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# 1 Line of fire near miss during lifting operations

# What happened

A member of the deck crew member put themselves in the line of fire during landing of a structure on the back deck of a vessel. The installation aids (bumper bars) were insufficient to stabilise the load, resulting in the structure being landed narrowly missing the

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individual, and damaging an adjacent container. The bumper bars were a critical barrier for keeping the banksman safe on the walkway but as they were not spaced far enough apart for the structure, they allowed a rotational movement of the load.





Video footage from near miss showing swinging load impacting container

## What went right

- Before landing the structure, the area had been barriered off and non-essential personnel removed from the area;
- All the containers were checked to ensure no-one was working inside them during the lift.

# What went wrong

• The individual was focused on landing the structure in a tight space and was relying on the bumper bars to keep him safe in the event of unplanned movement of the structure;

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• Even though the design of the installation aids (bumper bars) was within the vessel's design code, they were not there to protect people, but there as aids to landing and moving structures around the deck without damage. As they were not designed for personnel protection, the distance between them was not considered.

#### **Lessons and actions**

- There was a general misconception that installation aids can be used as personnel protection devices, but this is not their design nor their appropriate use;
- Moving the counterweight location and bumper bars was seen as an improvement by the vessel team and therefore they did not go through a Management of Change (MOC) process. Even perceived improvements may have negative consequences and need to be managed;
- Despite all the good work done in pre-job planning, the banksman still put himself in the line of fire. In hindsight, this area should have been a complete no-go zone.
- Take into account when planning work, the difference between "work as imagined" and work as actually done;
- Remain aware of your close environment and understand that during lifting activities, the exclusion zone may change;
- Review tasks where installation aids are being relied on for personnel protection. Should a wider exclusion zone be put in place for these tasks?

## Members may wish to refer to:

- Wrapped cargo slipped during loading and fell
- Uncontrolled movement of spreader bar
- Lifting complex loads offloading third party equipment
- Caught between: unplanned movement of equipment leads to severe injuries

# 2 Failure of personal isolation procedures: crane damaged when it was used inappropriately

## What happened?

On a vessel in dry dock, a crane, which had been isolated for many days for work to be conducted by a third party, was used by crew unaware that the crane was out of use for maintenance. The crane was damaged as a result, leading to increased maintenance time and cost.

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Bypassing Safety Controls

Mechanical Lifting

A "personal" isolation of the crane had been removed to allow a third party to function test the crane. A leak was found on the hydraulic system and work was being conducted to repair the issue. However, crew members not

involved in the maintenance of the crane had a task to do which needed a crane, and they decided to try and operate the crane, resulting in damage.

# What went wrong

Our members' internal procedures for personal isolations were not adequately applied. It was noted by our member that this was not the first time this had occurred. The previous example had led to a crew member being exposed to 930Vdc.



A **personal isolation** is used when a single person conducts low risk work on a piece of equipment. They cannot be used by more than one person and cannot cross

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shifts. A personal isolation was used inappropriately in this case as it was applied over a number of days by more than one person working on the equipment.

## **Contributory factors**

- The vessel was in dry dock and there was a weight limit of 5 tonnes on the crane. Operation of the crane was required to be communicated with the bridge to ensure vessel stability on the blocks;
- The scope of the crane maintenance work was non-routine and involved risks of pressurised hydraulics and movement of heavy machinery;
- A Permit to Work (PTW) should have been used but was not used:
  - The task was not adequately risk assessed in accordance with the requirements for when a Permit to Work (PTW) was required;
  - The lack of a PTW was a missed opportunity had the PTW process been followed, the errors which led to the failure of personal isolation, would have been spotted.
  - to follow the isolation procedure flowchart which would have captured the sanction to test control loop;
- Personal isolation should only be used by persons directly involved in a low risk activity and within the duration
  of one shift. The isolation of the crane was not low risk and there was an injury potential from exposure to
  pressurised hydraulics. Also, third party personnel were not authorised to work using personal isolation at
  company worksites.

## 3 Two hand injuries

#### What happened

A member reports two hand injuries.

# Applicable Life Saving Rule(s) Line of Fire

# **Incident 1**

As a Pilot climbed the vessel's access hatch to the under-deck passage, his backpack straps entangled with the hatch retaining bar. A sudden release of the hatch caused it to abruptly close, causing pain and swelling to the Pilot's right-hand knuckle.







## What went wrong

- The access hatch retaining bar was not being properly secured and this was not noticed by the Pilot;
- A third-party vessel duty officer failed to check the access hatch and proper rigging arrangements before the Pilot boarded;
- The access hatch is too narrow to pass through with bulky bags and this hazard was not recognized by the vessel crew or the Pilot.

