

AS PART OF THE CASE STUDY MATERIAL, THE FOLLOWING COMMENTARY HAS BEEN PREPARED TO FURTHER CONSIDER SOME OF THE KEY ISSUES IN ORDER TO SUPPORT REFLECTIVE LEARNING.

The first two pages of this commentary discuss some of the contributory factors and lessons learned in more detail with particular reference to best practices. The final page graphically illustrates some of the barrier control measures that could have potentially mitigated against the risks associated with the hazards by making use of Britannia's interpretation of the Hierarchy of Barrier Controls triangle as a framework.

SERIOUS INJURY WHILE SECURING CONTAINERS

THE CAUSES OF THIS INCIDENT APPEAR TO BE CONNECTED WITH THE FAILURE, OR ABSENCE, OF SEVERAL RISK CONTROLS AND SAFETY BARRIERS IN THE SHIP'S SAFETY MANAGEMENT SYSTEM (SMS), AS WELL AS APPARENTLY SUB-OPTIMAL SAFETY CULTURE.

The contributing factors and lessons learned identified by this case study are discussed below.

RISK ASSESSMENT AND RISK CONTROL MEASURES

Although all deck officers and ratings had been involved in preparing the risk assessment for the securing of containers, it appeared that it was incomplete and the implementation of the required risk control measures was not monitored effectively. The comprehensive risk assessment should have identified and addressed the risk of a lashing bar slipping from the corner fitting while being handled by only one person. For example, the weight and size of the lashing bar was such that it could not be expected to be held safely in one hand, while reaching to connect the turnbuckle with the other hand. This should have required two people to be employed when handling long lashing bars. Job hazard assessments should have also included the risks arising from the specific work location, e.g. the need to step up and down from the hatch cover while securing the lashing rod.

CORRECT APPLICATION OF PPE

The investigation noted that the injured seafarer may have worn his safety footwear improperly, although it was also possible that his foot slipped out at the time of the incident. Shipboard management is responsible for ensuring that PPE is suitable and effective for the task.

Some types of PPE, such as footwear, are also subject to increased damage or excessive wear and tear, depending on the work environment. It is therefore important that incorrect use or damage to PPE is noticed/reported in good time and addressed, which on this occasion may have prevented the incident from occurring. PPE should be subject to checks before each work assignment by the users themselves, other team members and supervisors.

FAMILIARISATION WITH LASHING ARRANGEMENTS AND RELATED PROCEDURES

Although the investigation did not identify lack of familiarisation as a contributing factor, during the investigation the company reviewed and revised their risk assessment for the securing of containers, and through this revision introduced a formal system of briefing and familiarisation for safe lashing. The company has also amended the SMS Manual to revise the guidance on safe lashing and introduced a 'Safe Lashing & Unlashing Checklist'.

Structured familiarisation is best suited to provide seafarers with ship-specific information required for safe operations. This is also an opportunity to advise the crew on the areas of elevated risk identified, as well as risk control measures, such as the requirement for two persons to be employed when handling long lashing bars.

SERIOUS INJURY WHILE SECURING CONTAINERS

FAMILIARISATION WITH LASHING ARRANGEMENTS AND RELATED PROCEDURES (continued)

The use of checklists to ensure procedures are followed should be carefully considered. Checklists are used to ensure that the essential actions related to a task are completed. Depending on how they are used and written, checklists may turn out to be too simple or too detailed and as such fail to achieve their intended purpose. An effective SMS should enable feedback from end users to verify correct use of checklists and identify the potential need for change/revision.

COMPLACENCY

As the securing of containers is a common activity, often carried out under time pressure, it is more likely to result in complacent behaviour where unsafe acts are ignored due to a false sense of safety resulting from completing the activity without an incident in the past. The signs of complacency include:

- near misses or unplanned events which continue to occur without reaction
- work tasks being completed in a rush or 'on autopilot' without due consideration for safety
- making basic assumptions about safety and insufficient job hazard assessments (JHA)
- incorrect use of PPE or performing work activities without the required PPE
- taking 'shortcuts' to achieve the work goal at the expense of safety.

