



Seaways

The International Journal of The Nautical Institute

From ship to shore

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Navigation assessments

What have we learnt? **p08**

DP and human error

Common design issues **p16**

Port State Control

Are we focusing on the right risks? **p31**

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Danny Cornelissen

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The International Journal of The Nautical Institute

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Diary

What's on?

Navigation Assessor Course, Malta 28 Feb – 1 March

Mediterranean Maritime Research and Training Centre, Malta
Contact: Susie.stiles@nautinst.org.uk

- What defines an assessment?
- Improving safety and best practice
- How to conduct the assessment with a systematic approach
- Preparing an effective report

Discount available for Nautical Institute members. For information on other courses, see page 11.

To take advantage of the discounts available for events listed in the Diary section, please log in to www.nautinst.org using your membership details and click on 'Event Discounts'

5 February

EfficienSeas2 – getting ships connected

London Branch Joint Meeting
1730 HQS Wellington, London WC2R 2PN

Email: kpfisher@btinternet.com

6 February

Offshore Wind Journal Conference 2018

Novotel London West Hotel, London W6 8DR

www.offshorewindjournalconference.com/index.htm
10% discount for NI members

European DP Conference 2018

Novotel London West Hotel, London W6 8DR

www.dynamicpositioning.europa.com/index.htm
10% discount for NI members

7–8 February

Offshore Support Journal Conference 2018

Novotel London West Hotel, London W6 8DR

www.osjconference.com/index.htm
10% discount for NI members

13 February

Corporation of Trinity House

SouthWest England Branch
1900, Royal Plymouth Corinthian Yacht Club, Plymouth PL12NY

Email: robert.hone@plymouth.ac.uk

<http://glang.me.uk/nisw.html>

14 February

Decommissioning Offshore Oil Platforms Joint meeting

1845, Roland Levinsky Lecture Theatre, University of Plymouth

Email: robert.hone@plymouth.ac.uk

<http://glang.me.uk/nisw.html>

15 February

Navigation Assessor Course Chennai

£150 discount for NI members

19 February

AGM and 'Chartered Master Mariners'

NW England & N Wales Branch

1800, HMS Eaglet, East Brunswick Dock, Liverpool

For security purposes, please register in advance with

sec@ninw.org.uk

21–22 February

Arctic Shipping Summit Montreal – venue TBC

<http://www.wplgroup.com/aci/event/arctic-shipping-summit/>

5 March

Vision and Decision - CHIRP

London Branch Joint Meeting
1730, HQS Wellington, London WC2R 2PN

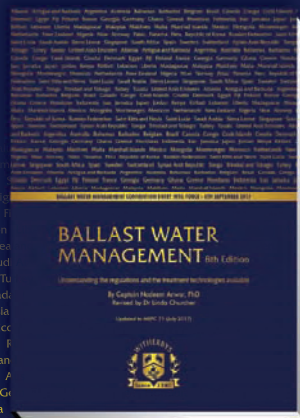
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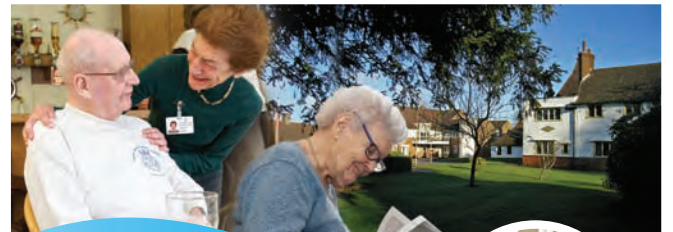


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Focus

Supporting professionalism

“
As we move further into 2018 the focus on maritime safety and professionalism remains at the forefront of our minds
”

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 across 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.

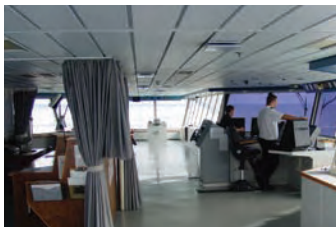
Please remember to get in touch through our letters pages or by articles of interest to your area. We are here to support your career and your industry – so we look forward hearing from you.

Best wishes

John 🇬🇧

Twitter: @nauticalinstceo

Email: sec@nautinst.org



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Captain's column

What my Nautical Institute Fellowship means to me

Ever since I was a young boy growing up in the faraway Andaman Islands, with the sea and ships almost always in sight, there was only one thing I dreamt of – a career at sea, as a ship captain.

I was fortunate to find a position as a cadet after high school, and I was so grateful for the opportunity that I promised myself to be always at my best, and make myself worthy of the opportunity that I'd been given.

Gaining expertise

A few years down the line, I was a Chief Officer on the verge of getting my command. My maritime professor recommended that I should read *The Nautical Institute on Command*. The book is the Institute's flagship publication and distils the best advice available for aspiring officers, new Masters and experienced Masters. It's still one of my favourite books.

Next was a chance meeting with Captain Sivaraman Krishnamurthi FNI, who would eventually go on to become The Nautical Institute's youngest-ever President. After just a little persuasion from him I was convinced to join the Institute. Very quickly I saw I had made a great career move.

I was invited to seminars most seafaring officers usually don't have the opportunity of attending. The after-event conversations were even more enlightening. One-on-one discussions with more experienced maritime professionals opened my eyes to information I didn't even know existed. On ships, I had some good mentors, but not always – but here at The Nautical Institute, everyone seemed to have a mindset of abundance, sharing their own experiences and knowledge, which was very helpful.

I got my very own command soon after, and the advice I had received from other members at The Nautical Institute, including their books on command and manoeuvring, came in handy.

Getting engaged

In the 14 years that I have been with The Nautical Institute, I have moved from a seagoing role to a corporate one. Here, too, the publications came in handy. My involvement with the Institute became even more active. I was on the committee in both Hong Kong and Cyprus. I was part of the team organising events for the shipping industry and helping mentor younger maritime professionals. I've had the opportunity to have two of my articles published in *Seaways*, reaching members of the maritime profession worldwide.

It's also been fun. My colleagues at the Institute, many from different companies, have become trusted friends and mentors. I was part of the Institute's dragon boat team in Hong Kong, and social barbecues and dinners have made me feel at home far away from home.

Recently, I was elected a Fellow of The Nautical Institute and I was honoured to be presented with my Certificate of Fellowship by the President of the Institute, Captain Duke Snider FNI.

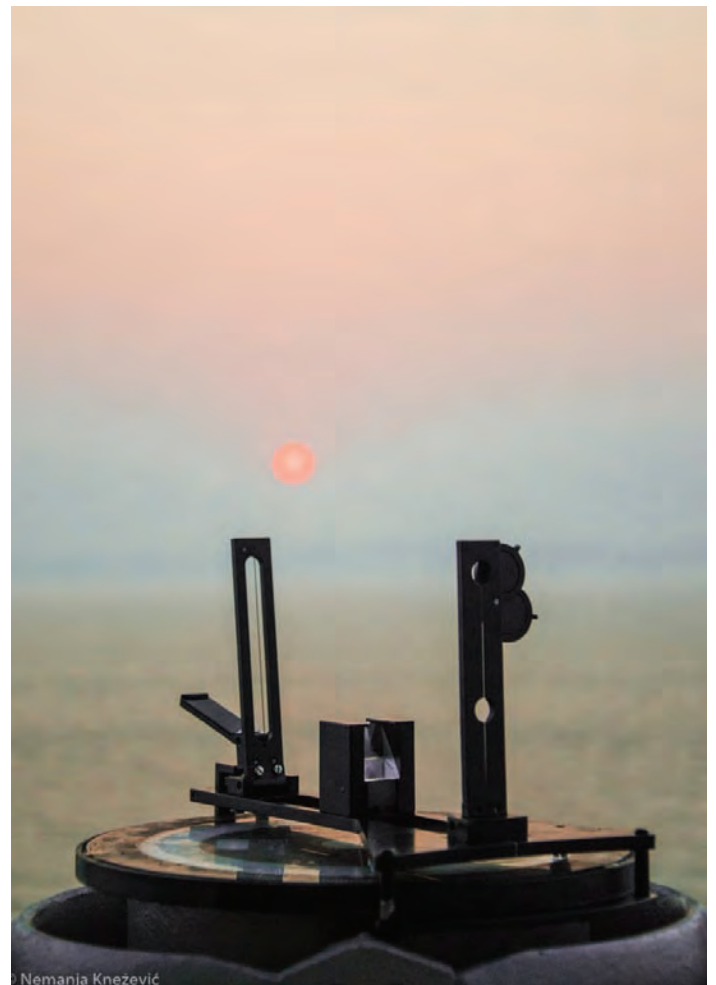
The other Nautical Institute member elected to Fellow that day was Captain Michael Quain FNI – who received his navigator's licence even before I was born. He is an expert on tanker operations and his recent presentations on vetting-inspections were very enlightening.

Alexandros Josephides, Deputy Director General/Marine Manager of the Cyprus Shipping Chamber, received the Honorary Fellowship for his role in promoting The Nautical Institute in Cyprus. Due to his efforts, The Nautical Institute and the Cyprus Shipping Chamber reached a closer working relationship where members of both organisations could benefit from the information exchange.

Sharing professionalism

My view, based on research, is that experts rarely thrive in isolation and most professionals help each other raise awareness through a mutual sharing of ideas and experience. I can also support this with my own fulfilling experience with The Nautical Institute.

It's both a privilege and a humbling experience to be in such great company. 🌐



Membership of The Nautical Institute helped me find my bearings – at sea and ashore

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Shiphandling is one of the ten key action points in The Nautical Institute's five year strategic plan. It states: Ship manoeuvring and practising good seamanship onboard is one of the most challenging aspects of the control of ships today. Seafarers must be capable of controlling vessels with new technology in all circumstances, even when automated systems fail. Tasks such as manoeuvring and mooring are still fundamental navigational operations and an inability to undertake these procedures safely is one of the main causes of maritime accidents. Officers of all ranks need to master the art and science of shiphandling around pilot areas and anchorages. The Institute will continue to develop best practice in these areas. Specifically, mentoring, experiential learning on board and the best use of simulation and assessment techniques will be developed. The value of sea time experience in developing and maintaining these skills will be promoted at the IMO and to employers on the basis that the regulatory requirement is too low a minimum to produce true competence. Deliverables:

- Provide input to the IMO review of the STCW Convention and Code to ensure necessary professional standards in these subject areas and that sufficient experience for competency is required;
- Continue to update and publish best practice in these subject areas;
- Promote best practice in simulation training and assessment so competency can be demonstrated in a safe environment;
- Ensure that work in this area relates to the mentoring project.

What's special about shiphandling?

Why The Nautical Institute has focused on shiphandling skills for its latest Book of the Month – and how it can help mariners develop their own skills



David Patraiko FNI
Director of Projects

In recent years, concerns about shiphandling skills have been one of the issues raised over and over again during Nautical Institute seminars and meetings. Older members are concerned that these skills are not being passed down; younger ones are keen to learn, but often do not have the opportunity to practise. Those that do have experience often have no way of proving it.

The Nautical Institute's Shiphandling Logbook (see p30) aims to help mariners to record and reflect on their experiences – but not at teaching them how to do it. For that there are many excellent books on the subject, computer-based training (CBT) tools and specialist courses. Mariners should use these resources to get the best possible understanding of the theory and then practise, practise, practise.

Types of learning

There is far more to shiphandling than berthing and unberthing a ship. Manoeuvres could also include: altering course for navigation or collision avoidance; embarkation and disembarkation of pilots; anchoring; handling a vessel in heavy weather; and interaction with banks, shallow water and other vessels in confined waters. In addition, practising shiphandling is essential because the skills needed vary between different types of ship and even on the same ship in different conditions. All these are important reasons for acquiring as much experience as possible.

Mariners should take advantage of every opportunity to improve their understanding of shiphandling, to identify any additional learning they need and to arrange for this to happen. The three main types of learning are considered to be in-service (on board your ship), simulator training and manned models. Each has its benefits and limitations, but ideally all should be used. The IMO only accepts these three methods for demonstrating competence. There are of course many other methods that can assist learning, including books, CBT, films, table-top models and even just a pad of paper and a good mentor.

IN-SERVICE TRAINING

In-service training could be planned or unplanned. Many Masters will schedule shiphandling exercises during slack time by conducting man overboard drills or mock anchoring exercises, which can benefit all the officers on board.

Most commonly, in-service learning comes from mentoring. This is when an officer with experience takes the time to explain how and why they are doing a particular manoeuvre. Or they could let an officer undertake the manoeuvre under their supervision. This relationship needs to be carefully managed by both parties. It is essential that this type of activity doesn't interfere with the concentration needed to manage the ship's safety. However, if done well it will lead to greater safety, as the skill levels and confidence of all officers will increase.

Mentoring costs little, if anything, but is essential to the learning of shiphandling. Individuals seeking to learn from mentoring must prepare by choosing their time right, by being open to constructive criticism and by being prepared with a plan – which is where the logbook can help.

Typical examples of this are if the Master gave the Chief Officer the task of picking up the pilot or anchoring the vessel in appropriate circumstances. On another occasion a junior officer might pay particular attention to a manoeuvre, make notes and then review events with the senior officer or pilot afterwards when time permits. We hope that this logbook will ensure this type of activity is encouraged, with senior officers understanding the need for practising specific manoeuvres and maintaining a record of the lessons learned.

Another type of in-service learning increasingly adopted by some companies is the practice of 'reverse piloting'. On these occasions, when it's appropriate, Masters let their OOW do all the manoeuvring while they monitor from behind. This allows the Master to keep a wider overall situational awareness and provides the OOW with valuable training and greater job satisfaction.

