Keeping on track
Why logging experience is key to shiphandling progress p06
I know many of you were expecting (and perhaps hoping) to be reading a message from our President Captain Duke Snider in this edition of Seaways. As a seagoing member Duke has been caught up in a long voyage and has been unable to get the communication access we had hoped – so please be patient until next month.

As we move further into 2018 the focus on maritime safety and professionalism remains at the forefront of our minds. The Nautical Institute, both at Headquarters and in our branches around the world. Our latest publication ‘Launch and Recovery of Boats from Ships’ is already proving popular, and I hope you will have seen this promoted in other media as well as in the January edition of Seaways.

The sinking of the tanker Sanchi in the East China Sea early in the year brought into sharp focus the perils facing navigators in congested waters and the need for best practice and professionalism on board our ships. While the world may have been focused on the spectacular fire, explosion and resulting pollution – there seems to have been little reflection on the lives of those lost in this tragedy including 30 Iranian and two Bangladeshi seafarers. Their families have been devastated by this incident played out on international media. The spectacle of a burning tanker makes headlines while the real misery brought about by deaths in the workplace gets scant attention. Our thoughts go out to those involved.

Our work in supporting professionalism in navigational standards continues strongly this year with our popular Navigation Assessors course going to locations including London, Liverpool, Aberdeen, with Chennai, Mumbai and Malta taking centre stage during February. We were especially pleased to see representatives from the Maritime and Coastguard Agency, the Marine Accident Investigation Branch and OCIMF at the recent delivery in London.

We are delighted by the support for this initiative and thank the participants and those involved with helping to host the sessions. Training people to encourage better standards in navigational practice is a real contribution to the industry and we will continue with the world-wide availability of the programme. Please look out for a course near you.

Events, both at a branch and international level are very important aspects of our engagement activities. One of the major events this year is the Technical Seminar that accompanies our AGM in Malta. I am very grateful to those leading experts who have committed the time and energy to prepare a range of interesting and stimulating presentations and discussion topics for the seminar. I look forward to some challenging discussion about the priorities of mariners and the continued challenges faced when dealing with both old and emerging technologies. I would also like to thank our sponsors who are supporting our engagement with industry and members in the heart of Malta, a maritime nation growing in presence and influence globally. Please see the details provided about the event inside this edition of Seaways (p27) and – as numbers are limited – be sure to sign up as soon as possible.

In a new initiative to help understand the lessons that can be learned from accidents and near-misses, The Nautical Institute has developed another in-house professional development course on ‘Incident investigation and analysis’. Designed to introduce the mariner and shore staff to the principles of accident investigation and the root cause of incidents, the course has already had a successful start in London. Delivered over two days, the programme engages the learner in a series of activities that will help in the gathering and assessment of evidence related to an incident. This approach will help foster an appetite for learning and continuing improvement so the near-misses of today may not become the accident of tomorrow.

The pilot course will run at the end of February and will be available for wider participation from April this year. For more information, see p 25.

Please remember to get in touch through our letters pages or by articles of interest to your area. We are here to support your career and your industry – so we look forward hearing from you.

Best wishes

John

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Providing learning through confidential reports – an international cooperative scheme for improving safety

Mariners’ Alerting and Reporting Scheme

MARS Report No. 304 February 2018

MARS 201807

New channel, new risks
Edited from UK P&I Club Circular 003/2017

- A new channel was dredged and buoyed in a river waterway, allowing a straighter route to a commercial port. However, several groundings in the new channel over a short period of time revealed that there were risks that were apparently unaccounted for.

  Initial investigations found some possible contributing factors including:
  - Charts did not correctly reflect the new channel;
  - The navigation aids initially installed were not sufficient to cover the new area;
  - The strength of the current, which is considerable;
  - Pilots lacked experience of the new channel.

  After consultation it was decided to decrease risks by adding three additional green side buoys in the new channel.

Lessons learned
- New configurations, new ways of working, or changes in the status quo bring new risks that need to be carefully evaluated.
- Redouble your vigilance when something new presents itself. Ask yourself, what can go wrong?

MARS 201809

Defective lifejacket lights
Edited from US Coast Guard Safety Alert 09-17

- Several sources have indicated that the water activated flashing lifejacket light on Alcares models Jack A1-ALK and Jack ARH-ALK may have operational problems before their advertised expiration dates. Inspections have discovered over 3,000 such lights with leaky batteries (see photo). Additionally, some had incorrect battery expiration labels.