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#### **Incident 2**

A sudden movement of a small boat caused a seaman's thumb to get caught between the fender and the quay, leading to injury. The small boat was being moored alongside at a mooring ring. It was high tide, so the mooring ring was about 0.5 m below the bulwark of the boat. As the boat approached the mooring ring, the seaman began securing the boat even though it was not yet hard up against the quay. The bow of the boat moved unexpectedly, causing his thumb to get caught leading to a crush laceration injury.

#### What went wrong

- Lack of proper risk assessment and job planning the team failed to identify hazards associated with routine & non-routine tasks. Pinch point hazards were not considered or documented in the task risk assessment;
- There was a lack of communication and no visual contact between the skipper and the crewman;
- There was a lack of PPE compliance the injured person wore no gloves at the time, though this was a company requirement for this work.

#### **Actions**

- Ensure that access hatches are properly secured;
- Heavy bulky bags or accessories carried by Pilots should be transferred separately;
- Better identification of hazards associated with routine and non-routine tasks;
- Better communication can we keep in the line of sight and so keep out of the line of fire? What about a handheld radio?

## Members may wish to refer to:

- LTI worker fractured arm during mooring line handling
- Communications: LTI finger injury during lifting operations
- Man overboard from anchor handler tug [T-bar caught on the life jacket worn by the crew member, causing him to lose balance and stumble]
- HSSE 025 Guidance on the transfer of personnel to and from offshore vessels and structures

# 4 LTI - Finger crush whilst operating safety gate

# What happened

A crew member got his finger trapped in a hinged fall protection bar on a crane pedestal platform, causing a serious injury. The crew member was climbing the main crane vertical ladder; when he reached the top of the ladder, he used his right hand to raise the hinged fall protection bar to gain access to the crane pedestal platform. He kept his right hand on the bar until it was at 180 degrees, trapping his finger between the bar and the handrail.







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### What went wrong

Our member notes that this accident is still under investigation; however, it is recognised that there is potential for a similar event to occur elsewhere where the use of the same or similar type of hinged fall protection bar has been fitted.

#### **Actions**

The following action is being taken: An immediate review of all work areas and identify if the same or similar type arrangement is fitted anywhere else.

Our member notes different or alternate safety gates for consideration:

- https://www.yellowgate.com/product/swing-gates/
- https://www.materialshandling.com.au/products/flex-impact-single-and-double-axes-gates/
- http://cablesafe.com/dropped-objects-prevention/self-closing-safety-gates/



Members may wish to refer to:

- Finger crushed under Tether Management System (TMS) protection guard
- Crew member trapped his left index finger in watertight door

#### 5 Worker cut hand on broken mirror

# What happened

A crew person on a vessel sustained a deep cut on the left thumb while attempting to repair a broken mirror. The mirror had shattered because the closet (bathroom) door in his cabin had fallen off the hinges. The person had reported to the Chief Officer that the closet door in his cabin had become detached. The Chief Officer instructed the person to wait while he organized deckhands to assist in fixing the closet door. While the Chief Officer was on the deck coordinating with the deckhands, the person returned to his cabin. Shortly thereafter, he came back to the deck with a deep cut on his left thumb and promptly informed the Chief Officer about the injury. The Chief Officer administered immediate first aid and subsequently arranged for medical attention through an authorized medic.

# What was the cause

Our member notes:

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- Lack of preparation and awareness about potential hazards: No proper work planning or risk assessment conducted for the task. Failure to consider environmental conditions, such as the vessel rolling and potential cut hazards;
- Didn't follow instructions the injured person attempted to perform an activity that was beyond his qualifications and responsibilities. Assistance was offered, but not taken;
- Lack of PPE: IP did not use appropriate personal protective equipment, such as gloves and safety glasses.
- Condition of the furniture fixtures: The condition of the closet door fixtures was a factor that led to the door falling off and subsequently causing the injury.

**Bypassing safety controls**: IMCA notes, broken glass is something we might encounter anywhere, even in the home. Anyone might cut their hands tidying up broken glass. **Stop and think!** Here, the injured person "did not use safety-critical procedures which applied to the task". They were instructed to wait – but did not do so, so they "did not obtain authorisation before deviating from procedures".

#### **Actions**

• Our member took steps to assess the condition of furniture and fixings in vessel cabins.

Members may wish to refer to:

- LTI: three fingers badly cut while handling a long brass bar
- MSF: Cut Hand Whilst Cleaning / Hand Safety

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