SIMULATORS

The use of simulators for shiphandling training is well established, but opportunities are limited for seafarers.

Although some companies have installed small simulators in their offices or even on board their ships, most simulators are installed in training centres and a staff of qualified instructors is needed to carry out exercises. Despite the technical complexities of simulators the real learning experience comes from the debrief session with a skilled instructor.

MANNED MODELS

Even rarer than having access to a simulator is having access to a manned model, but again, with a good instructor they are excellent. Manned models should incorporate scaling factors that accurately represent the dimensions (area, volume and displacement) and the speed, time and rate of turn of a real ship. They should also incorporate controls for the rudder and engines to the correct timescales.

When learning happens

During a ship manoeuvre there is not always the time to reflect on what goes right or wrong because of the need to concentrate on the task. This is why real learning comes from reflecting on the manoeuvre, ideally helped by an instructor or mentor during a debrief afterwards.

To get the best from the experience, mariners should first try to identify what went right, then what could be improved. Improvements can always be made even by those with lots of experience. Reflect on the forces: was the pivot point identified correctly, did the vessel respond as anticipated and was the bridge team engaged through good communication?

When in a simulator or manned model seafarers will have the advantage of being able to 'play back' the manoeuvre, pause it, discuss it, and gain insight from the instructor and all members of the bridge team. This is where the best learning takes place.

How to use the logbook

In most cases mariners will learn shiphandling as they go along, perhaps with reflection, perhaps not. This logbook has been designed to help identify the manoeuvres that seafarers need to master, and help them to logically deconstruct and reflect upon the learning experiences of each trial. Recording these experiences should:

1. Provide a systematic plan for recording and learning from shiphandling experiences;
2. Create a tool that will help identify gaps in experience and how to address those gaps;
3. Demonstrate professional development to senior officers, company, flag state and insurers.

The logbook has deliberately been kept generic so as to make it flexible enough to apply to all mariners and all ships in all trades. Companies or even individuals might wish to augment the descriptions of manoeuvres and observations more specifically.

For each exercise you should consider describing:

- The experience type, e.g. whether on board, in a simulator or in a manned model;
- The manoeuvre type (reference to STCW, company instruction etc);
- The environment (restrictions, traffic, visibility etc);
- External forces (windage, weather, current, seas etc);
- Internal forces (propulsion, rudders, thrusters etc);
- Pivot point(s);
- Additional information such as UKC, squat effect, turning circle and transfer, effect of trim, use of tugs/anchors, position of tugs, etc;
- What went right;
- What could have been done differently or improved.

In addition to the logbook, we suggest users consider supplementing it with providing augmented documentation of their experiences – maybe including a greater level of written description, photographs or video. 🌐

10 Example shiphandling record		Example shiphandling record 11	
Vessel: MV Nonsuch		Date: 28 January 2018	
Simulator:		Manned model:	
Risk assessment (restrictions, traffic, visibility, abort point etc.) Advised by VTS to anchor in B4 anchorage radius 350 metres on chart – no restrictions. River estuary – ebb tide and river current – estimated 3kts. Depth of water 20 metres. Bottom – sand and mud. 2 other vessels anchored in designated anchorages, nearest one 800 metres. No other traffic. Good visibility and good weather forecast for 24 hours. Plan – port anchor 5 shackles in water (approx 5 times depth of water)			
Internal forces		External forces	
Rudder: Semi balanced	Current/tide: Ebb tide and river current – from west 3 kts		
Propulsion: R, H propeller	Windage: SW 4		
Pivot point posn: 0.3L from stern	Sea state: Slight		
Weather: Good			
Type of manoeuvre (from STCW table A-II/2 or other) 9 – anchoring – in designated anchorage one anchor			
Additional information (if appropriate) Ship's particulars: Bulk carrier 40k dwt 180m LOA 11.0m draught even keel Turning circle and transfer: N/A Under-keel clearance: Min 1.0 metres Squat effect: N/A Tugs (number, position and power): N/A Other:			
Description of manoeuvre – include sketch if necessary Reduced speed to 5 kts dist 8 cables from B4. Anchor party prepare port anchor. Lower anchor to water and ready to let go. At 5 cables from anchorage, test engine astern then approach anchorage with current and tide right ahead, dead slow ahead, just making steerage way. Keep steering into ebb tide right ahead. Check position using beam bearing of lighthouse. Stop engines and half astern at designated anchorage. When propeller wash reaches No 5 hold, stop engines and let go anchor. As vessel comes astern, continue to pay out until 5 shackles in water. Hold on windlass brake. When brought up, check final position, report to VTS			
Master/instructor comments <i>Straightforward anchoring manoeuvre – possibly should have kept on slow ahead into anchorage, but a good shiphandling exercise</i>			
Signature: <i>P. Rabbit</i>		Date: <i>28 January 2018</i>	
Comments and reflections Thought the manoeuvre went well, perhaps I did take it slower than I should have. Better to be safe, but gaining confidence in manoeuvring, so next time will be more positive.			

Sample pages showing what a typical entry in the NI Shiphandling Logbook might look like (see p 30 for more details and a 40% discount)

Navigation assessments – the first 15 years

What we've learned and where we're headed



Captain Richard Leedham
B.Sc., MNI, FRIN

The recent discussions on the subject of navigational audits and navigation assessments are both timely and welcome. As someone who has been carrying out navigation assessments almost since they started, I thought it would be of interest to take stock of where we have come from in this field, and where we are heading.

Back in 2000, a large ship operator approached Leedham Marine Consultants Ltd to carry out external navigation audits on their vessels, following a couple of serious navigational incidents. At the time, they believed that their navigation procedures were of good quality and comprehensive; the problem appeared to be that their officers were not following them. Internal audits had not indicated any problems in this area. We were tasked with finding out why – to conduct an external navigation audit – and recommend appropriate remedial action.

The importance of getting on board

From the outset, it was apparent to us that an effective navigation audit cannot be done without actually sailing on the vessel. In port, only the paperwork side can be checked, and that was generally in perfect order, so the vessels had always passed muster during the company's internal audits.

We stipulated from the very start that we should attend on board during a coastal voyage of at least three – and ideally around five – days. Where possible, the voyage should also contain a mix of pilotage, coastal and offshore passages. The minimum of three days turned out to be fully justified; ship's staff were invariably able to maintain a credible front of compliance and efficiency for more than a day or so. The cracks began to appear on day two, as they slipped into old habits, and became more relaxed in our presence. By the end of day three, the cracks were wide open; all pretence had been dropped, and ship's staff were themselves raising issues and highlighting where and how they felt that practices and procedures were impractical or of no value. We were able to see not only exactly what was happening, but why.

Obviously, this did not occur without the assessor building up a sympathetic rapport with each officer. From the outset we worked to establish professional relationships with each officer, based on the common bonds and shared experiences of navigators the world over.

From the very beginning, we identified that our audits should be against best practice, rather than the operator's bridge procedures. This would allow us to bring the operator's procedures under scrutiny, and would free us from attempting to justify or support inadequate or improper procedures.

Breaking down the barriers

Common areas of weakness and non-compliance were quickly identified. The root causes generally pointed back to either the operator's navigational procedures, training standards and/or motivation, rather than any shortcomings in the personnel themselves. Most were keen and displayed a desire to do the job well – they were just not sure how to go about it. Based on our findings, we were then able to implement remedial actions. We reviewed and developed new navigational procedures for the client from first principles, in a compact, simpler and more coherent form, referenced directly to the ICS Bridge Procedures Guide.

The client requested that we carry out remedial training on board, where deficiencies were identified. Mentoring was provided on a one-to-one basis, and more formal training sessions delivered to officers in group sessions. Training materials were also developed to cover common problem areas.

At the time, I had no idea what a huge difference this would make to our work. Our consultants were no longer received on board with suspicion. As word of our training activities spread, and we began to start seeing some of the same faces, we were actually welcomed on board. Officers were almost always keen to improve and acquire navigational knowledge and skills. The knowledge that they had left the vessel significantly safer and better than they had found it was also highly satisfying to our consultants.

From audit to assessment

Up to this point, we had been using the term 'navigational audit' to describe what we were doing. While this mirrored industry usage, clients were increasingly asking us to minimise the audit side in order to give more emphasis and time to mentoring and training. A new term was needed and so, in 2004, we decided to re-brand the work as 'navigation assessments', where possible removing references to audit altogether.

To further distance ourselves from the audit domain, the report format was entirely descriptive text; any attempt at putting numbers or scoring was deliberately avoided. Personal anonymity was preserved in the report, especially where on-board mentoring appeared to have been successful. Where it was identified that an individual needed particular on-going support or additional training, a supplementary confidential report would be submitted.

Our attention was increasingly focused on the elements where we perceived the major improvements were necessary: watchkeeping, collision avoidance, position monitoring, passage planning and bridge teamwork – the five pillars of navigational safety.

Formal presentations on the five pillars are always well received, and often stimulate interesting discussions. It has been gratifying to see how well officers, in the main, have adopted these ideas and practices into their watchkeeping.

Items such as the completion of checklists, logbooks and the maintenance of charts and publications are also covered. In practice, these paper systems are much more easily measured – indeed, they are the only ones which can be effectively assessed on an in-port audit. But even collectively, their importance to the navigational safety of the vessel is less than any of the five pillars, considered alone.

Looking beyond the numbers

I described above my reluctance to attempt to put numbers on navigational performance in a navigation assessment report. Firstly, no two consultants will assess the same topic in the same way. One assessor's 6 is another man's 8, or even 10. Secondly, the importance of an item depends on its context when measured; this can change according to circumstances of the case. For example, the provision of additional equipment may lessen the value of a traditional process or procedure, or even render it inapplicable.

Our original narrative-only reports were intended to give clients an accurate idea of what was happening on the bridge of their ship. This worked where the person receiving the report was an experienced mariner themselves, but these reports – often running to 20 or more pages – took time to compose and to read.

Also, some clients wanted to be able to demonstrate progress towards improved navigational performance. We started to include a summary score sheet as an appendix to the report and gave scores of 1 to 6 (very poor to excellent) for ten basic areas, including the five pillars of watchkeeping. It has given us much satisfaction to see these numbers

steadily improving for each client over the years.

But this does not overcome the problem of objectivity in assigning the numbers.

Ensuring objectivity

A possible solution would be to follow the model used by the OCIMF inspection system. Questions phrased are so that they can be answered as either Yes, No, Not seen or Not Applicable. A 'Yes' answer indicates the desirable outcome. Any 'No' answer must be explained in detail. The report is presented in a database format so that it can be queried, and tailored reports generated to match the particular user's requirements. This also has the advantage that the data can be entered in a more efficient and functional way.

Assuming a suitably large and comprehensive question set, it would also be possible, using a suitable matrix overlay, to put a scoring and a weighting on each individual answer, in order to generate a more objective overall report than is possible by subjective individual scoring of each topic.

We have set about developing an assessment report which is now based essentially on 'Yes / No' answers. This is now in its eighth edition, with much additional focus on the use and integration of ECDIS, as dual ECDIS, with no paper chart backup, fast becomes the norm. Colour-coding also allows the reader to quickly scan to the important or required information.

But ultimately, it is not about numbers or scores; navigation assessments are primarily about improving navigation performance



It takes time for ships staff to become comfortable with the assessor's presence

and safety. We should never lose sight of what distinguishes navigation assessments from audits – that is training and mentoring.

The navigation assessment report therefore focuses on:

- What was done well;
- Training and mentoring provided;
- Potential for improvement.

Encouraging the positive

We see a wide range of skills and abilities, but it is always possible to find things which were done well, and to use these to encourage ship's personnel in other areas. It is important to understand what motivates people to come to sea. The mystery which was navigation has long been supplanted by small boxes which show latitude and longitude to a precision which far exceeds that of the ENC survey data; nevertheless, we find that many navigators of all nationalities still obtain great satisfaction in learning and practising astronavigation.

Training – whether one-to-one or formal sessions to all – is tailored to areas of weakness identified in the assessment. We will also ask ships personnel if there are any areas of navigation that they would like to receive training on. On a three day assessment, the amount of training which can be provided is obviously limited, particularly where the ship is in busy or confined waters and/or hours of rest are precious. With a five-day assessment, much more can be achieved. On a longer passage, and particularly with time at anchor, we can achieve a very extensive training program. The benefits seem almost exponential as the officers become progressively more attuned and involved in the process.

Delivering the assessment

So, what does it take to be able to deliver this kind of navigation assessment? In addition to Class 1 Master Mariner qualification, a thorough and in-depth knowledge of all aspects of practical and theoretical navigation (eg Extra Master, B.Sc., etc) and/or Command experience is also essential. From the teaching perspective, lecturing experience or formal teaching qualifications are a great advantage, and experience in mentoring and an attitude of empathy with the ship's officer is equally important. A good understanding of human factors is also vitally important for navigational assessors. They must also be sensitive to ethnic and cultural differences, particularly where the bridge team is made up from personnel of mixed race. Willingness to question or challenge a 'superior' differs widely between cultures; the Liverpoolian AB would not think to spare his officer's feelings, but his timely comment might save the latter's career – but there are plenty who would be too polite, overawed or even frightened to make such a challenge.

This is obviously a huge skill set, which cannot be learnt on any course. However, The Nautical Institute's new course for Navigation Assessors will greatly assist those who already possess the necessary knowledge and skills to carry out effective navigation assessments.

Navigation assessments and ISM

Finally, an important part of the Navigation Assessor's job is training and advice to officers on how to prioritise the many tasks for the safety of navigation. In an ideal world, ISM systems, company procedures, vetting inspections and audits would guide and assist bridge officers in carrying out their duties. In practice, many modern ISM systems are depressingly gigantic, and many young officers simply lack the experience to distinguish the important from the trivial. The proliferation of checklists can lead to tunnel vision and getting officers to think outside the box – in this case, the borders of the checklist – can be difficult.

