

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 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 LTI: Diver suffered crush injury to finger

What happened

A diver sustained a crush injury to his finger. The incident occurred when a diving support vessel was working on a decommissioning project, and the dive team were working to re-instate a side panel on a subsea tree. The task was carried out by using the vessel main crane in active heave compensation mode, with the divers required to position the panel into the tree hinges. While the diver's hand was positioned between the panel and the tree, the vessel heaved, causing movement on the panel, causing the diver's finger to be crushed between the panel and the tree.

The diver sustained a fracture and laceration to his right-hand ring finger, resulting in an LTI.

Applicable
Life Saving
Rule(s)



Line of Fire



What went wrong

The investigation found that:

The diver was holding the sling too close to the panel, meaning that when the vessel heaved, his hand was in the line of fire;

While pinch points were identified as a hazard, no specific measures (i.e., use of tag lines) had been implemented to suitably control the hazard;

While the procedure allowed for two methods of completing the task (either through the use of the crane or the use of lift bags) there was no guidance or instruction on factors to consider when deciding on which method to use.

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Lessons learned

When moving loads, wherever possible pinch point hazards should be eliminated by use of 'hands-off' lifting techniques:

For deck operations, this should be through push/pull poles or taglines;

For subsea operations, this should be through taglines.

Where it is not possible or advisable to use 'hands-off' lifting techniques, the task risk assessment should be reviewed and updated to outline how the pinch point hazard will be managed and controlled;

When carrying out a diving operation which allows for differing methods to be used (e.g. use of lift bag or crane), guidance should be provided on factors to consider when making the right decision, including:

Proximity and position of Diver relative to the work area and load;

Weight of load and ease of installation;

Pinch point hazards related to the task;

Potential for vessel movement and weather conditions.

Members may wish to refer to:

[Riggers injured while disconnecting rigging](#)

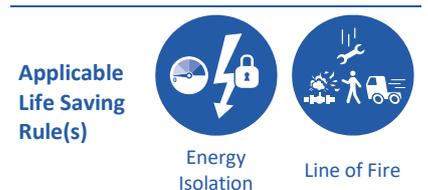
[Near miss: divers umbilical drawn beneath a load \[the vessel heaved leading to unexpected behaviour of a load\]](#)

[Hand pinched between cable and cable roller frame](#)

2 High potential incident - Foot trapped under ram cylinder

What happened

A person almost had his foot crushed by a ram cylinder on a pipeline coating machine. The incident occurred at a spoolbase, during the application of pipe joint coating, using an Injection Moulded Polypropylene (IMPS) unit. This task is conducted by two persons, the IMPS operator, assisted by a helper - the injured person. This person stepped up onto the IMPS unit platform, and his foot became trapped underneath the lowering ram cylinder. He called STOP to the operator who raised the unit to release the trapped foot. The injured person received first aid, but no further treatment was required.



Showing coating machine associated ram and re-enactment of foot entrapment

What went wrong

Safety by design:

The process is semi-automated, but at the end it requires the helper to step up on to the IMPS platform to access the pipe: the design of the IMPS system is such that it allows access to a hazardous area without adequate controls being in place;

There was no physical guarding in place to prevent foot placement under cylinder ram;

Instructions, procedures and risk assessments were not adequate:

The hazard of moving equipment (the lowering of the moulding unit) was not identified in the operating procedures;

There was no instruction in the operating procedures regarding access to the IMPS during the operation;

While generic risks were covered in the relevant Task Risk Assessments, access issues and pinch points had not been considered.

Lessons to learn

This incident highlights the risk of potential entrapment with moving equipment.

Identify any moving equipment components that pose a risk of entrapment at your worksite and apply suitable controls e.g., guarding, access restrictions or automatic cut-off;

Ensure personnel are suitably trained and fully familiarised with the safe operation of the equipment before use. This includes a review of safe operating procedures and risk assessments;

Have a focus on risk perception and consider regular “cold eyes” reviews of work tasks and equipment use.

Members may wish to refer to

[LTI: foot injury after standing on rotating winch drum](#)

[Serious Injury from Rotating Winch](#)

[Hand pinched between cable and cable roller frame](#)

3 Fall leading to serious personal injury

What happened

A crew member suffered a fall leading to concussion and other serious injuries. The incident happened when he was single-handedly trying to hold and manoeuvre a drill tool into position for a certain task. The movement of the vessel combined with slippery conditions underfoot meant that he lost control of the swinging tool, which caused him to fall onto the raised platform floor/deck. He was concussed and sustained various soft tissue injuries.

What went wrong

Risk seen as tolerable: the technique for doing this particular task had been determined and accepted by management beforehand;

The task risk assessment and work instructions did not specifically include the methodology or address specific risks associated with this task;

The potential implications of the mixed sea conditions (operating in marginal (but within defined working limits) sea state for drilling operations), damp equipment and slippery deck (due to foggy conditions) were not sufficiently considered or mitigated in the task risk assessment and planning;

The movement of the vessel coupled together with the layout of the drill floor resulted in the crewman placing himself in the line of fire while performing this task;

What went right

Applicable
Life Saving
Rule(s)



Line of Fire



The incident response and management of the incident went well and exactly as planned in the project medical emergency response plan.

