

# Close calls and near misses

Kevin McSweeney, manager of ABS' safety & human factors group talks about navigating safely around human error



33

**The ABS Mariner Safety Programme** formally began in 2010 as a collaborative effort between US classification society ABS, with Lamar University of Beaumont, Texas and a group of industry partners, including shipowners, operators and managers who shared the aim of developing an 'injury and close call' database that could be used to provide insight into the human element in shipping.

ABS' Kevin McSweeney says: "This data – more than 85,000 injury and close call records, drawn from over 1,600 ships and 45,000 mariners – brings together US and international owners and operators and maritime industry groups.

To encourage participation, the partner data is sanitised, entered into a database, and analysed by ABS and Lamar. Results from the analysis are put into a document portal for all partners to use. The goal is to provide information to assist partners in the mitigation of potential human error involving the crew, the vessel or the environment.

## Differences in perception

An observation that has become apparent from the start of the project is inconsistency in the amount and type of injury and close call data being captured and reported. In addition,

industry partners were using different reporting taxonomies, so that what one industry partner deemed a close call was not by another.

The comprehensiveness of the data collected also varied between the partners. Some reporting practices contained minimal relevant information for an appropriate causal analysis for the development of corrective actions and/or lessons learned. We attributed this to several factors such as training, corporate safety maturity, and a less effective close call management system.

Companies naturally employ different systems to help manage incidents. For a few of our industry partners, the comprehensiveness of the information collected made it obvious that they didn't always have a formal close call reporting programme in place. For other partners, it was obvious that a more formal and effective close call system existed.

Language usage is another issue. English is the language of the maritime industry but the people filling out incident reports are not

necessarily English speakers or writers.

We found that a lot of information was lost through inappropriate word choice or other misunderstandings.

To address these issues, the US Maritime Administration (MARAD) in conjunction with the US Ship Operations Co-operative Programme (SOCP) is trying to establish industry baselines for injury and close call reporting and recording. A big part of that will be identifying a minimum set of data that should be captured for each incident as well as a standardised definition list.

With assistance from ABS and Lamar, the ultimate goal will be to develop two American Society for Testing of Materials (ASTM) standards, one on close call reporting and recording and one on injury reporting and recording. Once this effort has concluded, the US maritime industry (and possibly the international industry too) can begin some significant and meaningful industry benchmarking and trending.

**English is the language of the maritime industry but not necessarily the language of the people filling out incident reports**



# 85,000

ABS collected more than **85,000 injury and close call records**, drawn from over **1,600 ships and 45,000 mariners**, for its research into the **human factor** and **corporate safety culture**

### Benchmarking factors

Since the start of the Mariner Safety Programme, we have made several high-level observations based on the data shared with us and communications with the programme partners.

Incidents of close calls are on the rise, while injuries are declining. This is a good sign that our partners continue to embrace safety and are working towards a more effective safety culture within their organisations. The Mariner Safety Programme industry partners strongly encourage the reporting and sharing of hazardous occurrences onboard ships to improve safety for all mariners.

It also became apparent when looking through thousands of reports that incident management systems have many different components. These include items like awareness, management support, proper close call training, hazard identification and investigation processes including how to recognise appropriate corrective actions and lessons learned. This requires trained incident investigators onboard ship and at the corporate level who can perform the formal incident investigation.

We have also observed that international companies (ie, based outside of the US) are considerably more willing to share incident data, perhaps because they are more exposed to international industry initiatives such as OCIMF and TMSA or follow the ISM code requirement for hazard tracking.

As more industry partners share data, we started to perform some close call benchmarking and injury trending and noticed that some of our partners have very low incident frequency rates.

This is meaningful in several ways. It indicates that they are a safe company to work for, which is good for recruiting and retention and appealing to their potential charterers. Indeed, one partner is going on 14 months without a lost time injury, which represents

over 15 million man-hours of safe operations.

Outputs from the Mariner Safety Programme include tools that can help industry partners with their safety auditing efforts, supporting safety interventions as well as crew education and training.

### Safety culture

Running in parallel with the Mariner Safety Programme is the ABS Safety Culture and Leading Safety Indicators project, another collaborative effort between ABS and shipping industry partners. The central premise of the safety culture assessment is that improvements in safety culture at an organisational level can lead to improvements at an operational level.

ABS considers safety culture to be the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour. There are many elements involved in a successful safety culture effort and what we find among our top safety performers is that crew members fully understand their duties and responsibilities.

In these companies, crews are actively encouraged to participate in not only safety meetings but in other ways to help improve safety onboard for themselves and for their colleagues. They feel empowered to ask questions and have a strong sense that safety is the top priority.

A company's commitment is the foundation of any safety culture effort, since workers can be influenced by their perceptions of corporate leadership's expectations.

For example, if corporate management fail to prioritise safety by issuing conflicting

instructions - "be safe, but get the job done quickly" - or indirectly through a failure to enforce safety procedures, a powerful message is sent to workers that safety is not a priority.

### Demonstrating commitment

We also know that workers sometimes emulate the priorities of their corporate leaders, notwithstanding stated corporate safety policies. This is sometimes associated with the term 'competing objectives'. For example, should I continue with Task A, even though my co-workers are fatigued, just to meet the required schedule?

When contemplating competing objectives companies should understand that some goals or objectives may not be achieved in a timely fashion because safety must come first. ABS field and office staff have the ability to stop work when they feel that their safety or the safety of others is a concern: decisions that are fully supported by management.

Personal Protective Equipment (PPE) is a recurring topic. Common findings relate to the condition of the equipment provided, the availability of PPE, and in some instances, its appropriateness. Even though a crew member may have a hard hat, it may not be appropriate for the task they have been asked to perform.

Another observation is related to cultural smf language issues onboard ship. Industry partner assessments have identified a need for the company to make sure the crew are using English onboard for ship-related activities. A situation where different nationalities speak to each other in their own tongue while on watch means there is an opportunity for misunderstandings which could create a potentially hazardous situation.

### Diversity matters

Cultural differences extend beyond just language. We have found that potential issues exist when dealing with multi-cultural crews with respect to safety and safe work practices. These results were common among crew in all ranks, ages, years with the company.

This is a concern for some owners and operators where a large portion of the crew are from culturally diverse backgrounds and are required to communicate and work together on a daily basis. Fully understanding the underlying causes of possible cultural or language differences is clearly important for crew safety and well-being." ■

