties continue to be a blight on marine activities - yet they are entirely preventable. By following the enclosed space best practices found below risks will be reduced to levels as low as reasonably practicable (ALARP level).

<http://www.hse.gov.uk/pubns/indg258.pdf>

<http://www.maritimenz.govt.nz/Publications-and-forms/Commercial-operations/Shipping-safety/Safety-updates/Issue21-mnz-safety-bulletin-september-2009.pdf>

[http://www.imo.org/KnowledgeCentre/IndexofMOResolutions/Documents/A%20-%20Assembly/1050\(27\).pdf](http://www.imo.org/KnowledgeCentre/IndexofMOResolutions/Documents/A%20-%20Assembly/1050(27).pdf)

Two conditions, each complementing the other, should be in place to prevent an event such as that described above.

- 1 Workers should be properly trained in the risks of confined spaces
- 2 The employer must demonstrate due diligence and safety leadership when planning and assigning tasks.

MARS 201328

Phenol exposure

→ After berthing at the terminal a pre-transfer safety meeting was carried out. It was agreed that cargo tanks, once loaded with phenol, would be padded with nitrogen. After approximately 10 hours the loading was complete and nitrogen padding was subsequently undertaken. However, at this critical juncture it was not verified that the cargo lines were cleared and free of any residual cargo.

Immediately after completion of line blowing the manifold valves were sealed by the cargo surveyor. This had not been discussed initially during the pre-transfer meeting with the ship's staff.

The Pilot boarded the vessel one hour after the nitrogen padding manoeuvre, shifting the vessel to anchorage. The next day as the vessel was awaiting instructions, it was found that the transverse sections of the cargo lines loaded with phenol were frozen. Preparations were undertaken to clear the lines; an AB and an OS along with a cadet were assigned to assist the chief officer. The chief officer felt that since he was supervising the operation from a distance it was not necessary for him to wear any cargo specific PPE. The OS who was directly handling the valves was wearing coveralls, a chemical suit and a face shield. The other two crew members were wearing basic PPE and were standing aside at some distance.

One tank line was cleared in a couple of hours and then the steam hose was shifted to next manifold line. Upon opening the bottom drain of the manifold it was found that the line was blocked with cargo. Since the manifold valves were sealed by the cargo surveyors, it was decided to connect the steam hose to a plug on top of the line in order to clear the drain valve. Upon opening the top plug there was a sudden spray of liquid phenol and fumes as the line was under pressure due to the nitrogen padding of the cargo tanks. The OS who had removed the plug received some phenol fumes inside the face shield and inhaled a small amount of fumes. A small quantity of phenol also landed on the left sleeve and side of the neck of the Chief Officer who was standing about 5-6 m away from the manifold.

The emergency shower was immediately used for decontamination and exposed clothes were also removed. After washing the area thoroughly, polyethylene glycol was applied to the exposed skin. The chief officer experienced a burning sensation to the skin and OS experienced irritation of the throat. As a precaution both crew members were sent ashore for treatment and evaluation where they were later found fit for duty.

Lessons Learned

- 1 The pre-transfer safety meeting should include all the necessary steps and precautions and these should be discussed and documented.
- 2 Cargo lines must be promptly and properly blown through upon completion of cargo operations to avoid freezing of cargo / blockage of lines.
- 3 If cargo lines are found to be blocked any attempt to clear the lines should only be made after a proper risk assessment has been undertaken and vetted by the company shore superintendent or DPA.
- 4 All crew members and officers must be well briefed about the cargo being carried and the PPE to be worn. The emergency procedures also must be discussed prior to arriving at the berth.
- 5 All ship staff must be aware of the Material Safety Data Sheet of the products on board and specifically the measures to be taken in case of accidental release of the product so that immediate action can be taken by ship staff.

MARS 201329

Unpublished draught restrictions lead to grounding

→ The vessel arrived in port to load 5000 tonnes of tallow and take on bunkers. Loading and bunkering operations took place over approximately 25 hours and all appeared normal, with the loaded draught finishing at 9.70 m. However, at the end of loading it was noticed that the vessel had a slight list to port.

A check of the port side double bottoms confirmed they were empty. A lead line sounding over the side on both port and starboard sides revealed that vessel was now sitting on the harbour bottom on her starboard side.

Although the official nautical chart (BA 3188) indicated an available depth of 11.83 m, it was discovered that the draught allowed at this berth by the port authority was restricted to 9.44 m.

Notwithstanding this local restriction, no Temporary or Preliminary Notice to Mariners had been published to officially notify mariners. However, the restriction was posted to the pilotage website. It was later determined that the local draught restriction was not communicated to the vessel by either the pilot, agent or the harbour authorities. Neither was this restriction discussed by the terminal representative during the safety meeting prior to loading.

During preliminary contacts with local ship's agent, the draft restriction was not mentioned because the ship's berth had not yet been designated (three possible berths).

■ **Editor's Note:** Even such basic information as water depth restrictions at a certain berth can sometimes slip through the cracks. Humans being human – mistakes of this nature are possible. This is the advantage of a thorough Master/Pilot exchange and the completion of a berthing checklist that includes expected loaded draught as well as the depth of water available at the specific berth. This information should be shared with and validated by the pilot and the loading facility.

MARS 201330

Danger of fake fire extinguishers

Edited from U.S.C.G Alert 01-13

→ Counterfeits of US Coast Guard approved portable fire extinguishers manufactured by Amerex Corporation and Buckeye Fire Equipment have been discovered. Both companies are major producers of genuine approved fire extinguishing equipment and serve a worldwide market.