For example, preparing the bridge for port departure, an officer spends some time verifying the integrity self-test of the bridge navigational watch alarm system (BNWAS) – which probably makes a negligible contribution to safety on any well-run vessel – but fails to

run the similar test on the mission-critical ECDIS or ARPA. Why? – because the latter is not on the checklist. Similarly, much time and effort is put into keeping a quite irrelevant GPS position log, but a bell book is not maintained. Why? – lack of understanding of the relative value of these documents – which sometimes extends into company procedures – and perhaps also improper peer learning.



The fact is that ISM systems, engorged by sometimes excessive and disproportionate corrective actions, can easily become a massive information overload for the mariner. Masters and officers are often quite unable to explain the purpose of some company procedures – particularly those in relation to record keeping. With the age and experience profile of the modern mariner, questioning company procedures is no longer part of the culture. And more importantly, where would you find the time, and where would you start? Even if ship's staff do question, the response from up the line is often something along the lines of 'I can't see the use of it either, but we must do it for the vetting/port state inspector'. The result is that officers' valuable time is often wasted in pointless and irrelevant tasks, which contribute little or nothing to navigational safety.

Inadequate or inappropriate training, poorly managed advances in technology and constant changes in legislation under an umbrella of paperwork overload leave the modern mariner often unable to see the wood for the trees. The attention to minute detail and all-encompassing nature of today's ISM systems can result in a paper behemoth, within which the inexperienced or poorly trained officer cannot distinguish the important things from the sea of trivia. The sense of proportion has been lost.

Those of us who were privileged to have received our nautical education on board well-run ships with mature systems, where practically everything we did had a functional or practical purpose, were fortunate. Our practical world on board ship was very closely in-sync with the shore-side training, certificate syllabus and marine legislation of those times; that is not the case for the today's officer, whose world has unfortunately become increasingly divergent in all these areas.

Today's mariner deserves a better deal, and navigational assessments are one – albeit small – way of delivering it. At all costs, let's try to keep it real. 🌐

THE NAUTICAL INSTITUTE'S NAVIGATION ASSESSOR COURSE



The course complements The Nautical Institute's specialist publication
Navigation Assessments: A guide to best practice

- What defines an assessment
- Improving safety and best practice
- How to conduct the assessment with a systematic approach
- Preparing an effective report

This course is suitable for:

- Personnel requiring to demonstrate they hold a qualification to be able to conduct navigation audits stipulated in TMSA3 element 5
- Marine Consultants ● Surveyors ● Inspectors
- Marine Managers ● Superintendents
- Shipmasters preparing for navigation assessments

Fees: NI member: £750 (plus VAT) Non-member: £900 (plus VAT)

Delegates successfully completing Part A will be awarded a course certificate and will be eligible to proceed to Part B – the onboard assessment. Delegates completing both Part A and Part B will be awarded The Nautical Institute Navigation Assessors Certificate.

INDIA

CHENNAI 15-16 FEBRUARY

MOL Synergy India, AKDR Tower, Chennai

MUMBAI 19-20 FEBRUARY

Venue TBC

MUMBAI 23-24 FEBRUARY

Scorpio Marine, Scorpio House, Hiranandani Business Park, Mumbai

MALTA

28 FEBRUARY - 1 MARCH

Mediterranean Maritime Research and Training Centre, Transport Malta Centre, Marsa

ATHENS

7-8 MARCH

KC Lyrintzis Group, Piraeus

SINGAPORE

12-13 MARCH

Swire Marine Training Centre, Loyang

HONG KONG

19-20 MARCH

Cliftons, Hutchison House, Central

To book your place, email: susie.stiles@nautinst.org

Helping shape The Nautical Institute

Putting your expertise to wider use



The Nautical Institute is a membership organisation - which means that everything that we do is shaped and directed by our members' needs. The committee structure is the way in which we ensure all our members' voices are represented in Institute decisions, from all sectors, from around the globe, and at all stages of experience. Expert recommendations from the committees are passed on to Council and/or the Executive Board, who use them as the basis for decisions that will direct the Institute.

Engagement with The Nautical Institute's governance and committees gives you the chance to use your skills and knowledge to give back to the industry, and at the same time to build on those skills to develop new ones. This is an opportunity to develop mentoring relationships, or to pass on knowledge in your turn.

“Engagement with The Nautical Institute's governance and committees gives you the chance to use your skills and knowledge to give back to the industry”

Committee meetings are held in Institute HQ in London. To make it possible for as many members as possible to take part in the committee structure, meetings are kept to a minimum, and electronic attendance is possible. Seagoing members are very welcome; it is vital to have current experience reflected in our governance process.

Members of Committees are elected for a three year term at each AGM every year. If you are interested in contributing to the NI through its committee work, please contact sec@nautinst.org

The Institute has a worldwide network of branches run by local members. A typical Branch will hold technical and social meetings, helping develop the knowledge of others in the local area. They also run major events such as AGMs and Command Seminars. To find out more about helping your local branch, please contact your local Branch secretary (see back page for details).

SPECIALIST COMMITTEES

IMO Committee

This committee normally meets twice per year to decide on the Institute's policy on matters to be debated and worked on at the IMO. This makes sure that the voices of active seafarers and those with real experience of the issues are heard in an international forum. In addition to this single meeting, the committee communicates by email throughout the year, to ensure they keep current with issues and debates at the IMO, and members' views on these matters.

Among other key responsibilities, the committee:

- Liaises closely with the Chief Executive and Head of Delegation to ensure that we make an effective contribution to the work of the IMO
- Selects the subject matter that is most important for the Institute to contribute to the IMO
- Makes sure work at the IMO is founded on the basis of evidence from our membership
- Provides a summary report of the Institute's activities at the IMO to Council and the Executive Board

The IMO committee is made up of 8 members who are directly elected by Council for 3 years and may be re-elected for further 3 year periods.

Professional Development Committee

The committee shapes Nautical Institute policy on education, qualifications and professional development for the maritime profession including accreditation standards. Key concerns are to ensure recommendations are correlated with seagoing requirements and experience and that effective professional techniques are proposed to meet new developments internationally. The committee meets twice a year.

Among other things, the committee will make recommendations to the Board on:

- Open learning schemes
- Training and certification schemes under development
- Continuing Professional Development (CPD) policy and services including the CPD recognition service
- Recruitment and retention of personnel in the maritime industry

Training is relevant across all the work that The Nautical Institute does, and the committee will work with the IMO Committee, Technical Committee, and other appropriate bodies. While this committee obviously offers opportunities for education professionals and teachers to get involved, we also welcome those at sea and those undertaking professional development.

Technical Committee

The technical committee makes recommendations to the Executive Board on all matters of a technical professional nature and the associated training requirements. This is a wide ranging brief covering all aspects of the maritime sector, and we hope to see that range reflected in the committee make-up.

The committee oversees the Institute's publishing activities, ensuring that appropriate topics are covered and standards are maintained. The committee will normally meet twice per year.

This includes considering and making recommendations to Council on:

- Topics for Seaways, books & electronic publishing, Internet activity, and the Mariners Alerting Reporting Scheme (MARS)
- Identifying areas of technical interest for members, and to give guidance on how such areas should be addressed
- Major project work on the Human Element, e-Navigation, Integrated Bridge Systems, manning and safety issues, etc.
- NI representation on external technical committees (excluding the IMO)
- Liaising with the IMO Committee on technical and human element issues
- Liaising with the Professional Development Committee on technical training requirements
- Providing support on technical issues for the Institute's secretariat and the branch/membership network

These are just some of the ways in which you can get involved in the running of The Nautical Institute. The next issue will look at governance opportunities including Council and its Assurance Committee, the Nominations Committee, the Finance and Audit Committee and the Executive Board.

The NI at the IMO

Captain John Dickinson looks back on nine years as Head of Delegation



Captain John Dickinson

FNI

The Marine Environment Protection Committee sat between 3-7 July. As the Secretary General (SG) said in his opening address, although IMO is primarily concerned with regulations for ships, there are countless areas where its work also impacts on ports – from safety and traffic facilitation, through security to environmental protection.

There were two particularly important items on the agenda. These were the prevention of atmospheric pollution from ships, including the reduction of greenhouse gas (GHG) emissions, and the implementation of the Ballast Water Management Convention, which was set to enter into force in September, just two months after the meeting.

There were a number of issues to consider with regard to the Energy Efficiency Design Index (EEDI), including ensuring the minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions, correction factors for ice class ships, and reduction factors for existing ships which have undergone a major conversion.

Ballast water

The issue of harmful aquatic organisms in ballast water was high on the agenda. There were 49 documents submitted, causing lengthy discussions – which in some cases had a rather soporific effect.

One point at issue is how to deal with existing ships fitted with gravity discharge topside ballast tanks. These ships are not suitable for ballast water management systems, and a ballast water exchange system is the only way that ballast water can be managed. The Nautical Institute made a short intervention supporting a paper by Intercargo and Intermanager on this subject. The pros and cons on this subject were evenly divided, and a more detailed proposal will have to be submitted.

One important clarification was on areas where ballast water exchange is not possible. On ships which have not yet had ballast water management systems fitted, the ballast water exchange shall be conducted in sea areas where distance from the nearest land is at least 200 nautical miles (if this is not possible, 50 nautical miles) and water depth is at least 200 metres. If there are no areas which meet these criteria, ballast water exchange should be carried out in the area designated by the port States.

Minimum propulsion power

Discussions on air pollution and energy efficiency proved to be interesting, in particular the guidelines for determining minimum propulsion power to maintain manoeuvrability in adverse conditions.

These guidelines were developed in tandem with EEDI requirements in order to avoid construction of extremely under-powered ships. The guidelines stipulated two assessment methods, level 1 and level 2. In 2015, amendments to the guidelines were adopted to strengthen the requirements of level 1 and to extend the application

period. It was agreed that a review of the level 2 assessment would be conducted on completion of two ongoing research projects.

The NI made an intervention on this subject,

“We have had serious concerns with the weather limitations in the past and can support the proposal that further consideration should be given. We should not rush into finalising the draft revised guidelines. To put a little perspective on this, at Beaufort force nine (a strong gale) the probable maximum wave height can be up to 10 metres. This sort of weather is not unusual. At force ten one may expect wave heights of 12.5 metres and at force eleven up to 16 metres.”

The ability to make this kind of intervention in a forum where many of those attending are not mariners and may have no idea of the practical implications of these regulations is a key part of The Nautical Institute’s role as an NGO.

The committee also looked at oil spill response contracts, and at provisions in the voyage planning section of the Polar Code for avoiding marine mammals. The Committee noted that MSC 98 had invited member states and international organisations to report on the status of their collection of marine mammal information and their communication of this information to Masters transiting polar waters.

The next meeting was the Technical Co-operation Committee (TC 67). This Committee was formed to help developing countries improve their ability to comply with international rules and standards. Unless there is something on the agenda that directly involves or impacts the NI, we attend only the opening day, as was the case here.

Carriage of Cargoes and Containers

The Spanish delegation provided information on the successful rescue operations and salvage of *MV Cheshire*. The vessel was underway off the Canary Islands in August 2017 with a cargo of ammonium nitrate based fertiliser when an incident occurred involving high temperatures in the cargo holds and the release of gases from the cargo. The United Kingdom stated that a marine accident investigation would be carried out and communicated to the IMO in due course.

The following amendments to the IMSBC Code and Supplements were noted:

- The existing individual schedule for ammonium nitrate based fertiliser (non-hazardous) covers a wide range of different fertilisers. The safety requirements vary depending on their specific properties, types and compositions;
- It would be possible to divide the existing individual schedule for ammonium nitrate based fertiliser (non-hazardous) into two schedules, ie for Group B and Group C;
- In the absence of criteria for classification of Group B cargoes, fertilisers could be differentiated by composition or type;
- The practical experiences and lessons learnt from incidents should be a sufficient justification for reclassification.

The sub-committee noted that the industry should provide more data and information on ammonium nitrate based fertiliser (non-hazardous), in particular on the different types of fertiliser and their specific properties, and on the necessity of the existing safety requirements.

Bauxite

The sub-committee noted views on the carriage of bauxite. A new phenomenon known as dynamic separation, has been identified as a possible factor in recent casualties and may have an impact on the safety of carriage.

- The new phenomenon of dynamic separation should not impact on the finalisation of the draft individual schedules. It could be a long-term consideration to be looked at by the Maritime Safety Committee;
- Both liquefaction and dynamic separation are moisture-related mechanisms. There is a need to expand the existing definition of Group A to cover the new phenomenon of dynamic separation;
- The impact of the new phenomenon of dynamic separation on the IMSBC Code needs to be further examined;
- Some existing Group A cargoes may not be liable to liquefaction, but to dynamic separation;
- The test method for Transportable Moisture Limit (TML) and mechanisms for dealing with the identified risks regarding dynamic separation are the same as for other Group A cargoes;
- There is a need to raise the awareness of seafarers on the safety requirements related to dynamic separation.

Following the discussion, the sub-committee agreed that the phenomenon of dynamic separation should be considered in the long term and invited interested member states and international organisations to submit proposals to the Maritime Safety Committee with a view to amending the IMSBC Code.

Containers lost at sea

The World Shipping Council presented a paper on the estimated number of containers lost at sea on an annual basis.

For the combined nine-year period from 2008 to 2016, on average, there were 568 containers lost at sea each year, not counting catastrophic events, and 1,582 containers lost at sea each year including catastrophic events. On average, 64% of containers lost during this period were attributed to a catastrophic event.