  The US Coast Guard recommends that lifejackets with lights, especially those with automatic lights, be stored in environments where temperature and humidity are controlled. Visual inspections and tests must be conducted in accordance with vessel carriage requirements and manufacturer manuals. Vessel owners/operators should check their lifejacket lights to verify that they are operational at the nearest opportunity.

Lessons learned
- The design of gangways and associated areas is often less than adequate to allow crew to safely rig or stow the gangway. Evaluate your gangway arrangements to see if there are improvements to be made.
- If the lifejacket is not designed for fall arrest – and few are – then ensure the safety line is attached to a proper fall arrest harness. These will typically have specific ‘D’ clips on strong points either in front, in back or both, and have leg anchor straps.
- A false sense of security, as in this case, is a dangerous situation. It is an accident waiting to happen.

MARS 201808

Illusion of safety
Edited from CHIRP Maritime Feedback Issue No49 12/2017

- The crew were rigging the gangway, using inertia wire rope safety lanyards clipped to the webbing straps of their life jackets as fall protection. They believed they were acting safely. However, objective observations show that safety, in this case, was an illusion:
  - The lifejacket was not of a type designed for fall arrest. (The lanyard was clipped around the lifejacket strap and the strap around the torso.)
  - The inertia wire rope unit was not directly above the worker. If a crew member had fallen, they would have suffered a pendulum effect.
  - The wire was passed over a sharp coaming.

Visit www.nautinst.org/MARS for online database

Read Seaways online at www.nautinst.org/seaways
Lessons learned
- Check your lifesaving equipment as if your life depended on it. It does.
- Correct storage conditions for lifesaving equipment are crucial to ensure longevity and operational readiness.

MARS 201810

Heave up? Not so fast

The vessel, a regular caller at the port, was slipping mooring lines. The usual procedure for the release of lines had the Officer in Charge (OIC) standing at a vantage point or close to the rails to ensure proper visual contact with the shore and his crew. The OIC and crew communicated directly with the shore linesmen with visual signals. The crew lowered the forward breast lines for release by the shore linesmen. The OIC, assuming that the lines had been released, gave the signal to the winch operator to heave in. The winch operator commenced heaving, but the OIC then realised that one of the mooring lines was in fact still on the shore mooring post. He signalled to the winch operator to stop heaving and to release the tension. The line was then released by the linesmen and the un-mooring operation continued.

An analysis of the close call found that the OIC was not standing at the proper location for the task, nor was he acting in a supervisory role. He had become personally involved with retrieving the lines on deck. Because he could not properly see what was going on, he did not have positive assurance that all lines were released. Instead, he made an assumption that the lines had been released from shore, based on the elapsed time. Another aggravating factor was that the winch was operating at high speed instead of the standard practice of starting at slow speed. As a result, when the signal to stop was given the winch drum took longer to stop.

Lessons learned
- Before giving winch orders, ensure the action is indeed appropriate. Never assume.
- As an extra precaution when letting go, always wait for the linesmen to leave the immediate vicinity of the bitts before heaving in.
- If you are overseeing an operation, resist the temptation to get involved yourself. You will lose your overall appreciation of the situation.

Editor’s note: In this incident, no one was injured or killed and no machinery was damaged, yet it was reported as a close call and important lessons were learned. This illustrates the importance of a strong reporting culture; we should not have to wait for dire consequences in order to learn lessons from the events.

For more insight, readers are invited to read the Seaways article April 2013 on Reporting Culture, which can be found in the April 2013 issue, or at the following URL:

MARS 201811

Knee cap injury due to high localised winds

A crewmember was doing his rounds on deck on an LNG vessel underway. Although winds were relatively strong at 40 knots (43 knots relative on deck), the crewmember felt safe as rolling was minimal and, with a high freeboard, water was not washing on deck. However, the decks were somewhat wet from rain.

As he made his way past the juncture between two LNG tanks he met localised winds that were so strong he was blown uncontrollably between the tanks. He was forcefully slammed into the ship’s structure and his knee hit the steel, breaking his kneecap.

After first aid the crewmember was evacuated to a shore hospital. A steel pin had to be inserted in his kneecap.

After analysis of this incident it was decided to apply non-slip paint on the upper deck passageways between the tanks. It was also agreed to increase the ‘eye-catching’ yellow markings of various structural elements that could be tripping or impact hazards. Finally, it was decided to conduct a hazard analysis on the strength of localised wind between the tanks with a view to risk reduction.

