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## ENCLOSED SPACE SAFETY

➔ The second of The Nautical Institute's seminars on enclosed space safety was held as part of London Shipping Week on 11 September. Like the previous seminar in Aberdeen, it attracted high attendance from across the maritime industry, both from those based ashore and from those at sea. While a certain amount of the seminar was, inevitably, based around outlining the scale and severity of the problem, this was above all a day of solutions, looking at practical ways of improving training and practice by creating an effective safety culture, and ensuring that people have the right tools to use when entering such spaces.

David Squire FNI opened the seminar by emphasising that one of the main problems is lack of awareness of what constitutes an enclosed space. Most people know that such spaces are dangerous, but not necessarily what an enclosed space actually is. 'If we are to stop reading headlines about losses of this type, there is more to be done than drill and procedures; we need a culture change that needs to start at management level,' he said. 'This seminar gives us a chance to bring together ship managers, agents and people who do the job on deck and under it.'

Steve Clinch, chief inspector of marine accidents for the Marine Accident Investigation Branch, looked at some of the better known incidents, including the *Viking Islay*, the *Sava Lake* and the *Saga Rose*. While these incidents indicate a widespread problem across different sectors of the industry (offshore, bulk and cruise), known incidents are likely to be only the tip of the iceberg. In many cases, rescuers act on instinct and emotion rather than knowledge and training, he said. Overcoming this instinctive response is key to reducing accidents. Proper identification of enclosed spaces, thorough risk assessment and increased awareness all have their parts to play in this process.

Allan Graveson, secretary general of the ship officer's union Nautilus International warned that we are in danger of enclosed space incidents becoming 'death as routine'. While regulation has a role to play in ensuring proper equipment and training, solutions require wider thinking – in particular looking at the construction of vessels and ventilation spaces, and at the safety equipment that is carried.

This is a theme that was looked at in greater detail by James Henson of Lloyd's Register in his presentation on the design issues inherent in improving the safety of enclosed spaces. One major difficulty to be overcome is the pay-off between increasing the size of access spaces against the need to maintain the highest possible level of structural integrity. Reducing the size of equipment to enter these spaces is more feasible,

whereas the best solution of all would be to design such spaces to reduce to a minimum the need to enter them.

Looked at from the shipowner's perspective, said Rob Purkis, safety manager at Carisbrooke shipping, ensuring good safety procedures also makes good business sense, as it ties in with the overall need for efficient ships. He emphasised that the obligation for training is the very minimum we should be trying to achieve. However, we need to ensure that training and procedures are both simple and practical – if crew do not like a system, they will not use it, no matter how good it is. This was later reiterated by Andrew Mitchell, who had seen accidents occur in spite of a very detailed enclosed space entry regime. 'The system was too complex; it had just been added to year after year,' Mitchell said. The biggest issue of all is ensuring awareness of the risk, particularly with places which can be safe under certain circumstances. This is a hard issue to tackle, he said, and the only answer is persistence. 'Safety culture is the hardest thing to tackle, and you can't change it overnight.'

Like Rob Purkis, Carl Durow of the London P&I Club also emphasised the importance of the permit to work system, which is often seen as an additional burden, but is key to ensuring safety. Encouragingly, enough, he thinks the seeds to creating a safety culture are already present within the industry. 'I didn't realise how much I had inbuilt a 'safety valve' from training until I saw things done differently elsewhere,' Durow said. 'The moment where you can see something going wrong and change things is where we start to win.' However, it is vital to ensure that any system established as part of a safety culture is fit for purpose, and not just a box ticking emphasis, said Andrew Mitchell. 'I have seen cases where, of 13 permits to work, 12 were nonsense, and most training had been carried out on lockers in the accommodation block.' This does nothing to contribute to overall safety, and can be actively dangerous.

The afternoon session focused on more practical matters, with Videotel demonstrating how the 'gamification' of training can be used to create an immersive training programme in which decisions are seen to have real consequences, rather than the more static – and less memorable – option of reading a book or watching a video. Adam Allan and Michael Lloyd looked in details at the enclosed space management programme which they outlined in *Seaways* (August 2013). They also pointed out that while there is legislation for enclosed space entry drills, there is no legislation for the training that precedes these drills. This needs to change.

A live demonstration of a rescue carried out by Mines Rescue Marine showed both the challenges

inherent in rescue and the importance of having the correct equipment – impressing several seafarers present with just how compact and manoeuvrable some of the material available is, compared to what is available on their own ships. A lively discussion session at the end of the day, with comments from serving seafarers, trainers and staff ashore highlighted what a major issue this is. In particular, there were concerns about whether seafarers' level of English was really high enough to fully understand onboard training when it was offered, and the need to make sure enclosed space training is covered under STCW.

Summing up at the end of the day, NI Director of Projects David Patraiko emphasised that dealing with enclosed spaces is a deadly serious issue. Perhaps the best way forward is to focus on the four points of what speakers referred to as the 'Enclosed Space Box':

### Culture

- This is a human element issue, and we need human solutions (in particular, to stop the emotive response of going in to rescue someone without considering the consequences);
- This needs top down culture change, starting from management.

### Design

- Larger seafarers wearing bulky PPE, need larger access holes;
- Need for improved ventilation to be designed in;
- Design to reduce the need to enter enclosed spaces.

### Equipment

- Fire equipment is for fires, evacuation equipment is needed for evacuation;
- 'Don't go in if you can't get out.'

### Training and Drills

- There are good and improving training products on the market;
- Culture will (and needs to) lead to improvements in/for training/drills;
- Procedures for Permit to Work needs to be addressed.

### Management Process

- Adopting a shipboard 'enclosed space management' plan based upon onboard audits is a good new initiative;
- The industry may wish to adopt an 'enclosed space management plan' as a component of SIRE/P&I or other external audits.

Industry leaders should address a 'management of change' strategy for improving the process of dealing with enclosed spaces on board.

**Lucy Budd**