Based on the 2017 survey results, there were approximately 612 containers lost at sea between 2014 and 2017, not counting catastrophic events. When catastrophic losses are included, an average total loss per year of approximately 1,390 containers was estimated for the years 2014, 2015 and 2016. This was a 48% reduction from the annual total losses of 2,683 estimated in 2014.

Implementation of IMO Instruments

In his opening address, the secretary general looked at the role that IMO should play in the governance of fishing vessel safety and the training of fishing vessel personnel. We should see the entry into force of the 2012 Capetown agreement on the implementation of the 1993 Torremolinos Protocol for the safety of fishing vessels in the near future.

Port Reception Facilities – or rather, the inadequacy of them – were discussed at some length. There were 70 reported cases of alleged PRF inadequacies received from eight flag States and one territory of the United Kingdom. These reports covered 282 types of waste in 30 port administrations. Six port Administrations responded on actions, accounting for just 15.7% of the total reports submitted.

Intercargo and Intermanager submitted a paper on the inadequacies of port reception facilities and the problems their members had experienced as a result, supported by The Nautical Institute.

ECDIS software

Intertanko presented a paper on the updating of ECDIS software. They advised that in spite of the best efforts by shipowners, some manufacturers have been unable to provide the necessary updates within the requested timeframe. This has meant ECDIS units have not been updated to the new standards.

The International Hydrographic Office intervened and advised that concerns are unfounded. ECDIS units still operating the old system are not unseaworthy, as the old system is still usable, and the procedures put in place by Intertanko gave assurance that there would be no significant issues. We intervened to support Intertanko.

IMO Assembly

The IMO Assembly held its 30th Session at the end of November. The IMO Assembly is the highest governing body of the organisation and meets every second year to approve the work programme, endorse the budget and generally check the workings of the various committees within IMO. It also elects an executive body, known as the Council, for the two year interim period, charged with supervising the conduct of IMO's work.

The Council is made up of:

- The 10 states with the largest interest in providing international shipping services;
- 10 other states with the largest interest in international seaborne trade;
- 20 States not elected under the other two categories which have special interest in maritime transport or navigation and, importantly, whose election to the Council ensures the representation of all major geographic interests of the world. This provides a good spread of member states.

The meeting was attended by representatives from 162 Member States, two Associates, three UN and special agencies, 10 inter-governmental organisations and 40 non-governmental organisations. Of the 1,600 delegates enrolled for the meeting, 1,400 turned up making it a pretty large gathering.

Non-governmental organisations

Of interest to us as an NGO was the paper on relations between the IMO and non-governmental organisations.

Twelve new applications for consultative status were received since the last Assembly. Of these, only two were granted: the Active Shipbuilding Experts' Federation (ASEF) and the Pew Charitable Trusts (Pew). The International Association of Technical Survey and Classification Institutions (TSCI) was instructed to submit further information.

The Assembly endorsed the Council's recommendation to maintain the consultative status of the current list of authorised organisations, which includes The Nautical Institute. Of note was a complaint regarding the action of Greenpeace International when 25 of their activists surrounded a Bahamas-flagged ship in confined waters, causing considerable danger to the vessel. The Bahamas delegation objected to the continuation of consultative status by Greenpeace. The Secretary-General undertook to investigate the alleged situation.

Moving on

As always, this is a snapshot of the goings on at the IMO. If anyone wishes further information, please do not hesitate to contact The Nautical Institute. Although I retired at the end of 2017, I am sure you will receive an answer from the Technical Manager or the Director of Projects.

It has been a privilege to commence the NI's membership to the IMO back in December 2009. It has been interesting (most of the time) and I think we have made a positive contribution to maritime safety and the protection of the marine environment.

I would like to thank all the members of the NI IMO Committee, past and present for all their guidance and support, all the Presidents who have been in place whilst I worked here, the NIHQ Staff for their support and all the various volunteers who attended over the years.

I wish all the members of the NI well for the future, especially Captain John Lloyd and all the staff at NIHQ; I will miss the companionship and the friendliness. To all members serving at sea, keep afloat and to all ashore best wishes. 🍀

DP systems and human error

An international collaboration looking at inadvertent deactivation of DP systems, and how it can be prevented

NOPSEMA

Since 2016, the [Australian] National Offshore Petroleum Safety and Environmental Management Authority has raised concerns about dynamic positioning (DP) systems with the offshore petroleum industry. Our concern is that DP systems' auto-position modes are susceptible to inadvertent deactivation. This concern originated from a loss-of-position incident in June 2016. It is not an isolated event; NOPSEMA is now aware of 16 similar incidents internationally. All of these had the potential to result in a major accident event.

Loss-of-position incidents

In the Australian incident, the operator of a vessel's DP system placed a notepad on the console which pressed down on the 'surge' button twice, unintentionally deactivating the auto-position mode. With the crew unaware, the vessel drifted off-location while a diver was working on the seabed. The diver alerted vessel personnel, as he followed his umbilical and walked with the drifting vessel, avoiding obstacles along the way. Fortunately, the diver was unharmed, but if the umbilical had snagged on subsea infrastructure, the diver could have died. A subsequent inspection by NOPSEMA determined that the incident was the result of human error made possible by a weakness in the design of the DP system (see Safety alert 62, available at www.nopsema.gov.au/safety/safety-alerts).

In the United States, a drill ship in the Gulf of Mexico unintentionally drifted off position while dealing with a well kick. The US Coast Guard Outer Continental Shelf National Centre of Expertise (OCSNCE) stated that the DP operator inadvertently deactivated the auto-position mode by accidentally double-pressing the manual button while reaching across the console. Upon realising the mistake, the operator re-engaged the auto-positioning to bring the ship back into position. The US Coast Guard OCSNCE stated the incident was the result of 'human error with a mix of ergonomics'.

In the United Kingdom, a semi-submersible drilling rig lost control of its position for several minutes due to an accidental disengagement of the DP system while drilling. Although the loss of position was immediately noticed by personnel, it took them six minutes to realise that the auto-positioning system had been disengaged. In response to the emergency, the drill pipe was sheared and the lower marine riser package was disconnected. The UK Health and Safety Executive attributed both the loss of position and inadequate crew response to the 'poor ergonomic design of the control system'.

If further control measures had failed in either the United States or United Kingdom incidents, a well blowout could have occurred, potentially resulting in multiple fatalities and a significant environmental incident.

What the industry should consider

Centralised control systems need to be resilient against human error. A single, inadvertent act by an operator should not lead to an emergency with a high probability of fatalities. Control systems should also provide adequate feedback to operators to allow them to promptly identify the issue and take appropriate action.

Facility operators are reminded to check their systems to ensure they are not susceptible to this type of design-induced human error. They should also ensure that suitable controls are in place to prevent, identify and adequately recover from the error. Operators should talk to DP manufacturers about having more robust controls in the design of their DP systems. For example, tactile differentiation (error prevention) of safety-critical switches, action confirmation dialogue boxes, provision of a high-visibility display (error identification and recovery) and audible alarms or warnings. Other industries, such as aviation, may have systems that could provide solutions (eg aircraft auto-pilot controls).

DP manufacturers are encouraged to review the built-in safeguards of their systems to ensure they provide sufficient protection, feedback and recovery against this type of design-induced operator error, noting that the three incidents above all had a double-press requirement for deactivating the auto-position mode.

What is the IRF doing?

In October 2017, at the International Regulators Forum (IRF) AGM in Denmark, NOPSEMA presented the latest information on the risks posed by design-induced human error in DP systems.

The presentation, relying on publicly available information, showed that the frequency of unintended and undetected DP system deactivation is significantly greater when viewed from an international perspective. The risk of death or other major accident event is also greater. NOPSEMA's presentation showed that measures to reduce risks are available, but these are not necessarily widely known or adopted. As a result, these risks are not being reduced to as low as reasonably possible (ALARP).

At the AGM, the IRF endorsed the need to maintain focus on this issue and to share information about risk areas. NOPSEMA agreed to write to DP system suppliers and industry bodies to inform them of the outcomes of the AGM and IRF member countries agreed to take action appropriate to their regulatory regimes.

NOPSEMA has also delivered the presentation at industry conferences in Asia and the United States, and written to DP system suppliers to make them aware of this work. We have requested their responses as to how they are addressing this issue. 🌐

This article first appeared in NOPSEMA's magazine *The Regulator*, which can be found online at <https://www.nopsema.gov.au/resources/publications/>



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 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.



- The inertia unit was secured to handrails that were in poor condition.

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 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.



Visit www.nautinst.org/MARS for online database

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: http://safeship.ca/uploads/3/4/4/9/34499158/creating_a_reporting_culture.pdf

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.

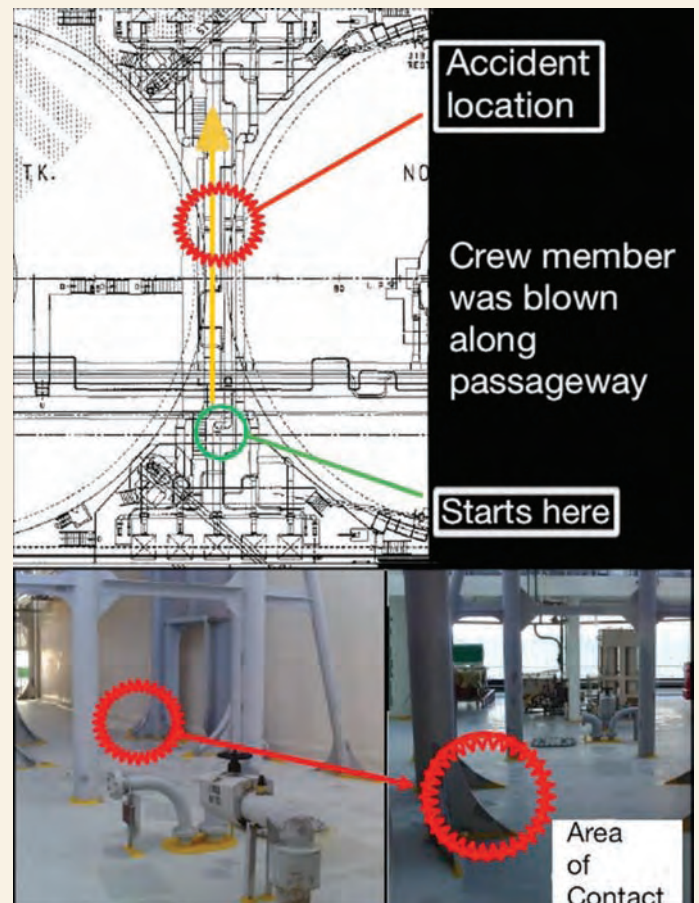
As he made his way past the juncture between two LNG tanks he met localised winds that were so strong he was blown uncontrollably between the tanks. He was forcefully slammed into the ship’s structure and his knee hit the steel, breaking his kneecap.

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.



MARS 201812

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.

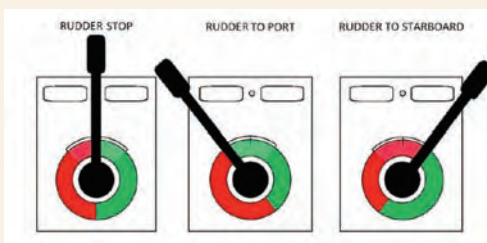
One of the pilots repeated the order 'Follow-up' to the helmsman many times in quick succession. As the vessel was already in 'follow-up' mode, the helmsman did not take any action with the helm mode selector. Meanwhile, the other pilot asked the OOW to call both the Master and the engine room to report 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).

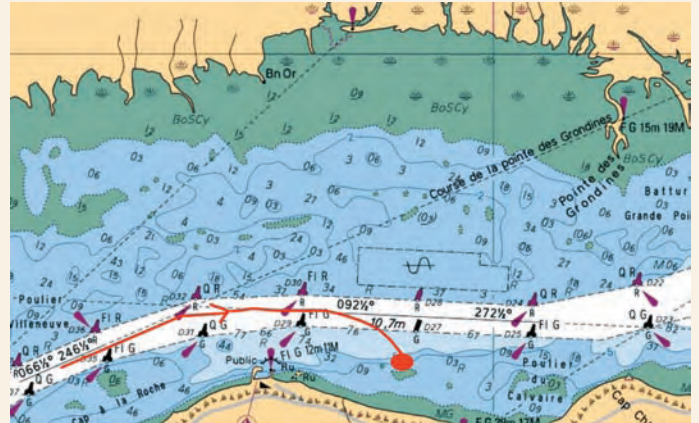
As the vessel was exiting the navigation channel, the OOW noticed that the rudder was positioned hard-a-starboard and brought the handle of the tiller to the left; the rudder then moved to 35° to port (hard-a-port), and the ROT diminished. Shortly, the vessel started to veer to port but it was too late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

The official investigation found several contributing factors to the grounding but also found, after extensive testing, that no steering gear failure had actually occurred. Some of the factors included:

- The vessel initially veered off course to starboard due to the helm likely being inadvertently placed 10° to starboard by the helmsman.
- The ambiguity of the verbal exchange between the helmsman and the pilots led the pilots and the OOW to incorrectly conclude that there was a steering gear failure. No immediate action was taken by the bridge team to verify the functionality of the steering gear once a system failure was assumed.



- The crew did not immediately switch to non-follow-up mode because the pilot mistakenly issued the order to use follow-up mode, the mode they were currently using.
- The helm tiller was not installed in accordance with the manufacturer's specifications, nor was it consistent with internationally accepted standards. Because the pilot was unfamiliar with the particular ergonomics of the installation he unintentionally put the rudder hard-a-starboard instead of hard-a-port.



