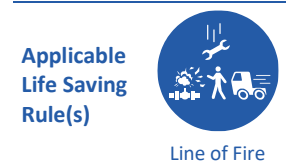
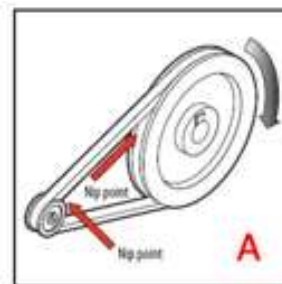


IMCA Safety Flashes summarise key safety matters and incidents, allowing lessons to be more easily learnt for the benefit of all. The effectiveness of the IMCA Safety Flash system depends on Members sharing information and so avoiding repeat incidents. Please consider adding [safetyreports@imca-int.com](mailto:safetyreports@imca-int.com) to your internal distribution list for safety alerts or manually submitting information on incidents you consider may be relevant. All information is anonymised or sanitised, as appropriate.

## 1 Hand injury when caught in machinery

### What happened

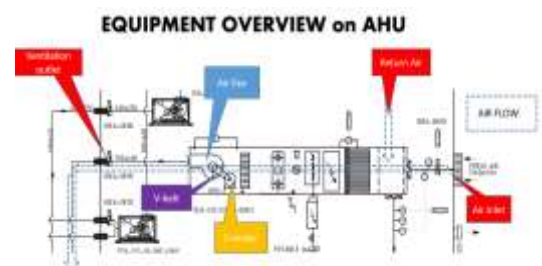
A crew member sustained injuries to his hand and arm when his hand got trapped by a moving belt. The incident occurred during routine maintenance of an Air Handling Unit (AHU) Humidifier. The AHU was confirmed as electrically isolated and the worker visually checked that the belt was completely stopped. The worker began the maintenance task as required, and happened to touch the belt with his right index and middle finger to check the tension. At this point an unexpected airflow within the ducting caused the air fan to rotate which caused the belt to move. This event led to his glove getting caught by the belt which in turn caused his right hand and forearm to be pulled towards the machine and caught between the belt and pulley. The movement caused his right forearm to get caught between the metal guard and fixed structure around the belt.



He was transferred to hospital, where he received surgery for fractures to his right hand and arm, and returned home to make a full recovery.

### What were the causes?

By opening the doors of the AHU humidifier an unexpected airflow was created by a vacuum from inside the AHU, that consequently rotated the air fan which then drew air from outside the AHU causing the belt to move. This previously unrecognized hazard was found only to happen when the ventilation outlet from the AHU to the accommodation E-deck is still in the open position. This scenario was re-enacted with several other AHU's on board and only the 2 Top-deck AHU's (#2 and #3) were found to have this unplanned event when the ventilation outlet was still in the open position.



### Lessons learned – how to stop it happening again

- A review and update of procedures taking into account the previously unrecognized hazard, providing clear instructions;
- Expecting the unexpected – particularly with any kind of large rotating machines, and when there is a great deal of potential energy that can be unexpectedly released.

Members may wish to refer to the following events where there have been unexpected unfavourable outcomes:

- [Finger injury caused by incorrectly secured console cover](#) [which closed in an **unplanned and unexpected way**]

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- [Control module failure caused main engine sudden reduction to idle speed](#) [“root cause was assumed to be extremely unfavourable conditions (hot and humid) in the engine room, leading to **unexpected and unpredictable** failures”]

## 2 Injury to Fingers During Grinding Activity

### What happened

Someone was performing maintenance activities with a grinder, using the grinder to cut and shape wood. When he finished, he switched off the grinder and placed on deck. He removed his gloves and then proceeded to pick up the grinder so that it could be unplugged from the wall. When picking up the device, the injured person inadvertently pushed the on-switch and the blade cut two fingers of his right hand. When he then attempted to switch off the grinder he also cut a finger on his left hand. He managed to disconnect the tool from the socket.

He received several stitches in two fingers but was able to return to work on restricted duties.

### What were the causes

Our member identified the following preliminary causes

- Poor selection of the proper tool for the job, and the grinder was not compliant with the company’s own standards for such equipment;
- Not following manufacturer’s instructions – there was a toothed saw blade fitted which was not recommended for use with this grinder;
- The injured person picked up the grinder in an unsafe way whilst it was still powered;
- The injured person was not wearing the required PPE - safety gloves.



