



BTA Safety Seminar – Thursday 9 November 2017

Northern Lighthouse Board, 84 George Street, Edinburgh



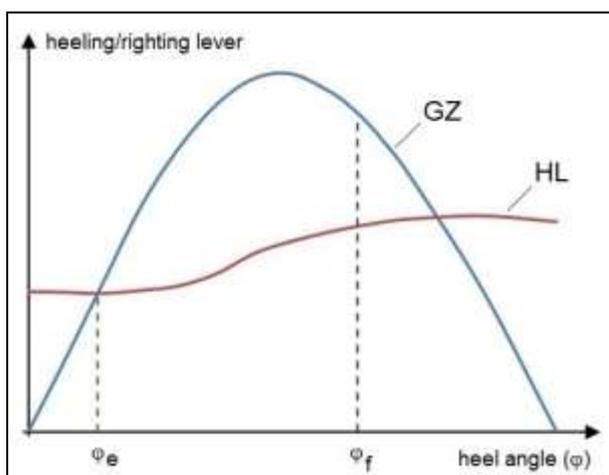
The newly refurbished Stevenson Rooms at the Northern Lighthouse Board (NLB) in Edinburgh made an excellent setting for the BTA's Annual Safety Seminar for 2017. A record number of attendees made the trip to Edinburgh with the audience comprising a range of tug masters, superintendents, pilots, regulators and others, with the programme including a series of excellent speakers.

The day was opened by **Nick Dorman, the BTA's Vice-Chairman and Technical Representative** welcoming all attendees and highlighting the wealth of experience and expertise in the room and the value that that experiences brings to safety. He issued a note of caution however around the potential creep of complacency, particularly when successful initiatives had led to tangible improvements in safety and everyone thought a job well done. Safety is a matter of continuous improvement and attendees recognised it was simpler to improve safety through the introduction of processes and best practices but often more difficult to remove the creep of complacency which may arise after.

Focussing on the recent safety successes of the BTA, Nick highlighted the very popular [Pilot's Pocket Guide and Checklist](#), a guide to best practice published in conjunction with Witherbys, the development of draft unified requirements for emergency release systems on towing winches by IACS and the voluntary towage endorsement developed by the MCA at the request of the towage industry to help ensure tug masters have the necessary skills, competence and proficiency to operate in this specialised field. Looking to wider strategic issues, Nick reiterated the unnecessary risk to boat and crew of bow-to-bow work in many cases, how the EU ports directive could be seen

as a race to the bottom for quality and safety standards, and outlined MLC developments relating to equivalent standards for accommodation and requirements for inflatable boats for tugs under 500gt.

As a case study, Targe's operations at the Hound Point Terminal were underlined and the achievement of 2.5 million hours of work without with Lost Time Injury (LTI) warmly welcomed. Targe attributed this positive safety record to a number of critical factors, including: employing the right people, seeking leadership, promoting excellence, ensuring experienced management, fostering partnerships between owners/employees/customers, avoiding bureaucracy wherever possible, ensuring robust safety management systems are installed and fully engaging with risk assessments.



Gijsbert de Jong from Bureau Veritas, began proceedings by presenting on the BV's ongoing work seeking to enhance tug safety through internationally harmonised stability regulation. Driven by criticism from tug builders by a lack of harmonised class build rules on stability and concerns that too many tugs had girted, class societies have been collaborating to develop harmonisation of class requirements for tugs within scope of SafeTug Joint Industry Project. Both class and industry recognise that one size does not fit all in the development of harmonised guidelines and that with the development of new tug designs, for example Rave, Eddy and Rotor, a prescriptive approach is not going to work well and that any approach need to allow for nuance and practical feedback.

Gijsbert further outlined how BV had in 2014 developed guidelines, including towing and escort stability requirements, in cooperation with industry partners (NI617). Positively, these guidelines were adopted as amendments to the 2008 Intact Stability Code, through the Marine Safety Committee at IMO in 2016. As such the guidelines had enhanced safety in tug design and operation and created a level playing field for industry. Entering into force on 1 January 2020, Gijsbert explained how this comprehensive internationally harmonised regulatory framework for tug stability is technically consistent, pragmatic in application and open to innovation, albeit with areas for future improvement in areas of tow-tripping criterion, escort operator guidance and new tug designs.

Pilot's View.



Hywel Pugh from the UK Marine Pilots Association (UKMPA) talked about the pilots' view to towage and presented on the new technologies and navigational aids provided to pilots, their potential use, and drawbacks. Hywel was prompt to caveat that aids are only as good as the data they receive and that GPS signals can be spurious and that the importance of goods communication between the pilot and tug masters cannot be overlooked. The current and incoming varieties of equipment and aids were outlined, both stand-alone systems and those that piggyback on the ship's AIS. The risk of bow-to-bow work was highlighted, with the particular concerns around speed, situational awareness and unsuitable equipment or training. The pilot's view was that bow-to-bow work typically presented unnecessary risks and strongly recommended refraining wherever possible.