Approximate vessel course and grounding position

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?'


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 David Patraiko FNI rounds up the latest news, releases and events affecting the maritime professional throughout the world


Health and wellness assessment

➔ As of the beginning of 2018, RightShip dry inspections now include a voluntary Health & Wellness Assessment. This reviews the onboard working and living standards and how they influence wellbeing, work performance, safety and employee retention.

This self-completion assessment is intended to recognise and reward ship owners and managers who go beyond compliance with the Maritime Labour Convention

(2006). It does not yet form part of the RightShip Qi vetting platform. However, charterers may choose to use the information gathered from this assessment in their decision making.

The Health & Wellness questionnaire can be downloaded and completed within 24 hours prior to inspection and e-mailed to RightShip at drycargo@rightship.com, or handed to the Vetting Inspector at the time of inspection.

The assessment form should be completed by the ship's Master, and will then be validated as part of the RightShip inspection procedure. 

Shore leave, EDI and stowaways

➔ Seafarers' rights to shore leave have been strengthened through amendments to the Convention on Facilitation of International Maritime Traffic (FAL Convention) which entered into force globally on 1 January 2018. The revised treaty aims to achieve the smooth transit in ports of ships, cargo and passengers.

The amendment to the international standard on shore leave adds a new provision, on top of the requirement to allow crew ashore while the ship on which they arrive is in port. This states that there should be no discrimination by nationality, race, colour, sex, religion, political opinion, or social origin. Shore leave should be granted irrespective of the flag State of the ship. If any request is turned down, the relevant public authorities must provide an explanation to the crew member and the Master.


The amendments to the Convention on Facilitation of International Maritime Traffic (FAL Convention) also bring in a new requirement for national

governments to introduce electronic data interchange (EDI), to transmit information related to maritime transport. This should be in place by 8 April 2019, with provision for a transitional period of at least 12 months during which both paper and electronic documents would be allowed.

Use of a 'single window' for data is encouraged, to enable all the information required by public authorities in connection with the arrival, stay and departure of ships, persons and cargo, to be submitted via a single portal, without duplication.

Three additional documents may be required by the shore authorities: security-related information required under SOLAS, advance electronic cargo information for customs risk assessment and advanced notification form for waste delivery to port reception facilities.

Standard forms, standards and recommended practices relating to stowaways have been updated and the section on preventing stowaways is updated and

expanded. National authorities are recommended to apply operational procedures equivalent to those in the IMO International Ship and Port Facility Security (ISPS) Code, to prevent stowaways accessing a ship. Governments are required, where appropriate, to incorporate legal grounds to allow prosecution of stowaways, attempted stowaways and any individual or company aiding a stowaway or an attempted stowaway with the intention to facilitate access to the port area, any ship, cargo or freight containers into their national legislation. 


Maintenance Checklist

➔ The latest version of *Good Maintenance Onboard Ships* from ClassNK provides a series of comprehensive checklists to ensure vessels are safe, well-maintained and comply with regulations.

ClassNK has incorporated its knowledge and experience from surveys and audits, feedback

from Port State Control (PSC) inspections and comments from shipowners and mariners to provide checklists for routine maintenance, PSC inspections, Safety Management Systems, Ship Security Management Systems, as well as photos of the most common deficiencies. The latest edition now

also includes a checklist for the Maritime Labour Convention, 2006 (MLC, 2006).


Good Maintenance Onboard Ships can be downloaded free online: http://www.classnk.or.jp/hp/en/info_service/psc/ 

Energy forecast

➔ DNV GL's *Maritime Forecast to 2050* analyses the impact of the changing global energy system on the shipping industry through to 2050. The report explores how the expected shifts in energy production and demand, GDP growth, industrial production and regional manufacturing might change the maritime industry, and the impact on individual ship segments.

'In the *Maritime Forecast* we can see the trends of today become the paradigms of tomorrow,' says Knut Ørbeck-Nilssen. 'Shipping will continue its drive for greater efficiency by reducing costs, improving utilisation, lowering fuel consumption, increasing vessel size, and deploying new technologies. The current wave of digitalisation transforming the industry will also have a profound impact – advancing design and operation and creating new business models.'

The *Maritime Forecast* predicts that:

- Shipping will continue to enjoy robust growth till 2030;
- From 2030 to 2050, demand will increase less rapidly;
- Growth over this period will primarily be in non-energy commodities, such as the container trade and non-coal bulk;
- Shipping's fuel mix will become much more diverse and split equally between fossil and renewables;
- Oil will remain the main fuel option for trading vessels;
- Natural gas will become the second-most widely used fuel. 

A tidal change for the RFA

Introducing *RFA Tidespring*

Commodore Duncan Lamb MA CMMar RFA MNI
Commodore Royal Fleet Auxiliary

On a wet and windy November day in Portsmouth Naval Base, the Royal Fleet Auxiliary (RFA) welcomed the first addition to the flotilla for over a decade. *RFA Tidespring* is the first of four modern fleet tankers to be delivered from the Daewoo Shipbuilding and Marine Engineering (DSME) Company in Okpo, Korea, and the first to enter service. This follows a UK customisation package at A&P of Falmouth, which saw the fitting out of defensive weapons, military communications and computer infrastructure and then UK operational trials including aviation and replenishment at sea.

The journey

In 2009 the UK Ministry of Defence (MOD) issued an advertisement for a competition to deliver the 'build' element of four Military Afloat Reach and Sustainability (MARS) tankers. In accordance with public

contract regulations and MOD commercial policy, expressions of interest were sought worldwide through the Official Journal of the European Union and the Defence Contracts Bulletin. In February 2012, the Department announced that DSME, in partnership with UK company BMT, was the preferred bidder for the MARS Tanker project, and the contract for the build of four tankers was awarded in March 2012. The MARS Tankers are built by DSME to a design provided by BMT Defence Services.

Technical challenges

The first keel was laid in December 2014, and *Tidespring* arrived in the UK in March 2017. This was later than scheduled as a number of technical challenges had to be overcome during the build. These reflected the complexity of a ship designed to operate upthreat (that is, supplying ships in a high threat environment) as part of a Maritime Task Group. This calls for redundancy of systems and self-defensive capability to ensure survivability. The ships are built to meet the latest safety and environmental legislation. They are fitted with a highly fuel efficient hybrid propulsion system and can be easily upgraded to meet more stringent Tier III air emissions.

A significant element of the build project was UK Customisation and



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Tidespring arriving in Portsmouth



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Replenishment at sea can take place at speeds of up to 12 knots

Capability Trials (UKCCATs). Following a UK only competition, the UKCCATS contract was awarded to A&P Group Limited, Falmouth. UKCCATS also includes funding provision for other equipment installation and servicing activities, and specialist trials and technical support. The customisation work is helping to support around 300 jobs at A&P Falmouth. The UK work content in the wider Tide Class programme is sustaining further jobs at 27 UK-based companies.

State of the tides

At the time of writing, the second of the class, *Tiderace*, is coming to the end of her UK customisation and will commence operational trials in the first quarter of 2018. *Tidesurge* left the shipyard in Korea prior to Christmas 2017 and will arrive in the UK in late February, and *Tideforce* was named in Korea in January 2018 and is expected to arrive in the UK in the summer. The lead ship will undertake training in January and February and we expect to employ the ship around the UK during the rest of the year. We expect the first replenishment at sea trials with *HMS Queen Elizabeth* to take place early in 2018.

Future ambitions

At 39,000 tonnes, these four ships are among the largest modern tankers in the RFA, and are optimised to support the Royal Navy's new aircraft carriers. The tanker is designed to take station to port of the *Queen Elizabeth* class 'under' the aircraft carrier's flight-deck overhang. The geometry and view from each bridge bring an added dimension to replenishment at sea for the RFA and RN, with the ships stationed 45 metres apart while underway at 12 knots. However, dynamic modelling has demonstrated the stability of the replenishment system and *Tidespring* handles well.

Of course, the ships are designed to support all classes of warship, UK and NATO and are capable of embarking a Merlin aircraft with a hangar fitted to provide full engineering support at sea. The flight deck itself is designed to land and launch a Chinook. The cargo tanks are entirely versatile so that the 19,000 cubic metres of cargo fuel can be carried in any configuration of aviation or diesel fuel. Replenishment at sea to the carrier will be by two rigs each comprising dual 7-inch RAS

hoses which is the standard delivery system used by the USA but never before employed by the RFA/RN. The pumping rate is up to 15,000 cubic metres per hour in order to minimise the time spent alongside.

A broader perspective

Bringing a new class of ship into service is a demanding endeavour which relies on a diverse, multi-skilled team. *Tidespring* and its sister ships are a testament to the hard work of men and women, military and civilian, around the globe who have delivered a high-quality ship significantly under budget. As the Senior Responsible Officer for the project, I am very proud of what this team have achieved.

The Tide Class will assure the Royal Navy's global reach for many decades to come. Given that the RFA employs a significant proportion of UK registered seafarers, these ships will play an important role in underpinning the RFA contribution to the UK maritime skills base.

A first-class global support solution for a first-class global navy. 🌐



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Getting ship design right

What does it look like when user input is put into practice in ship design? One possible answer can be found in looking back – and it may also have lessons for the future

Captain Peter May

MNI

Recent articles in *Seaways* have emphasised the need for naval architects to talk to the people who actually operate – and work on – ships. One case where this actually happened was the SS *River Boyne* and SS *River Embley*, which might be considered the first double-hulled bulkers. The *Embley*, built in 1983, lasted 29 years, undertook 816 voyages and carried over 57 million tonnes of cargo. The *Boyne* lasted another year with correspondingly higher figures.

Although these ships were scrapped in 2012, they incorporated a lot of ideas that could well be applied to newbuildings.

In a previous article I bemoaned the lack of contact between naval architects and their customers. This was a brilliant exception; it is the only time I know of when the people who had to work the cargo had serious input. Their combined output was exceptional.

Cargo handling

The vessels were built to serve the needs of Queensland Alumina (QAL). One of QAL's main parameters was to get the maximum amount of cargo out using grabs only. The grabs were operated by QAL employees. If bulldozers were to be put down the hatches the company would have to employ members of the Waterside Workers Union and it was reluctant to allow them access to the refinery.

The result was an eight-hatch ship with only three holds. There were athwartships bulkheads between hold nos. 2 and 3 and nos. 5 and 6. The ballast tanks went from the deck to the keel. The height of the void space underneath the holds would have been of concern because of draught limits in the Great Barrier Reef, but it must have been necessary to give the box girder construction enough rigidity. The ballast tanks were bigger than necessary, but this had several beneficial effects:

- The entire hatch floor was accessible to the grabs
- The slope on the ballast tanks channelled the cargo on to the hatch floor
- It provided greater strength
- When the cargo was loaded, it was reasonably close to the top, which made for quicker discharge
- The framing/stiffening for the ballast tanks was on the inside. This meant that the cargo holds were all smooth sided, with very little residual cargo hung up out of reach
- When it came to hatch cleaning there were only three sets of bilge/strum boxes to clean instead of eight. (If naval architects ever had to clean bilges, I am sure we would have had some significant improvements in this department a long time ago.)

We generally left port with about 600–800 tonnes of cargo left in. More could have been discharged, but after the first few trips we realised that large grabs chasing small amounts of cargo led to

unacceptable damage to the ballast tanks. A high discharge rate was more important.

Making sure that as much of that cargo as possible is discharged is also important. Shipowners need to take a good, hard look at their requirements in this respect. When asked how big they would like the holds, the shipowner's knee-jerk response is often 'As big as possible to get the maximum amount of cargo in'. Wrong. The key parameter should be to get the maximum amount of cargo out. If a lot of residual cargo comes out as sweepings/cleanings, that is freight lost – and depending on the fine print of the charterparty, that may be expensive. It is better to load a smaller cargo and to deliver a higher percentage of it. The cavalier approach of yesteryear to the disposal of residual cargo/sweepings/slops is no longer acceptable, and increasingly expensive.

When thinking of new tonnage the shipowner should look at the stowage factors of prospective cargoes before working out an acceptable mean for the size of hatch as against the speed of discharge. A word of caution here. If you are carrying coal, check and double-check the stowage factors given to you. They vary significantly. I was halfway through loading a hatch to 90% capacity using the stowage factor given by the terminal when I realised that the tonnage would be approximately 110% of the hold capacity. The chances are that the loader operator would not have stopped until he reached his tonnage. It prompted a bit of hurried recalculation.

Alternative benefits

While this design worked very well for QAL's needs, it struck me that it could also have wider applications. When I worked on handy-sized bulkers that used their own cranes to discharge, work over a week-long discharge would go very well for the first couple of days with the cargo near the top of the hatch. It would then get progressively slower. Eventually you would have to put a bobcat (mini excavator) down the hatch to consolidate the last of the cargo. To do this you had to take the grab off the crane and put the hook back on to lower the bobcat into the hatch. With the exception of a few 'cowboy' ports, it is deemed

Why these ships?

Queensland Alumina (QAL) owned the largest smelter in the world in Gladstone. When the original four conventional bulk carriers serving the smelter became due for replacement, four new ones, purpose-built, were proposed. Two were to be run by ANL (Australian National Line) and two by TNT (Thomas Nationwide Transport). I served on both the ANL ships, but spent much more time on *River Embley*.

The run to Weipa, the loading port, took about three and a half days followed by a day loading and then waiting for the tide. It took about four days to Gladstone followed by one and a half days to discharge. With four ships on the run, any delay had a multiplier effect.

unsafe to have both the grab and a bobcat working simultaneously in the same hatch, so after the bobcat has pushed a bit of cargo into a heap, you take it out and put the grab back on. This process is repeated for ever-diminishing amounts of cargo. It is obviously painfully slow. Think how much quicker it would be if the bobcat could consolidate cargo in hold no. 1, then drive through to hold no. 2 and consolidate there while hold no. 1 is being discharged, before reversing the process.