Complacent behaviour may also result in attempts to find false efficiency in completing the task with insufficient manpower and/or in insufficient time.

EFFECTIVENESS OF SAFETY CULTURE AND IMPLEMENTATION OF THE SMS

An activity which is carried out frequently and which can lead to unsafe acts or unsafe working environments is also more likely to result in an incident. All crew members, as well as visiting superintendents, will have multiple opportunities to report or raise their concerns regarding safety issues.

In particular, the ability to report near misses or minor injuries, without the fear of retribution or apportioning blame, is essential to identify weak spots and gaps in work safety on board.

Effective safety culture should create an environment where such reports are encouraged and duly considered. Where deemed necessary, this should in turn result in a meaningful root cause analysis and the implementation of adequate corrective and preventive actions. The overall aim is to ensure continuous improvement of safety through collective ownership and the participation of all crew members involved.

SEE NEXT PAGE FOR HIERARCHY OF BARRIER CONTROLS DIAGRAM

FOR MORE INFORMATION ON THIS INCIDENT EMAIL LOSSPREVENTION@TINDALLRILEY.COM

THIS CASE STUDY IS DRAWN FROM THE INVESTIGATION REPORT PUBLISHED BY THE TRANSPORT MALTA MARINE SAFETY INVESTIGATION UNIT AT:
https://mtip.gov.mt/en/msiu/Documents/MV_Boston_Trader_Final_Safety_Investigation_Report.pdf

THE PURPOSE OF THIS CASE STUDY IS TO SUPPORT AND ENCOURAGE REFLECTIVE LEARNING. THE DETAILS OF THE CASE STUDY MAY BE BASED ON, BUT NOT NECESSARILY IDENTICAL TO, FACTS RELATING TO AN ACTUAL INCIDENT. ANY LESSONS LEARNED OR COMMENTS ARE NOT INTENDED TO APPORTION BLAME ON THE INDIVIDUALS OR COMPANY INVOLVED. ANY SUGGESTED PRACTICES MAY NOT NECESSARILY BE THE ONLY WAY OF ADDRESSING THE LESSONS LEARNED, AND SHOULD ALWAYS BE SUBJECT TO THE REQUIREMENTS OF ANY APPLICABLE INTERNATIONAL OR NATIONAL REGULATIONS, AS WELL AS A COMPANY'S OWN PROCEDURES AND POLICIES.

HIERARCHY OF BARRIER CONTROLS

HIERARCHY OF BARRIER CONTROLS		EXAMPLES OF POSSIBLE RISK MITIGATION CONTROL MEASURES RELATED TO THE CASE STUDY	
<div><div>ELIMINATE THE HAZARD</div><div>SUBSTITUTE THE HAZARD</div><div>ISOLATE THE HAZARD</div><div>INFLUENCE BEHAVIOURS</div><div>PROTECT</div></div>			ELIMINATE – not applicable as the need for lashing and securing containers is inherent to most container ships.
			DIFFERENT DESIGN of lashing gear to eliminate the need for manual handling of heavy items.
	PHYSICAL CONTROLS/BARRIERS		SUFFICIENT MANPOWER provided for the task to ensure heavy objects are handled safely. DECK AREA clear of trip hazards and with adequate space to ensure safe footing.
	ADMINISTRATIVE CONTROLS/BARRIERS		RISK ASSESSMENT/PROCEDURES to identify and mitigate the risks, as well as monitor the implementation of risk controls.
	BEHAVIOURAL/SKILL CONTROLS/BARRIERS		SAFETY CULTURE to eliminate complacency and enable reporting near misses without fear of retribution. FAMILIARISATION to provide ship-specific safety information.
	PPE CONTROLS		PPE provided as appropriate for the activity and risk. MONITORING THE USE of PPE to ensure it is fit for purpose and used correctly.

The suggested barriers/controls above are provided to help generate reflective discussions, and should not be considered as conclusive/definitive or comprehensive for the provided case study. The risk and control measures relating to any similar scenario or activity must always be appropriately assessed based on the specific onboard arrangement and circumstances.