Raising the issue of Dangerously Weighted Heaving Lines, Hywel called for pilots to be informed of such incidents to enable pilots to immediately inform the ship's Master and offer a direct feedback loop. Cases of gear failure and the risk of deck equipment giving way were highlighted, specifically issuing caution to stated Safe Working Loads and breaking strain figures, which had been found to give way before the stated load.

Andy Moll, deputy chief inspector at the Marine Accident Investigation Branch (MAIB) offered an insightful view into the Swiss cheese model of incidents and safety risk through highlighting single points of failure in a number of case studies. Whether it is gear failure through incorrect use or insufficient maintenance, or communications failure and lack of situational awareness, single points of failure were commonly identified in MAIB report findings time and time again.

The difficulties in maintaining the balance between commercial pressures and safety operations were highlighted, with the critical mantra being that commercial operations and KPIs should in no instance drive unsafe or undesirable behaviour. As an example, setting a time specific KPI for pilotage services may appear commercially astute but will drive unintended consequences, risk safety and shows a lack of understanding of safety from management.

When conducting safe operations, Andy highlighted the need for a shared mental model between all involved and the importance of clear communications between parties outlining responsibilities and intentions when conducting manoeuvres. In striving for improved safety, it was recommended operators carry out exercises in self-reflection and critical analysis of past incidents. By examining incidents holistically with the companies' management, recognition of the issues or points of failure can be done at the same time as management taking direct action in rectifying areas of weakness.

Andy summed up by stating that any redundancies and resilience within the rest of the system can be undone or disrupted through a single point of failure.

Number of		Number	Comments
Incidents reportable to MAIB	↑	5	Trend up – 2 in 2015
Loss Time Injuries	↓	4	Trend down – 5 in 2015
Medical Treatment Injuries	↑	10	Trend up - 2 in 2015
First Aid Incidents	↑	71	Trend up – 66 in 2015
Total Onboard Exposure Hours in 2016	↓	2,290,654	Total Exposure hours of industry as represented by 6 of 10 BTA members down 211,000 hrs from 2015
LTIF	↓	1.74	Trend down - 1.99 in 2015
TRCF	↑	6.11	Trend up - 2.79 in 2015

Scott Baker, Head of Marine Standards at Svitzer presented the BTA's Safety Statistics for 2016 drawing out trends across the last three years from this growing dataset. Year on year, it was unfortunate to see incidents broadly increasing, especially the notable increase in incidents reportable to the MAIB and incidents requiring medical treatment or first aid. Compared to 2015, many of the incidents requiring treatment were due to increased number of minor slips, trips and falls, and personal injuries. Anecdotally with the ageing workforce of the towage industry there is a growing need to recognise and negate such incidents.

Other trends identified including the continued misuse of dangerously weighted heaving lines and messenger lines remaining a significant issue for the industry and with both an increase in the reporting and significance of such incidents reported. It was recognised that efforts to stop the use of DWHLs were needed from multiple actors and that the P&I Clubs and IACS had a key role to play in promulgating loss prevention information and best practice.

Positively in the comments submitted with the statistics, improvement in crew communications and leadership were noted, with the increased use of toolbox talks to outline and identify key hazards and dangers prior to all operations. Furthermore, there was a recurring theme around the value of good leadership, maintenance and husbandry of vessels in instilling pride and resulting in reduced incident rates. Golden Rules – one for people and one for husbandry.

Portable Cutter - Softline



- Lightweight and Self Contained
- Simple Operation
- Options:
 - Remote Pendant
 - Electrical Control
 - Simple Hydraulic Control



Rory McGarry and Chris Bond from Webtool, the sponsors of the day, showcased their new portable softline deck emergency cutter for tugs, barges and offshore vessels. The portable cutter, which grew great interest from the audience, was shown to be easy to deploy and operated remotely, removing the human from a hazardous location and providing an instant cut of fibre ropes up to 80mm in diameter should the vessel get into difficulty and need to drop its tow.

Simon Tatham, Partner at TugAdvise provided a breakdown of a series of girting and capsize incidents and the areas of commonality across them in recent years. Detailing with legal expertise, Simon explained how there were multiple perspectives from any incident and that views of the various actors needed to be taken into account when investigating. Comprising best practice, Simon strongly endorsed the value of good planning, pilot/master exchange, overall communications and reiterated the value of sharing a joint mental model of the manoeuvre. The incidents outlined showed a commonality of tugs being used incorrectly, in unsuitable weather and climatic conditions or where gog ropes had not been used or misused. Gog ropes drew much discussion however it was reiterated that gog ropes were not a universal solution, which they were extremely difficult to adjust once in use and that often it was the incorrect use of the boat and not the omission of a gog rope which had been the contributing factor to the incident.