Another benefit of this type of construction could be that instead of having a single bulkhead between two holds, you could make it a box construction (provided you were willing to sacrifice the convenience of driving from one hold to the next). This would allow you to put a bunker tank there. The outer hull could be breached and the bunker tank could still be intact. In a worst case scenario, most of the oil would still be contained in the ship. This could be of significance to ships likely to transit the North West Passage or other areas of high environmental sensitivity.

These ships were built as ore carriers and when we took a coal cargo to Indonesia on our way to drydock, we could not load to her marks with the hatches full. Compared with an ore carrier, the ballast tanks on a bulker would have to be smaller to increase the volume in the holds. This would reduce the stiffening provided by the box girder construction. Compromise is called for.

When proposing a new system, you know you are going to get people knocking your proposal and saying it will not work. In this case, in cricketing terms, these two ships have the 'runs on the board'. They would have cost more to build, but the comparisons would be interesting. MHI are to be congratulated on two superb ships. 🇺🇸



Ability to unload efficiently is just as important as overall capacity

You may also be interested in *Improving Ship Operational Design*, published by The Nautical Institute

THE NAUTICAL INSTITUTE'S MARINE INCIDENT INVESTIGATION & ANALYSIS COURSE

Based on IMO Model Course 3.11, this course introduces the processes and procedures to support a marine casualty investigation in accordance with IMO Assembly Resolution A.849(20) and the Code for the Investigation of Marine Casualties and Incidents.

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➔ Reporting back from conferences, seminars and discussions across the maritime world. Join the discussion at LinkedIn, or email editor@nautinst.org

CARGO AND MARINE INSURANCE

➔ At the end of 2017 an international conference on cargo and marine insurance took place for the first time in Odessa. The conference was organised by Interlegal law firm, supported by The Nautical Institute of Ukraine (NIU).

Black Sea countries have not discussed marine insurance innovations at such a high level for many years. The conference attracted the interest of more than 100 delegates, including insurers, traders, exporters, shipowners, charterers, lawyers and other international trade experts.

Pavel Rudenko, CFTS analyst, opened the first session with a review of cargo handling in Black Sea ports, showing the full scope of cargo flows across Black Sea markets. Andrejs Radionovs and Dmitrijs Igaunis, from Marine Services Group and Inter Hannover, gave a presentation on the implications of cargo insurance as opposed to liability insurance for terminals, freight forwarders and logistic operators. They also considered the question of how to insure cargo for very short periods of time as it passes through a port. Each presentation was backed up with publicly available case studies,

highlighting the fact that conference delegates face such problems every day.

David McKie from Kennedys Marine closed the first session with an update on English law on marine insurance. During the coffee break, participants had plenty of questions to ask the speakers.

Lachlan Morison and Tomas Ling, of The Charterers P&I Club (United Kingdom), explained why charterers' liability insurance is less expensive than you might think. Karina Gorovaya, Interlegal, spoke on subrogation and recourse in Black Sea Region countries, while Ufuk Teker, TURK P&I, set out the advantages of being a local P&I insurer. Mehmet Dogu, Dogu – Interlegal, continued the regional theme by looking at cargo shortage and customs fines in Turkey.

Following lunch, Andrey Suprunenko MNI, from Remedy Law Firm, and Andrey Perepelitsa, Interlegal, drew our attention to a case study that centres on the interaction of the parties in complex insurance cases.

Pavel Svertilov, CIS P&I (Ukraine), provided clear recommendations for ports of loading.

Natalya Myroshnychenko, Alexey Remeslo

AFNI and lawyer Ekaterina Gadetskaya, all from Interlegal, gave a series of presentations on:

- Liability of the parties under cargo traffic at the port
- Operations concerning export cargo passing the port/terminal before loading on board the vessel
- Terminal co-operation with vessel and shipowner
- Cargo arrest by law enforcement bodies.

The wide variety of important themes and case studies, the high level of interactivity among delegates, the number of international speakers, and the high professional standard both of those making the presentations and of the participants were the highlights of the International Cargo and Marine Insurance conference.

Participants, speakers and media partners together made this event unforgettable. We believe that this conference yielded positive results for everyone and will be similarly successful when it is held again next year.

Professor Vladimir Torskiy FNI



Members of The Nautical Institute at the International Cargo and Marine Insurance Conference in Odessa

GOLDENPORT ANNUAL CREW CONFERENCE

→ The Odessa Maritime Academy welcomed Goldenport’s annual crew conference, giving members of the company the opportunity to discuss current crewing trends with the cadets and academic staff. The conference also marked the company’s 19th anniversary.

Captain Nicolaos Kostiras, manager of Oceangold Odessa, welcomed the guests and made a brief presentation on activity in the Ukrainian crew market. Nikolaos Kokkinos, crew manager of Goldenport Shipmanagement Ltd, gave a presentation on the company’s cadetship programme.

The event offered updates on:

- Company collaboration with the Odessa Maritime Academy
- MARPOL incidents and the human factor
- Ballast water management (BWM)
- Ship recycling services
- EU Regulation 2015/757 for Marine Monitoring, Reporting and Verification (MRV)
- Cargo precautions at Ukrainian ports
- The new STCW convention.

Three of the speakers were members of The Nautical Institute: Captain Y Buchkovsky, Mr E Kuznetsov and Mr P Svertilov.

Professor Vladimir Torskiy FNI



Staff and cadets at the Odessa Maritime Academy, Goldenport Odessa and members of The Nautical Institute at Goldenport’s annual crew conference



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SOUTH WEST OF ENGLAND BRANCH

Sail training and subsea pipeline installation

→ Andy Brown AFNI gave a lively presentation on two very different topics which have dominated his working life; first as a skipper of sail training vessels, and subsequently developing a professional career as hydrographic surveyor.

Sail training

Following a degree in Nautical Studies at Plymouth Polytechnic, Andy went on to work for the Ocean Youth Trust (OYT). At a very young age, he was skipper mate on the well known South West vessel the *'Falmouth Packet'*. Andy has enjoyed the challenge of skippering various training vessels belonging to the Trust in different locations in the United Kingdom.

The OYT's most recent acquisition is the 2005-built *TS Prolific*, a 30 metre Bermuda rigged ketch introduced into the OYT fleet in 2017. Staffed by four professionals, the vessel gives sailing opportunities for crews of up to 12 young people, allowing them to experience life at sea. The young people who make up the crew come from a wide range of backgrounds including young leaders, apprentices, people with physical and learning difficulties, young carers, those undertaking the Duke of Edinburgh Award, Scouts and Guides, those not currently in education or training, and young offenders. The sailing helps provide young people with confidence and team work in a 'friendly yet disciplined' environment.

The work of the OYT (Scotland) illustrates the educational value of sea experience, as it has been recently engaged in the development of a 'Curriculum for Excellence'. This attempts



Andy Brown
AFNI

to encourage four key capacities in all young people, making them successful learners, confident individuals, responsible citizens and effective contributors. We were shown several short film clips 'starring' experienced teachers who undertook a voyage with the OYT. They testified to the value of sailing in curriculum subjects areas such as health and well-being, science and technology, numeracy and mathematics and business education.

Subsea pipeline installation

The second part of Andy's presentation looked at subsea pipeline installation, in particular the role of the hydrographic surveyor. He outlined the importance of the initial desk-top study used in preparation for the pipeline lay, and described the many activities which follow, including seabed preparation, the pre-lay survey, pipe-laying processes, trench and backfilling operations, the post lay, 'as built' survey and the ensuing annual surveys.

The process of route planning for a pipeline lay was described in some detail. To establish the necessary information might require five



TS 'Prolific':
the latest
addition to the
Ocean Youth
Trust's fleet

forms of survey: land site survey, diving survey, inshore survey, shallow water survey and deep-water survey. Issues which determine the exact route to be taken by a pipe line include not only the geological and topographical features of the sea bed but also vessel access, fishing activity, shipping movements, climatology, currents, hydrocarbon activity and other pipelines and cables in the area. The surveyor's report will be presented to the client, who will then present the information to the pipe-lay and route-lay contractors. They, in turn will estimate the costs of undertaking prior to producing a quote for the client.

The talk was interactive, with much participation and sharing of experiences from members. Both topics covered were succinctly presented and of interest and value to all who attended.

In the absence of the seagoing chairman, Oliver Chasteauneuf MNI, Captain Bob Hone FNI, Branch Honorary Secretary, thanked the speaker for his very interesting presentation.

Paul G Wright MNM FNI

IRELAND BRANCH

→ The first Ireland Branch event of 2018 began with a presentation by Dr Margareta Lützhöft FNI on autonomous ships.

Margareta opened by asking whether autonomous ships will mean the end of human error. She argued that human error will not go away as humans will still be involved at every stage of the process, including ship design, build and maintenance. Current legal and regulatory frameworks also need to be considered. There is a view that with autonomy, shipping will be safer, with greater cost savings, enhanced environmental safety, reduced fuel consumption and enhanced crew safety. But how will these vessels be effectively controlled, and how many operators will be required to control how many ships?

There is a perception that everyone is engaged in autonomous shipping development, with some companies pushing

hard to be known as those that were the first to operate autonomous ships. Remote control tests have been proven with a tug. However, the tug was manoeuvring but not engaged in actual tug work.

There is a general assumption that the next generation will easily be able to manage and multi task autonomous activities. Margareta suggests that next generation users may well be out of their depth earlier than we are, as technology evolves faster than humans.

When developing a cost/benefit analysis for the introduction of more autonomous ships, we need to consider all areas, including the cost of competence on the shore side, IT, engineering and the cost of redundancy. We also need to consider security and environmental implications, search and rescue, Sensitive Sea Areas, jurisdictional issues, safety culture, procedures and the potential transfer of the

'Master's responsibility' to operators ashore.

Margareta's presentation was followed by a lively discussion on the topic of autonomy. It was noted that seafarers can be conservative and so change is slow to be implemented in the industry.

Issues of ethics and culture in relation to artificial intelligence were highlighted. Norway's Human Maritime Autonomy Enable (HUMANE) project was also mentioned and there was some discussion of Colregs with regard to interaction with autonomous vessels.

It was felt that seafarers should be at the front, leading technology development and not chasing it. Whether you agree or disagree with the concept of autonomous vessels, now is the time to have the debate, and The Nautical Institute is a fantastic forum to engage in it.

Deirdre Lane MSc MNI

SOUTH EAST AUSTRALIA

Focus Event – Connecting women in the maritime industry

→ The Port Authority of New South Wales and Nautical Institute, South East Australia Branch co-presented an inaugural event to connect women in the maritime industry. The event garnered significant interest from the maritime industry in the Sydney area, with further sponsorship from TeeKay Shipping, Carnival Australia, Svitzer, and the Australian Institute of Marine Surveyors (AIMS).

The seeds for the event were planted during the NI Command Seminar held in Sydney Australia in 2014, organised by the NI SE Australia Branch. In the intervening years, national and international developments led to the decision to hold a focus seminar to help women in maritime, both afloat and ashore, connect and determine a strategy for further action. These developments included the strategic development goal of the United Nations to promote gender equality; the work of the IMO to promote women in maritime industries; the work of the NI and WISTA, as well as the establishment of regional organisations for women in the maritime industry, such as Pacific Women in Maritime (PACWIMA).

The 'Connecting Women in Maritime' event was oversubscribed, with more than

80 registered participants. The focus for the evening included career pathways; awareness and visibility; and the value of diversity at all levels in the maritime industry.

Jeanine Drummond AFNI, Deputy Harbour Master and Operations Manager for Ports Authority of New South Wales (NSW), organised the evening event, with strong support from Phillip Holliday AFNI, Harbour Master and Chief Operating Officer, Ports Authority of NSW.

Presentations from professional sailor and maritime lawyer Adrienne Cahalan, Master Mariner Megan Arnott and tug engineer Mel Perottet highlighted the influence and strength of women in all sectors of the maritime industry. Phillip Holliday highlighted the importance of diversity at all levels, noting the value he places on a diverse management team to address current and developing requirements when running a large port authority.

The event wrap up included a number of key points, and conclusions to lead to further activity for *Connecting Women in Maritime*.

Summary Conclusions:

- It is good to simply connect with others who are in similar professional fields, who have similar experiences, providing support for

and from each other in an informal setting.

- Existing organisations, such as NI, WISTA, and the regional associations can provide a focus for activity, but there is a need to ensure an inclusive environment, recognising women in sea-going roles as well as shore based positions.
- The numbers of women applying to entry level maritime positions are disproportionate to the number of men. In order to encourage girls to work in maritime environments there is a need to provide strong role models.
- Lessons learned from the work to promote women in STEM (science, technology, engineering and maths) could be beneficial when looking to promote seafaring / maritime related careers for young adults and school leavers.
- Mentoring – both informal and formal – could be beneficial to support women entering or already in maritime professions.

Jillian Carson-Jackson FNI, FRIN
Vice-President, The Nautical Institute



NORTH WEST ENGLAND & NORTH WALES BRANCH

Windfarm support vessels

→ Stephen Bolton, Commercial Director of Bibby Marine Services, gave a fascinating presentation on wind farm vessels. The topic generated a lot of interest and it was no surprise when 30 members and associates sat down to hear about the latest developments in this area.

The *Bibby Wavemaster 1* was delivered from Damen Shipyards earlier this year and immediately entered service. This vessel is the latest generation of 'Walk to work' (W2W)

vessels designed specifically for offshore wind farms. It is expected these larger craft will displace the current fleet of smaller support vessels, which can only take limited staff out to the farms, and must return to shore every evening. The W2W vessel enables maintenance teams to stay adjacent to the towers and carry out work more efficiently and effectively.