Lessons learned

Update and review task risk assessments and procedures, and ensure personnel affected are properly briefed and instructed in the revised methods of doing the task;

Engineering changes were made to the equipment used for this task, and to the task methodology:

Equipment was installed to allow the drill tool to be manoeuvred and manipulated more easily, so that crew would be able to do this work on the drill tool with no lifting or dragging required, even when the vessel is heaving or rolling.

Members may wish to refer to:

[IOGP: Dropped object with potential for injury – riser release](#)

[Serious LTI – deck crew member struck by termination head/flexible](#)

[Fall from the quayside into water \[worker lost balance and fell into the sea\]](#)

[Man overboard from anchor handler tug \[worker lost balance and fell into the sea\]](#)

4 Chemical burns to body

CHIRP Maritime, an industry charity facilitating confidential incident reporting from seafarers, has published its Annual Digest 2021, which includes a number of events and incidents of interest to IMCA members. The aim of CHIRP Maritime is to enhance maritime safety worldwide, by providing a totally independent confidential (not anonymous) reporting system for all individuals employed in or associated in the maritime industries. This incident is one of them.

Applicable
Life Saving
Rule(s)



Bypassing
Safety
Controls

What happened

During maintenance work on a purifier, an engineer who had only recently joined the vessel was instructed to bring a specific chemical (carbon remover) from the chemical locker to clean the purifier. The engineer went into the chemical locker to transfer a quantity of the above-mentioned chemical from the drum to a small can. However, during this activity a quantity of the chemical liquid was spilt, resulting in a severe chemical burn.

First aid and medical treatment were provided and the engineer was landed ashore two days later when the ship reached port. The engineer was subsequently repatriated for further treatment.

What went wrong

The company's safety instructions which were posted at the entrance to the chemical locker were not reviewed or followed;

Appropriate chemical personal protective equipment (which was also positioned at the locker entrance) was not used;

There was complacency – “task seen as routine” - cleaning the purifier was a planned work activity that took place almost every day;

The company's documented procedures directed that the appropriate Job Hazard Analysis be reviewed before starting work. However, the Job Hazard Analysis for this task did not require a toolbox meeting, nor was one carried out;

Investigation determined that this chemical should not have been used for cleaning purifiers because a less hazardous alternative was available.

Lessons learned

Avoid the temptation to take shortcuts by **not** wearing PPE for a job that is done regularly and which takes a very short time – don't fall for "it won't happen to me" syndrome;

Ensure that familiarisation and training of new crew is thorough and comprehensive. Taking time to demonstrate how to do a job safely sets the safety culture for all crew to follow;

A new joiner to a ship or company should be supervised for their own safety during their induction period. Ideally, the induction process should be formally documented and include a formal or informal assessment to check that they have learned, and can consistently apply, safety procedures to the required standard;

STOP the JOB: ensure people feel confident and empowered to STOP THE JOB and challenge any apparent infringement of safety standards, and raise concerns if they discover even minor equipment defects. There may be cultural challenges to resolve in helping crew to be willing to STOP THE JOB.

Members may wish to refer to:

[Hose management and chemicals: crew person felt ill](#)

[HSE: Allergic reaction at work](#)

5 Personal injury – burns from hot engine oil to body and face

CHIRP Maritime, an industry charity facilitating confidential incident reporting from seafarers, has published its [Annual Digest 2021](#), which includes a number of events and incidents of interest to IMCA members. CHIRP = *Confidential Human Factors Incident Reporting Programme*. The aim of CHIRP Maritime is to enhance maritime safety worldwide, by providing a totally independent confidential (not anonymous) reporting system for all individuals employed in or associated in the maritime industries. This incident is one of them.

Applicable
Life Saving
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Bypassing
Safety
Controls



Line of Fire

What happened

In a vessel alongside, engineers started the removing the cover of the main engine fuel oil filter. Hot fuel sprayed onto the body and face of one of the engineers. He received immediate medical attention and was then hospitalized locally for a week and then repatriated. According to the final medical report issued two weeks later, the engineer was recovering well.

What went right

A toolbox meeting was held before the work was started, and both the supervisor and the injured junior engineer had undertaken the same task previously;

A review of the work/rest hours revealed that the injured crew member was well rested and his working hours were within company and MLC requirements;

A Permit to Work had been issued and all involved were wearing the correct PPE.

What went wrong

The risk assessment was inadequate: it had been issued but it had not been forwarded to the company for review and endorsement, and did not address all of the potential hazards;

There was inadequate implementation of the Company's basic safety procedures.

The filters were not isolated properly from the compressed air pipe and the isolation valves were not labelled as closed as required by the relevant work permit;

The filters were not checked for being under pressure and draining of the filter was not carried out before opening the cover;

The maker's safety instructions were not followed.



A Typical modern fuel oil back-flush filter

Lessons learned

Follow the safety rules through – these rules exist for your protection.

Ensure risk assessment is thorough, effective and diligently carried out;

Follow your company procedures, ensure that there is appropriate supervision to ensure this is done;

Ensure that work instructions and procedures are strictly followed;

Ensure everyone involved is fully and properly briefed on the job in hand;

Follow the instructions provided by the manufacturer – they exist for a reason.

Members may wish to refer to:

[Engineer suffered burn injuries in engine room incident](#)

[Two near miss incidents with a risk of scalding](#) [*second incident, "Crew were carrying out maintenance on the vessel's engine"...*]