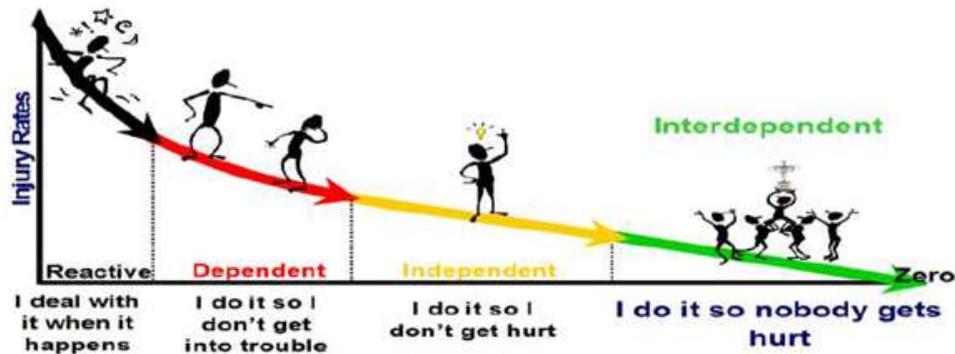


Julie Carlton, Seafarer Safety and Health Manager at the Maritime and Coastguard Agency, examined the human element and the four interconnecting areas which overlap and interrelate to influence marine safety and maritime system performance. Those being: the individual, the job, the organisation, and the environment.

Julie explained that one of the key problems the MCA had identified was the mismatch between normal human capabilities and performance, and what and how they were asked to do. These could be summarised into the so-called deadly dozen of people related factors affecting safety as outlined in the MCA's [MGN 520](#). It was outlined that an individual or team does not simply have or not have capability; rather that capability is a progression from incompetent to competent from Novice to Expert with an increasing complexity of tasks.

Julie introduced the book, jointly commissioned by the MCA titled: "[Being Human in Safety Critical Organisations](#)" and recently published and released at London International Shipping Week. The book focuses on how to improve operational safety via human behaviour, how to manage human behaviour and motivate success and why and how organisations need to fundamentally change their assumptions about people if they want to become safer.

Attendees were encouraged to constantly look out for safety problems, be willing to speak out and challenge seniority, in spite of stereotypes or cultural differences, since only through a change in culture and continuous improvement as with the COSWP would safety really improve.



Adrian Mundin from the UK Chamber of Shipping discussed the Chamber's ongoing Safety Culture initiative to bring safety to the core of company operations and instil a commitment culture to safety rather than one based on compliance. The occupation of seafaring is remains considerably more hazardous than that of a factory worker, a unacceptable difference, and whilst the industry's safety record is improving the industry is still a significant way from safety interdependence.

The strands of the Chamber's safety culture initiative were presented, specifically safety leadership from management and board level, prompt intervention of unsafe acts and behaviours, enhanced data collection and near miss reporting with improved standardisation of terms, and managing operational safety. The group recognised that whilst technology and engineering advancement could create safe solutions and reduce risk to operatives, it is not sufficient to rely on technological safety improvements rather attitudes and behaviours needed to change to encourage and foster a culture of safety and commitment. Attendees were invited to post on the Chamber's safety culture forum, sharing thought leadership, near miss reports and gear failure so as to allow others to learn from common experiences.

The day's programme culminated in a serious of group discussions lead by Nick Dorman examining the role of third party stakeholders in safe towage operations. Attendees considered distinct groupings of stakeholders impacting upon towage with productive suggestions.

- Importance of close communications and a shared mental model between the port authorities, pilots and agents, and the importance of leadership from the port. Widespread recognition of the increasing use of Integrated Port Operating Systems (IPOSs) as a means to share data and information across multiple port users.
- The importance of the MCA as the national regulator and its role at IMO directing international regulation
- Critical importance of the UK Standard Conditions for Towage and perceived attempts to shift liability
- The perception of commercial pressure should be questioned and any effect on safety clearly communicated and understood.
- Operators should reject any imposition of shifting greater responsibility onto the tug operator from the shipowner
- The need for safety to be proactive rather than reactive and importance of near miss reporting
- Value of P&I clubs in visiting tugs and improving customer focus, seen as a positive influence in loss prevention
- Issue of the varying quality of suppliers and the lack of standardisation in rope manufacture.
- Value of the Port Marine Safety Code (PMSC) meetings in bringing different stakeholders and parties together

BTA Secretary
December 2017