The *Bibby Wavemaster 1* is a 90m monohull which can operate in significant wave heights of

3.5 – 4.0 metres. There are currently five similar vessels in operation, with three more currently being built and a projected demand of 25 in the near term. Older vessels tended to be ex platform support vessels (PSVs). These were less than ideal, but were still seen as better than the smaller day only operation support fleet. The new W2W fleet is likely to see the demise of these PSVs as well.

Stephen explained the significant gains made

with the new generation vessel:

- The gangway is integrated with the dynamic positioning (DP) system so workers can literally walk onto the turbines with no stepping over a gap needed;
- Maintenance kit is trolleyed over the same gangway;
- Faster deployment to several turbines by programming DP to run automatically;
- Able to work in more sea states;
- Gangway is fully heave compensated (it is designed to rest against the turbine).

The vessel incorporates 20 foot containers which carry the technical stores for the turbines. This enables heavy items to be trolleyed direct from the vessel to the turbine. At the moment, the vessel needs to restock these containers by returning to port. For 16 hour gangway operations, 22 crew are required; for 24 hr operations, 24 crew are required.

The Bibby hull has been specifically tuned for North Sea operation. This has minimised its sea movement and produced a better profile for various wind states. A lower height for helicopter landings means more landings are achieved. These are all areas which potential charterers see as key to an efficient maintenance operation.

Perhaps one of the key benefits of the hull tuning is minimal sea movement and hence less motion sickness for the maintenance teams. The vessel can carry 90 people, and cabins are equipped to Comfort Class 2 (cruise vessels are considered Comfort Class 1, diving support vessels are Comfort Class 3), fitted with all the refinements expected of a decent hotel ashore – wifi, TV and leisure facilities.

One of the key pieces of equipment is the specially designed access tower which incorporates a lift, ensuring maintenance staff can seamlessly walk from the vessel onto the turbine with no ladders needed, a major improvement over previous vessels. Each turbine is built with a transfer platform, and the W2W vessel puts the gangway against this platform, while retaining its horizontal level. The next big improvement will be to fully integrate the gangway end point with the DP system. The vessel also carries Crew Transfer Vessels (CTVs), which can be used for additional tasks in sea states of up to 1.25 metres. The vessels are unlikely to operate on floating turbines, as these are typically closer inland, and it would not be safe to do so.

Although the vessel is currently operating in the construction segment, contracts are already

coming through for use in W2W operations, so charterers are clearly seeing the gains they can make here. The vessels are designed by Damen, and it is possible vessels for other owners will be built to the same design.

A lively Q&A followed, and the evening closed with Capt Ian Mathison FNI, Branch Chairman, extending thanks to Stephen Bolton, and Bibby for making the evening such a success.

Derek Gallagher MNI



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Letters

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IMO and Port State Control

→ For a number of years in the 80s and 90s, I managed the vetting scheme for a major oil company. Its main purpose, then as now was, among other matters, to protect the Company from the effects of substandard shipping. In those days, inspection records and reports were often handwritten and certainly not computerised. Any analysis, therefore, was laborious and painstaking, the results often somewhat simplistic and limited to very general conclusions only. Port State Control was merely a twinkle in IMO's eye. Now, after a huge number of inspections and detentions, it has amassed a colossal amount of data, all of which can and ought to be rigorously interrogated.

The article by the CEO of AMSA Mick Kinley in December's *Seaways* 'Time to stop detention by design' was, for me anyway, a fascinating document. It is a pity, although understandable, that the top nine detainable defect categories span Conventions, Codes and very specific items of equipment which makes a reasonable comparison

rather subjective and possibly dangerous.

The principal categories of non-compliance have hardly changed in 30 years. On reflection, it ought to be blindingly obvious that a management system ought to outscore in percentage terms a small subset such as lifeboats and rescue boats. Similarly, detainable defects for the whole of MLC just outscore the humble engine room fire damper, yet the differential in both cases is nothing like as large as one might intuitively expect. The cynic in me asks 'Is it because finding a seized damper requires little effort whereas checking through reams of required documentation requires significantly more time and competence?'

In the years leading up to 2005, a group of experts looked at ISM in some depth (MSC81/17/1) and concluded, among other things, that while there was much to be pleased with, the Code was clearly not easy to understand or comply with. Has this report been conveniently filed at the bottom of

the ocean?

One very pertinent comment was that the study had not explored the impact of Port State Control.

The document included the following recommendations:

'A further study should be undertaken, at a later date, specifically to examine:

- Cause and effect between ISM implementation and flag State safety record;
- The relationship between PSC and ISM compliance; and
- Whether textual changes in the requirements of the Code could make compliance easier and lead to an improved safety culture.'

We all know that defects and failure to comply are widely viewed as the fault of those on board the vessel. In their defence, however well intended the legislation may be, it is not always so easy to comply with legislation. In this regard, one only has to consider the shift in balance between lives saved and those taken by lifeboats, caused by the difficulties

in designing and operating what is intended to be a lifesaving piece of equipment, yet has sadly proved to be exactly the opposite.

With a considerable number of years and many ship inspections under its ISM belt, IMO members might serve the whole maritime community, from Administration Representative to the humble deck boy, if they were to act objectively upon this recommendation. PSC data should be interrogated with a view to assessing the effectiveness not only of ISM, but also of the various governing Conventions and acting to facilitate compliance through improvement of Conventions, thereby improving the lot of the humble seafarer.

As Mick Kinley concluded: 'Otherwise, in 20 years' time, seafarers will still be suffering the same issues – and we will still be detaining ships for the same thing.'
Captain Peter Gill ExC FNI, FRIN

Nature of water

→ Responding to Capt Mike Nicholson's commentary on the 'Nature of water' in December's *Seaways*, I would like to point out that, in common with many pieces published in *Seaways*, the article represents only a small extract from a much more extensive work that addresses how water subtly changes fluidic state under certain conditions. The article was not a treatise on how to handle ships.

The science underpinning the theory is well established (New Scientist, February 2012, 'Water, the Strangest Liquid') and, at

that time, was of critical interest to biologists who were trying to understand why water could exist in varying fluidic states inside the human body – an environment that does not possess the extreme physical conditions which Capt Nicholson cites as being necessary to achieve molecular conversion. Water converting from solid to liquid or vapour, and vice-versa, goes on all around us. It is an entirely natural process and does not require huge pressures or extremes of temperature to take place.

Barring a more robust and

encompassing concept, the theory presented as the molecular conversion of water does work insofar as it serves to aid our understanding of what happens when the energy profile of water is caused to change by whatever means.

The generally accepted test for a 'theory' is that it should be capable of predicting related, but previously unexplained, occurrences. Nevertheless, a proposing theorist should always be content when their idea results in debate or attracts criticism. Surely this will cause others to test

the theory and try to disprove it by means of hard science. To that end, I look forward to, and readily welcome, any future development that improves our understanding of the nature of water.

Captain Peter McArthur FNI

City of Rotterdam and Primula Seaways collision

➔ It is difficult to disagree with the fact that the pilot and the captain caused this collision. The pilot suffered from 'Relative Motion Illusion'. We must not forget two basic aids to navigation, namely the compass and the chart. Surely a glance at the compass repeater on the centre line of the ship would have alerted the pilot to the fact that his true heading was not what he thought it was. If the Master and the officer of the watch had kept track of the ship's position on the chart and if they too had kept an eye on the compass and listened to everything the pilot said, the multi-million dollar collision might have been avoided, the pilot would not have been fined £45,000 and the pilot and the captain might not have lost their jobs.

We often admonish bridge personnel for not looking out of the window, but in this case, the pilot's errors were as a result of him looking out of the window. The basic problem was the design of the ship's bridge. SOLAS has very clear regulations about bridge design, but rules are often allowed to be broken by ship owners and builders if it can be shown that they are making adjustments to

compensate. For example bridge windows may slope inwards from the top down but not from the bottom up. Seventy years ago the Port Line had two ships, very pretty and streamlined with windows sloping the wrong way, but they did not repeat the error in future ships. Fifty years ago a signal station tower was built in a harbour with which I was familiar. The purpose of the signal station was to keep a lookout in the harbour and to communicate with shipping, but the windows sloped the wrong way and signalmen could see nothing except reflections so the building had to be rebuilt. Why don't we learn from these mistakes?

About the same time, I spoke at IMO on the subject of bridge design, this time the topic was the necessity to be able to see the ship's side and the wharf from the wing of the bridge. It was obvious to me that most of the IMO delegates had no idea of the importance of this. It is now a SOLAS requirement, but the bridge wings on *City of Rotterdam* barely comply.

Surely, a navigation bridge should be designed primarily to serve the purpose of navigation.

The semi-circular shape of the bridge of *City of Rotterdam* was so designed to improve fuel economy. No part of the ship forward of the bridge can be seen from the bridge, and it is only from the centre window that it is possible to feel comfortable about the true heading of the ship; through the other windows one experiences 'relative motion illusion'. Other pilots have had difficulties with handling *City of Rotterdam* and they have developed strategies to cope with the challenges resulting from the bridge layout. In spite of this there have been other ships built with similar bridge design but this should not be allowed.

Airline pilots can have lapses in awareness about which way they are going. There was an aircraft which crash landed in the Brazilian jungle. The course from departure to destination was 027°, but on the flight plan this showed as 270°. The pilots set off on a course of 270°, flying due west into a clearly visible setting sun even though they were flying in familiar territory and they must have known that their destination was in a north easterly direction. They realised they were lost when elapsed time indicated that they should be close to their

destination. They were hundreds of miles off course, low on fuel, they were out of range of any land based radar, and out of range of their usual radio frequency. Did they not look at the compass or a chart during the flight? It took rescuers three days to find the wrecked aircraft, which they knew to be missing for some time before the fuel ran out, but like the pilots they had no idea where the plane was. Several passengers were killed or injured on the plane. The First Officer was badly injured but both pilots survived and both were found to be to blame for the disaster and both were fired. Two passengers had told a flight attendant that they were heading the wrong way but the message was not passed on to those in the cockpit. I guess BRM does not include passengers. Pilots, both maritime and in aviation must never be wrong because one error can lead to disaster.

Captain Malcolm C. Armstrong, FNI

Ports, ship visitors and Letters of Indemnity

➔ I have read a few times that in order to avoid any claim against the vessel for any injury to visitors, it is recommended that vessels should make all visitors sign a Letter Of Indemnity (LOI). This supposedly indemnifies the Master and the vessel against any claim due to injury to the visitors who visit the ships.

The intent behind this LOI is understandable, as it discourages unwanted persons from visiting ships. But it must be borne in mind that getting this indemnity signed by visitors does not absolve the Master from the responsibility to ensure that the ship is safe for visitors. For example, if a person who needs to go on deck of the vessel (stevedore or port authority),

slips and gets injured due to oil leakage on deck that took place 24 hours before and was not cleaned by ship crew, is this 100% the fault of the injured party, or is it partly the fault of the vessel for not cleaning the oil? The Master has all the authority to have a visitor escorted by the ship crew, and to make the visitor to leave the vessel if they are not listening to the escort or moving in an unsafe manner. But the Master cannot have this authority without being responsible for the visitor's safety.

Another point to note is that such LOIs should be only for actual visitors (defined as someone who comes to see the ship purely as a visitor). The term 'visitor' should not be used loosely to include anyone other than the ship's crew.

It definitely does not include port staff boarding the vessel to carry out the inspection or supervision of cargo operations.

On the flip side, there are some ports which are making vessels sign LOIs stating that the port will not be responsible for any accidents, even if they are caused due to the port's fault. Again, making the vessel sign such an LOI does not absolve the port from ensuring that they provide a safe berth and carry out cargo operations in a safe manner using well maintained equipment and gear. Ports should remember that the Master has the overriding authority for the safety of the vessel and can declare a berth as 'unsafe'.

This makes me wonder how

any such LOI which is forced upon Captains (or ship's visitors to sign) will stand up in the eyes of international law, if there is any accident due to port's (or vessel's) fault. My guess is that an LOI of this kind will be like LOIs for bills of lading, which are not admissible in the courts – but this will only be known in due course of time when there is a test case.

Vessels and port are cautioned that irrespective of any LOI, they are still responsible for providing a safe environment and equipment.

Captain Hemant Gupta AFNI

Port Safety Code

→ I read with interest the letter in *Seaways* January 2018 from Capt Ravindra P. Varma. Having been working in marine risk for several years, where the work included ports and their safe operations, I would like to highlight that a port safety code model exists in the UK – the Port Marine Safety Code (PMSC). Although it is a UK Code, the PMSC has been adopted in some other territories. It is modelled on and very similar to ISM and it would make a good template for an international code.

The next question should be which international body (equivalent to IMO) would form a basis for enabling legislation for making and reviewing such a code? There are international bodies representing the industry (The International Association of Ports and Harbours – IAPH) and the professionals within it

(International Harbour Masters Association – IHMA), but if such a code is to have true recognition it should also be adopted in the various territorial administrations where it would be used.

The work done independently by bodies such as OCIMF in the past is a good example of the industry getting its house in order. In doing so it has avoided remotely applied legislation that – however relevant it is at the time – can too easily become ‘set in stone’ and unable to move with progress. Too often, law makers will not act until some major catastrophe forces them down the road of legislation. By that time a lack of trust in the industry being regulated may have set in, and the resulting exclusion of input from that industry can lead to over-prescriptive and even irrelevant legislation – the proverbial ‘knee-jerk reaction’.

Does this sound familiar?