### Our member took the following actions

- Removed all button-controlled grinders and replaced with paddle switch grinders with handles as per the company’s existing standards;
- Reissued good practice guidelines in the use of grinders;
- Began programme of refresher training on the use of rotating hand tools;
- Reviewed and update maintenance risk assessment for rotating machinery.

### Members may wish to refer to:

- *Are YOU prepared to work safely* videos:
  - [IMCA short video – watch your hands](#)
  - [IMCA short video – grinding wheel safety](#)
- [Portable Grinders – Hand Safety](#)
- [Unsafe Use of Hand grinder with damaged disc](#)
- [Hand injury from portable handheld Angle Grinder](#)
- [Deliberate failure to follow instructions: unsafe/quarantined tools brought back into use](#)

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<b>Applicable Life Saving Rule(s)</b>		
	Bypassing Safety Controls	Line of Fire

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*Grinder equipped with toothed saw blade, no handle and no paddle switch*



*Showing **INCORRECT** way in which injured person picked up the grinder*

### 3 LTI: Stored energy – rigger injured leg working on quayside

A rigger sustained a significant injury to his lower left leg while working on the quayside during lifting operations. The incident occurred during the hours of darkness, when a third-party rigger was disconnecting lifts from the work vessel during demobilisation.

Applicable  
Life Saving  
Rule(s)



Energy  
Isolation

A set of slings 15m long were draped over the forks (not coiled or palletised) of a forklift truck. As the slings were lowered to the quayside, the steel eyes overhanging the forks made contact with the ground before the forks did, and they “kicked” off the forks. When they hit the ground they straightened out, in the process moving violently towards the rigger, causing injuries to his leg and breaking his foot. Injuries to his lower left leg needed seven stitches and there was a multiple fracture to his upper left foot requiring surgery to repair. A recovery time of six weeks was estimated.

The picture shows the quayside prior to the incident. The white arrow shows the rigger in full hi-viz clothing. The yellow line shows the route taken by him from aft of the vessel, with the red star indicating the location of the incident. The yellow arrow denotes the location where he awaited medical attention.



#### Causal factors identified

- A known risky technique (this method for moving slings with a forklift) had been accepted as the norm;
- There was no port induction for vessels coming into port, explaining quayside safety requirements including hi-viz and safe walkways;
- Containers removed from the vessel blocked the safe walkway;
- The forklift driver had to take a route which gave restricted visibility of personnel;
- The rigger had removed his hi-viz jacket further reducing his visibility;
- There was reduced lighting on the quayside;
- There were simultaneous activities occurring in the area which were not properly controlled.

Our member notes that mobs and demobs often pose the most risk on a project and it is vitally important that we take all precautions necessary to protect anyone from injury during these activities.

Remain aware of what is going on around you and don't be afraid to **stop the job** when required.

Members may wish to refer to:

- IMCA M 203 [Guidance on simultaneous operations \(SIMOPS\)](#)
- IMCA HSSE 032 [Guidance on safety in shipyards](#)
- [Release of stored energy from coiled superloops](#)
- [Serious injury incurred while removing wire rope sling from a crane hook](#)

### 4 Two incidents relating to the condition of personal protective equipment

Here are two incidents reported by two different contractors, relating to the condition of personal protective equipment.

## Incident 1: Defective Safety Harness

### What happened

During a site visit, a third-party owned safety harness was found inside a container of the barge. The harness was without the manufacturer's tag and with cargo D-shackles on the lanyard instead of proper carabiners. The safety harness could potentially have been used, posing risk to the crew members who used it. The safety harness was immediately taken out of service.

### Causes

- Ineffective checks on safety harnesses;
- Crew members did not quarantine or properly label defective safety harness;
- There was no designated quarantine space on the barge.

### Recommendations

- Crew on board reminded of the need for regular inspection of the safety harnesses;
- Defective safety harness removed from use immediately – remove and quarantine any defective equipment immediately. **Any doubt at all about the safety of the equipment, don't use it!**
- Dedicated quarantine spaces (boxes) for defective equipment and tools to be arranged on board barges.