These counterfeit extinguishers present a significant safety hazard as their capability to extinguish a fire is unproven;

- 1 they may be charged with a powdery substance that is not a fire extinguishing agent
- 2 the pressure cylinder is not DOT approved, and
- 3 the pressure gauge may not function or give false readings.

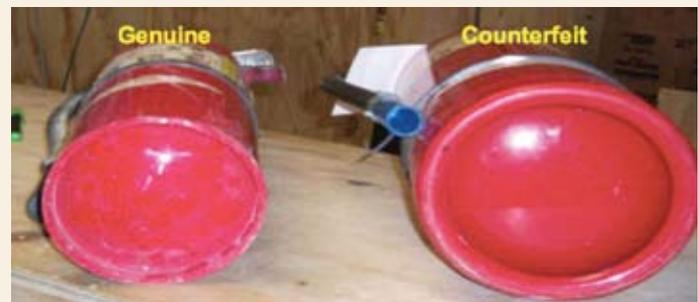
The dry-chemical counterfeit extinguishers are size B-II and may be identified by several distinguishing features:

Counterfeit units may have duplicate serial numbers. Genuine approved extinguishers will have a unique serial number for each extinguisher. For counterfeit Amerex extinguishers, the serial No V-654690 has been reported. There may be other serial numbers used on the counterfeits. For counterfeit Buckeye extinguishers, the serial No K-094927 with a red handle and serial No YM- U76222 with a black handle have been reported.

The labels on counterfeit extinguishers may be printed simplistically. Labels on genuine approved extinguishers will include a security imprint/texture behind the UL LISTED logo. Genuine Amerex Corporation extinguishers will have a pattern of scored 'circles'; (see below) and genuine Buckeye Fire Equipment extinguishers will have the letter S scored into the label.



The bottoms of the counterfeits have a rounded curved-in lip as shown on the right side of the image below. The bottom of a genuine Amerex extinguisher is shown on the left side of the image. Genuine Buckeye extinguishers will have a date stamped on the bottom.



The counterfeit extinguishers have been reported to have black or red plastic handles (see A below). Genuine approved dry-chemical B-II extinguishers typically have handles that are constructed of silver-coloured aluminum (although there are some with plastic handles). Pressure gauges on the counterfeit units may be the wrong colour. The gauges on genuine approved Buckeye dry-chemical extinguishers will have a red background. Counterfeit extinguishers may have welded seams on the sides of the cylinders (see B, right).

■ **Editor's Note:** If you think you are getting a price that seems too good to be true, it is probably because it is too good to be true. There is no substitute for properly approved, quality equipment.



MARS 201331

Ballast water violations – finding the truth

→ A vessel arrived in port to discharge her cargo of chemicals. The same day, the Master was summoned to the Harbourmaster's office for an alleged violation of the local ballast water regulation. He was somewhat surprised, as the ballasting plan had not been to discharge any ballast – quite the contrary, it was to take on ballast as they discharged cargo. Prior to attending the meeting, the Master asked the OOW if they had carried out deballasting, and the OOW confirmed that they had not.

Once with the Harbour Master the vessel's Master was shown photographic evidence that clearly showed ballast water being discharged from the ship. Based on this evidence the Master had to acquiesce and issued a statement to the Port Authority that no further violation of local rules would take place.

On returning to the ship, now armed with additional information, the Master again questioned the OOW about deballasting. He was then told that ship staff had inadvertently set up the ballast line and valve setting for deballasting instead of ballasting, and yes, some deballasting had inadvertently taken place.

All officers concerned knew it was contrary to local regulations to deballast, as the Master had told them this prior to discharge and it

was not a planned manoeuvre in the cargo discharge plan. But an error had been made – yet, the persons involved were reluctant to admit the truth.

Lessons Learned

- 1 Deballasting in port can have serious administrative consequences if it is not done according to the rules. Although the International Convention for the Control and Management of Ships Ballast Water & Sediments (BWM Convention) is not yet in force, coastal states and local ports may have their own ballast regulations that must be followed.
- 2 Ballast lines and valves should be clearly marked and ballasting processes well documented. Double check all line-ups before pressing 'pump on'.
- 3 It is ALWAYS better to come clean with the truth in the first instance rather than weave a web of lies or let the error remain unreported. Reporting errors, close calls or minor incidents is the basis of a strong safety culture. Not reporting has the effect of undermining safety and "doubling-down" on any unwanted consequences.

■ **Editor's Note:** I have personal knowledge of a similar ballasting error where the Master, in an attempt to hide the mistake from authorities, actually made false log book entries. The ballasting error was discovered nonetheless and both the ship and the Master were fined – not for the ballast non-conformities but for the false log book entries.

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.

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The Nautical Institute gratefully acknowledges sponsorship provided by:

American Bureau of Shipping, AR Brink & Associates, Britannia P&I Club, Cargill, Class NK, Constellation Marine Services, DNV, Gard, IHS Fairplay Safety at Sea International, International Institute of Marine Surveying, Lairdsidde Maritime Centre, London Offshore Consultants, MOL Tankship Management (Europe) Ltd, North of England P&I Club, Sail Training International, Shipowners Club, The Marine Society and Sea Cadets, The Swedish Club, UK Hydrographic Office, West of England P&I Club.



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