Lessons learned
- Outside decks should be covered in non-slip paint, even areas not regularly used.
- Every incident is an opportunity to reduce risks by analysing what went wrong and why it happened. In this case, the strength of localised winds due to an apparent venturi or ‘channeling’ effect between the tanks was an undocumented hazard that needed attention.
Steering mix up
Edited from official TSB Canada report M16C0005

A container vessel was down-bound at about 16 knots in a confined river waterway. A helmsman was executing helm orders in Full Follow Up (FFU) mode and the OOW was on the bridge assisting the two pilots, one of whom had the con. Soon after a course change, once the vessel was steadied up, the vessel’s head began to veer to starboard. The pilot with the con mentioned this to the other pilot. The helmsman then said ‘Not working,’ which was understood by the pilots to indicate a steering failure.

One of the pilots repeated the order ‘Follow-up’ to the helmsman many times in quick succession. As the vessel was already in ‘follow-up’ mode, the helmsman did not take any action with the helm mode selector. Meanwhile, the other pilot asked the OOW to call both the Master and the engine room to report the failure of the steering gear. One of the pilots then selected non-follow up (NFU) on the steering mode control switch at the helm station. The OOW informed him, ‘This is non-follow-up, sir.’

The pilot then activated the handle of the override tiller, placing it hard-a-starboard, but under the impression it was hard-a-port. He did not know that the tiller was installed such that when moved to the right, the red part of the indicating disc would illuminate, even though the rudder went to starboard (see diagram below). The pilot then ordered ‘Hard to port’ and that the main engine should be stopped. The Master was soon on the bridge, while the chief engineer, who had just arrived in the engine control room, observed that the rudder angle indicator was at 35° to starboard (hard-a-starboard).

As the vessel was exiting the navigation channel, the OOW noticed that the rudder was positioned hard-a-starboard and brought the handle of the tiller to the left; the rudder then moved to 35° to port (hard-a-port), and the ROT diminished. Shortly, the vessel started to veer to port but it was too late to prevent the vessel from running aground.

The official investigation found several contributing factors to the failure. No immediate action was taken by the bridge team to verify the functionality of the steering gear once a system failure was assumed.

Lessons learned
- Navigating in a restricted waterway and losing steering, or even assuming you have lost steering, can be stressful and cloud your judgement. As a first reaction, switch quickly to NFU and watch the rudder angle indicator, as well as the ship’s heading, for rudder functionality.
- While actual steering gear failures do happen and result in groundings, others have occurred due to an inopportune reaction to an assumed failure, as in this case. For some other examples, see: https://tinyurl.com/mars201813a https://tinyurl.com/mars201813b

MARS 201813
Hot oil scalding

Some engine room crew members were to clean out sludge from the waste oil tank. To do this, they first had to transfer the remaining oil from the tank to mobile drums. The steam valves to the waste oil tank had been shut on the previous night. The next day, the temperature had dropped from 110°C to 50°C. A risk assessment and toolbox meeting were held and a cold work permit was issued.

The workers realised that the oil was quite hot as the discharge pipe had begun to get hot to the touch. When one drum was nearly full, the hose was transferred to another drum. As the discharge hose was being changed, some residual oil in the hose splashed onto one crew member’s hands and he suffered severe scalding of his right wrist.

It was later found that the steam valves were leaking and the waste oil had not cooled as much as expected. In addition, the fixed tank thermometer showed about 20°C less than the true temperature. The tank thermometer readings had probably been affected by sludge accumulation in the tank.

Lessons learned
- Warning signs were not heeded! Even though the fixed thermometer was imprecise, it still showed 50°C. Yet a cold work permit was issued nonetheless. Crew realised the oil was quite hot because the discharge pipe was hot to the touch. They did not stop work and reassess.
- Even though the crew members knew the oil was hot, they continued to wear ‘cold work’ Personal Protective Equipment (PPE) such as short leather and cotton gloves.

Editor’s note: Factors that contribute to accidents are easy to identify, with hindsight. You should learn to do a ‘running risk assessment’ while working so you can identify the warning signs before the accident happens. Ask yourself: ‘What could go wrong?’ ‘How bad could it be?’ ‘Are there new risks?’ and ‘Do I have the right tools and PPE for the task?’
Our Nautical Affiliates help us make a difference to the shipping community by ensuring that our MARS Scheme is available to the industry for free. #MARSReports help others learn from accidents and prevent them from happening again. Apply online to have your organisation support our MARS Scheme next year: www.nautinst.org/affiliate