Further worthwhile reminders on PPE in general:

- ♦ [How PPE works: Fire and thermal protection](#)
- ♦ [Personal injury following PPE violation and slip and fall on deck](#)
- ♦ [Crewman suffers cut to hand - but gloves prevented it being much worse](#)

## Incident 2: Safety helmet found to be several years past its storage life expiry date

### What happened

While cleaning a storage cabinet onboard a vessel, a safety helmet retained for use by visitors was found to be several years past its storage life expiry date.

This prompted the inspection of all in-use and stored/spare safety helmets onboard the vessel. The inspection identified **five helmets** which were past their recommended in-use life and **three helmets** past their storage life. Several safety helmet suspension systems were also found to be defective - faulty ratchet adjusters and torn webbing. An inspection on onboard another vessel working on the same project also found several out of date and defective safety helmets.



Photo: <https://simplifiedsafety.co.uk>

### Lessons learned

- ♦ **Safety helmets don't last forever – remember it's your head and your life the helmet protects!**
- ♦ There was inadequate management of in-use and stored safety helmets resulted in safety helmets which had exceeded their storage/in-use life, and/or were defective, still being available for use;
- ♦ A standard/conventional safety helmet consists of two components – the shell and the suspension – which work together as a system. When in-use *both components* require periodic inspection and maintenance in accordance with the manufacturer's instructions. Lack of familiarisation training in the inspection, use and storage of safety helmets can lead to defects not being identified or reported.

## Actions

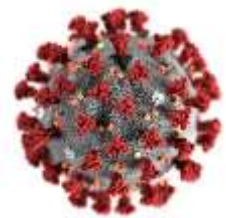
- ◆ Members are encouraged to check the procurement, storage and use of safety helmets;
- ◆ The storage-life and in-use life of a safety helmet is determined by the manufacture and whilst only a recommendation, should be followed;
- ◆ Spare safety helmets should be stored in accordance with the manufacturer's instructions. Exceeding the storage life will reduce its in-use life accordingly. Stock levels should be kept to a minimum and storage conditions monitored;
- ◆ When not being worn, in-use safety helmets should be stored safely and protected from damage.

Members may wish to refer to

- ◆ [The wear and care of safety helmets](#)
- ◆ [Checking of safety helmets](#)
- ◆ [Near-miss: falling object](#) [a falling object struck the hard hat of a worker piercing and destroying the hard hat. He himself was uninjured].

## 5 COVID-19 Improper Risk Management

As part of a scheduled vessel crew change, all on-signing crew members received a COVID-19 PCR test. Although all results were deemed negative, one test had failed to produce a valid result, and a new test was organised. Giving due regards to the known results and following an assessment of the COVID-19 risks, marine and project management took the decision to sail, with the re-tested person effectively isolated onboard the vessel whilst awaiting the result of the PCR test.



Two days after departure, a positive PCR test result was received, resulting in the person having to remain isolated on board the vessel for 14 days. The isolation was well managed in line with the vessel's COVID-19 outbreak management plan and there were no further infections reported.

### Lessons learnt

- Sailing without receiving all PCR test results was in direct conflict with the mitigations described in the original (approved) risk assessment for the crew change;
- The risk of having a potential COVID-19 infected person onboard was assessed by the project management team in collaboration with the marine senior officers. The outcome of the risk assessment was not presented to senior management ashore for formal review, nor for approval;
- There was no formal management of change to ensure that senior management (ashore) were satisfied that the risks had been evaluated and would be properly managed;
- The person concerned was required to remain onboard to satisfy the vessel's safe manning requirements, however, during the 14-day isolation that person was not available to perform normal duties;
- The work site was approximately 300 nautical miles from port, which could have prevented the person receiving timely treatment in the event of complications arising from the COVID-19 infection.

### Corrective Actions Taken / Recommendations

- Where testing is carried out as part of the crew change risk mitigation process, all test results should be known before sailing;
- Changes to a previously approved COVID-19 crew change risk assessment must be subject to a formal management of change (MoC) process, approved by senior management;
- Due consideration should be given to the ability to provide adequate medical care for someone onboard whose condition may deteriorate rapidly;

- Uncertainty about the medical fitness of anyone scheduled to sail on the vessel, should be resolved before sailing.

Members may wish to refer to:

- HSSE 001 *Guidelines for management of change*
- IMCA COVID-19 information page [www.imca-int.com/covid-19/](http://www.imca-int.com/covid-19/)