Waiting for disaster is the worst kind of risk management and does not deserve the name. A better approach is to have a system that has, as key ingredients, wide ranging and regularly updated risk assessment, and regular review and revision enabling action before disaster strikes. Near-miss reporting is perhaps the missing link in too many so-called systems. The system should also be subject to scrutiny by regular internal and external audit. As an aside, do not forget MARS and CHIRP. The latter in particular receives many reports from ports. *[Editor’s note: By contrast, MARS receives relatively few reports from ports, but they are always welcome].*

Perhaps the industry-led initiative is the way to go. Any volunteers? Similar coordinated approaches have been seen in

areas such as bulk carrier ship/shore interfaces, an initiative that started in the industry, supported by The Nautical Institute in *Bulk Carrier Practice*. They have influenced IMO and Chapter XII of SOLAS.

A good start would be to pass Capt Varma’s letter to the two bodies mentioned above. At least they would then know that mariners were thinking towards such merging of common interests in safety. We need to talk to others outside our immediate sphere but with whom we inevitably rub shoulders – or should that be fenders? It may throw up some surprises.

Captain Dennis Barber FNI MRIN Assoc. RINA
UK

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THIS MONTH, WE DISCUSS ANONYMOUS SAFETY REPORTING TO SHORE FOR SHIPS AT SEA

Peter Dolan, Principal Consultant at eProNav - AIS and Waterways Management writes:
"Recommendation #13 of the US Coast Guard Marine Board of Investigation (MBI) report on the sinking of the *El Faro* states that 'It is recommended that Commandant direct the development of a shipboard emergency alert system that would provide an anonymous reporting mechanism for crew members to communicate directly with the Designated Person Ashore or the Coast Guard while the ship is

at sea. The system would be in place to report urgent and dire safety concerns that are not being adequately addressed onboard the ship or by shore based company resources in a timely manner.'

If implemented, it could be abused but I think it is a good idea. I'm sure the second mate on the *El Faro* wished such a system had been in place at the time of the sinking. I'm interested in what others think of the recommendation."

THE INSTITUTE'S LINKEDIN COMMUNITY RESPONDED:

→ This proposal could open a real can of worms. Whistleblower schemes are open to abuse and bypass what should be effective means of communication.

The issue here seems to be more about management style and culture. Whilst the *El Faro* foundering may have been prevented by the Master being more open to his subordinates concerns, it would appear that his approach was very much 'top down'. The way of counteracting such behaviour is down to having an effective staff assessment process in the company.

→ Where were the Owners/Operators, including the Designated Person Ashore, to monitor the progress of the vessel? When they saw that she was heading directly into a hurricane, they should have ordered the Master to change course and/or speed.

→ DPAs in general rarely consult with senior management. Anonymous reporting has certainly been a feature of companies I've worked for, though I'm not sure how much use it served. I have never received any feedback or knew of the system being used. I've called the DPA direct and soon get past them direct to senior management.

ISM is great, if only people on the vessel would comply, a fair number don't. The reports to the office should include all faults and time outstanding. That provision alone in ISM would make it difficult for management to avoid responsibility. However, I found that senior manager do not really like this type of reporting and want to only include new findings.

→ As long as the crew does not misuse this privilege, such a recommendation should assist in enhancing safety.

→ Certainly this recommendation is not going to serve its purpose and only creates a good opportunity for those who wish to smear the reputation of their captains. The best remedy will be adopting a good system for the regular

and random performance assessment of captains.

→ The commercial pressure on Masters is so intense that many will strive to maintain their ETA – and avoid extra fuel consumption – irrespective of the weather forecasts. When shipmasters revert to behaving as if their command is 'their own property - and uninsured', safety will be enhanced.

→ It is a good control measure to check an errant Master's/supervisor's action that puts an entire vessel at jeopardy. However it has to be carefully designed. If 'anonymity' is the only point then such a system /control process is designed to fail on a merchant vessel due to the smaller number of crew, meaning an immediate revelation of who made the tip off. It should center around a 'whistleblower' reporting format wherein such contacts are properly documented.

Such a system would preferably be done via an intranet platform where creation of a Token Number and default delegation of shore side contact are built in. The person receiving the report must be legally liable to keep the identity of whistleblower to themselves and HR measures must be put in place to ensure that employee's contract is not terminated for flimsy reasons .

→ The *El Faro's* Master did consult with the DPA shortly before the vessel's demise. Unfortunately the DPA on duty had no seagoing background and would have been unable to provide much assistance. I think more important would be a requirement for DPAs to have proper seafaring experience, in order to be able to better assist those onboard their ships.

→ Even if it was implemented, I think this reporting system wouldn't have avoided what did happen. Having people with seagoing background in shipping company offices perhaps could help this change of culture. As sailors we are supposed to know the job at sea.

Commercial staff need to have someone next door to counterbalance the money pressure. Operating and managing a vessel is not always compatible with what is written by law and business folks in the charterparties.

→ Ultimately, it is up to the Master what he wants to do. If he is willing to compromise the safety of his crew, cargo and the vessel, no amount of ISM can prevent the ensuing losses. If he is unwilling to give in to shoreside meddling, no one can make him, at least not till the end of the voyage.

→ This has actually been in place for a very long time. Under the old school analogue system, you put a dime in a pay phone and called the USCG in that district. You can get the updated version 1.1 by using a cell phone. (Hard to find a phone booth.)

→ Master's 'Ultimatum' to shoreside will be followed by 'Change of Master'. I did try to force a managing company to follow risk assessment but they responded 'Change it on board to acceptable level or go home.' This is the actual ultimatum.

This report attempts to give a representative summary of the discussion – it is not possible to include all comments. To see the discussion in full, please visit LinkedIn.

➔ Representing The Nautical Institute to the maritime industry and beyond



NI President Captain Duke Snider FNI is spending this month onboard the *USS Polar Star* (seen here leaving Christchurch) exploring ice operations in the Antarctic.



On his way to board the vessel, Duke (r) took the opportunity to meet local NI members in Christchurch, New Zealand on New Year's Day. 'Wherever I go as NI President I am continually impressed by dedication of local members' said Duke.

The Nautical Institute and Green Awards

NIHQ's Director of Projects, David Patraiko, attended the 55th Green Award Committee meeting in Amsterdam last month. As a result of the meeting, the Green Award Foundation announced a Platinum label for ships operating emission-free.



At NIHQ, we said farewell to Captain John Dickinson FNI, our Head of Delegation at IMO (r). John begins his retirement this month after a wide and varied career including time at sea on conventional vessels and fast ferries, working as Harbourmaster in the Bay of Plenty, Licensing Manager for Maritime New Zealand and finally at The Nautical Institute. John has represented the NI and our members at the IMO since 2009, attending every IMO meeting in that time. We wish him all the best in his retirement!



CEO Captain John Lloyd FNI visited the C-Smart Training Centre in The Netherlands; part of the Carnival Corporation delivering training to seafarers from around the globe. John Lloyd is pictured here with two distinguished Fellows – Captain David Christie (l) and Captain Hans Hederstrom.

John also attended the opening of Warsash Maritime Academy's new facilities at Southampton Solent University, where he launched The Nautical Institute's latest publication *Launch and Recovery of Boats from Ships*. Here, he presents a copy to Lars Lippuner MNI, Head of Commercial Operations.



Merchant Navy Medal for Meritorious Service

Nominations Sought for 2018 Awards

Once again the UK Department for Transport (DfT), supported by the Merchant Navy Honours Consultative Committee, is seeking nominations for this year's Merchant Navy Medal for Meritorious Service. This State Award is for those who have served at sea in the Merchant Navy or Fishing Fleets, normally for at least 20 years and have made a significant contribution, some of which can be in a shore based capacity.

All those involved are anxious that everyone involved in the industry - individuals, ships' crews and organisations, ashore and afloat, give consideration to persons who they feel might be deserving of this Award. Nominees should have achieved something that make them stand out against others, either in an ongoing capacity, or as the result of some recent specific initiative or event.

This year, 2018, will mark the third year of this Award, which succeeded the former Merchant Navy Medal presented by the industry between 2005 and 2015. Over the last two years the medals have been presented, by HRH The Princess Royal, to men and women who have contributed towards areas such as maritime safety,

improved efficiency, training, welfare and the saving of life at sea.

The Award is a significant achievement in finally gaining formal recognition of the Merchant Navy by the State. It was achieved largely due to the efforts of the Merchant Navy Honours Consultative Committee whose members represent the widest possible spectrum of the industry including the Chamber of Shipping, the maritime trade unions, professional bodies and maritime charities. Appropriately each year the names of the recipients are announced on Merchant Navy Day, 3rd September. Presentations are made shortly thereafter in the prestigious surroundings of Trinity House, whose Brethren have given huge support.

Nominees should have shown devotion to duty and exemplary service, which has been of particular value and has constituted an outstanding example to others. All nominations should, ideally, also be accompanied by at least two letters of support. The DfT guidelines and nomination forms can be downloaded from the Merchant Navy Website; <http://www.merchantnavymedal.org> which also lists all recipients of both medals.

New members

The Nominations Committee has nominated the following for election by Council:

Associate Fellow

Barhoun, M Mr/Senior Fleet Personnel Manager (Cyprus)
Bomgardner, S Captain/Master / OIM (U.S. East Coast (N))
Cetin, T Captain/Lecturer (Turkey)
de Koning, H Captain/Master (Dominican Rep)
De Silva, H I P Captain/Master (Sri Lanka)
de Wolff, L Mr/Director of HSQE (UK/ Central Scotland)
Devadze, M Captain/Master (Georgia)
Ghosh, H S Captain/Project Manager (Singapore)
Hoshlyk, M J Captain/Master (U.S. S. California)
Karagiannis, K Cmdr/Director (GRC/ Hellenic)
Megwa, S Mr/Deputy Director (UK/ London)
Muhan, C Mr/Assistant Fleet Group Manager (Singapore)
O'Donnell, G R Captain/Marine Harbour Pilot (CAN/Maritime Provinces)
Rodrigues, I J Captain/Maritime Consultant (AUS - TAS)
Shuckburgh, M Captain/Master (CAN/British Columbia)
Sikharulidze, G Captain/Master (Georgia)
Singh, A Captain/CEO (Singapore)
Tully, D Mr/Operations Manager (AUS - WA)

Turner, L Captain/Marine Pilot (UK/ Solent)
van Knotsenborg, A Mr/Vice President of Sales (Netherlands)
Wood, B J Mr/HSQE Manager (UK/ Central Scotland)
Zulkurnain, A K J Captain/Managing Director (Malaysia)

Upgrade To Associate Fellow

Alkan, B Captain/Master (Ukraine)
Armitage, P Captain/Master (UK/ NE Eng.)
Fernandez Lobato, R Captain/ Master (Iberian/Spain)
Hanks, C Mr/Consultant (UK/NW Eng. & N Wales)
Jones, G M Mr/Marine Specialist (UK/NW Eng. & N Wales)
Kapellos, M Captain/Master (GRC/ Hellenic)
Monioudis, D Eur Ing/Technical Director (UK/London)
Ryman, B Captain/Marine Pilot (AUS - WA)
Vynokurov, O V Captain/Master (Ukraine)
Wild, R J Mr/Marine Pilot (UK/ London)

Member

Adekunjo, A A Mr/Deck Officer (Nigeria)

Andresen, R K Mr/Deck Officer (CAN/British Columbia)
Brunetto, A W Captain/Master (Brazil)
Butterly, R E Mr/Chief Officer (AUS - WA)
Byelash, V Mr/ Chief Officer (Ukraine)
Calovs, I Mr/Chief Officer (Latvia)
Fane, R L Miss/3rd Officer (UK/ Solent)
Giavridis, N Mr/ Ship repair Broker (GRC/Hellenic)
Hamilton, S J Mr/Marine Field Engineer (UK/Bristol Channel)
Holdstock, B Mr/3rd Officer (UK/ Forth)
Howell, D Mr/Assistant Director (U.S. Gulf (Houston))
Kamyano, V Captain/Quality Manager (Ukraine)
Kaye, C Captain/Marine Manager (New Zealand)
Khan, M S Mr/Additional Chief Officer (India (North))
Kielczykowski, G Captain/Master (Poland)
Klein, M Ms/Officer (U.S. East Coast (N))
Koporkh, S Mr/ Chief of Fumigation Division (Ukraine)
Lulic, R Captain/Master (Switzerland)
Nazarenko, S Mr/2nd Officer (Ukraine)

Oo, K M Captain/Master (Myanmar)
Pertiet, M Mr/Captain Superintendent (GER/Bremen)
Rangayeva, G Mrs/Economist (Ukraine)
Salmond, R J T Mr/Chief Mate/SDPO (AUS - TAS)
Smith, K B Mr/Chief Officer (CAN/ Maritime Provinces)
Svertilov, P Mr/ Managing Partner (Ukraine)
Symonin, P Mr/Chief Mate SDPO (Ukraine)
Thind, H S Mr/Chief Officer (India (North))
Villanueva Márquez, G Mr/Chief Officer/SDPO (Mexico)
Ypsilantis, A Captain/Marine Superintendent (GRC/Hellenic)
Zajac, P M Captain/Master (Poland)

Upgrade To Member

Morgan, O Mr/OOW (UK/Bristol Channel)

Associate Member

Goodyear, N C Mr/Able Seafarer (Deck) (UK/Solent)
James, K C Mr/Cadet (UK/SW Eng.)
Leitch, H Mr/Cadet (CAN/British Columbia)
McNeil, E M Mr/Cadet (UK/Central Scotland)
Sanders, A Miss/Cadet (UK/NW Eng. & N Wales)

*Signifies members who have rejoined



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