

IMCA Safety Flash 25/18

2018

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learnt from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat (imca@imca-int.com) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at www.imca-int.com/links. Additional links should be submitted to info@imca-int.com

Any actions, lessons learnt, recommendations and suggestions in IMCA safety flashes are generated by the submitting organisation. IMCA safety flashes provide, in good faith, safety information for the benefit of members and do not necessarily constitute IMCA guidance, nor represent the official view of the Association or its members.

1 Finger Injury: Diver Caught Finger in Bell Door

What happened?

A diver suffered an injury when his finger got caught between the top of the bell door and the retaining latch. The incident occurred at the end of the dive, when both divers had been recovered to the bell and were preparing for return to surface. The dive team were attempting to close the bell door; however, the racked umbilical was stopping the door from fully closing. Diver 1 placed his hand on top of the door and leant onto it to steady himself as he tried to reposition the umbilical. At that point, the door moved back slightly, pinching his finger between the top of the door and the retaining latch. He suffered a deep cut to his finger which led to him being decompressed from the system as a precaution against possible infection.



What went wrong?

The investigation for this incident highlighted a number of contributory factors:

- ◆ Incorrectly stored umbilical interfering with the closing of the bell door;
- ◆ Lack of awareness/perception of risk;
- ◆ Lack of hazard markings on the pinch point location.

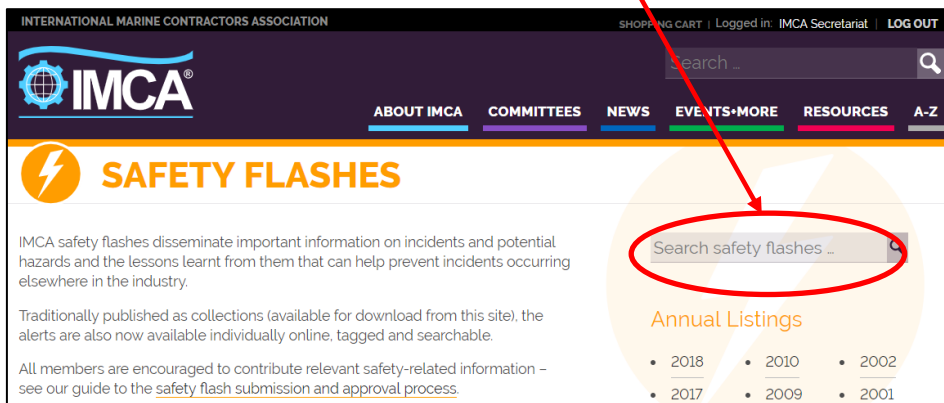
What actions were taken? What lessons were learned?

- ◆ There needs to be a thorough check of work areas for potential pinch points, and where these cannot be removed, ensure that they are physically highlighted and identified in task risk assessments (TRAs), and communicated to all personnel during toolbox talks (TBTs);
- ◆ There was a review of equipment stowage in the bell, which resulted in the repositioning of the bell scrubber, improved stowage of rebreather and repositioning of divers' seats within the bell.

Members may wish to refer to:

- ◆ [Finger injury: pinch point](#) [the exact same immediate cause]
- ◆ [Line of fire](#) ('Be prepared to work safely' video)
- ◆ [In the line of fire](#) (IMCA SEL 036, video)

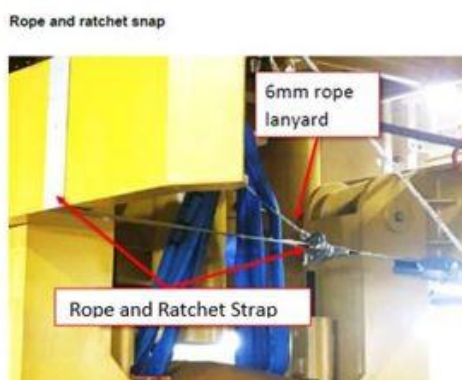
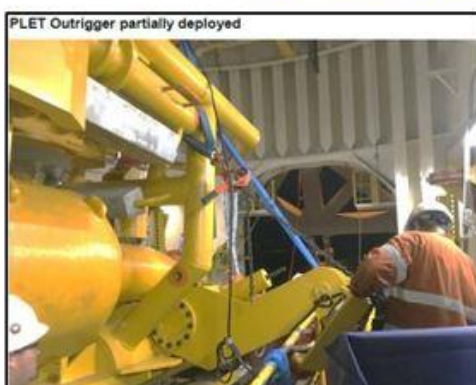
Incidents relating to the failure of bell door components have not been included here. Please see <https://www.imca-int.com/alerts/search-safety-flash/?swpquery=hand+pinch> for a wider and deeper selection of incidents relating to pinch points and hands. Please remember that safety flashes can be searched for any word. Browse to <https://www.imca-int.com/alerts/safety-flash/> and type here:



2 Near Miss: Unplanned Deployment of PLET Outrigger

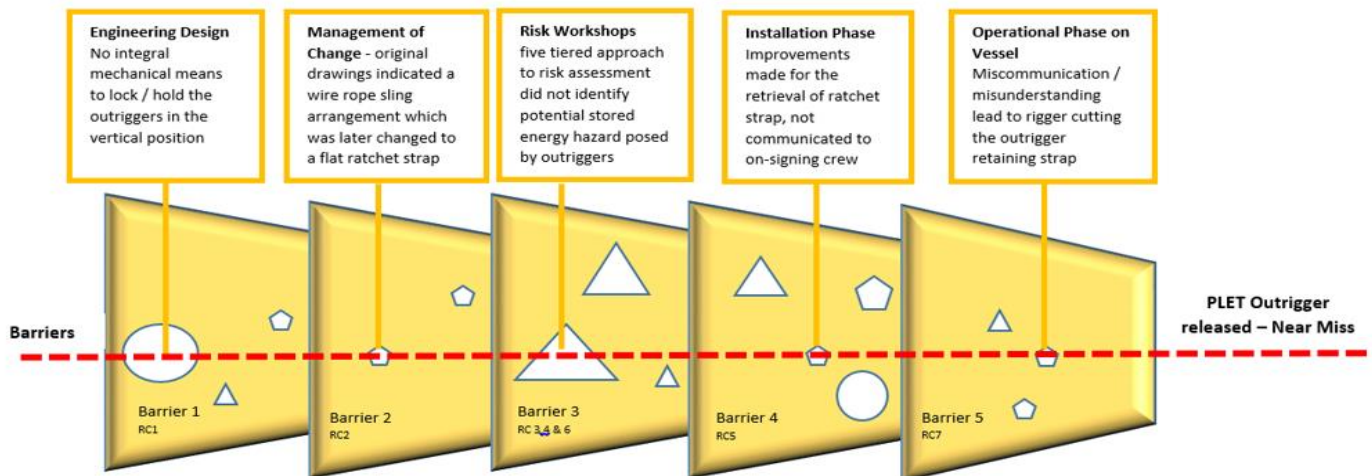
What happened?

As a pipeline end termination (PLET) passed through the firing line, a rigger incorrectly cut a webbed ratchet strap (instead of a 6mm rope lanyard) which was restraining the aft PLET outriggers/stabilizer legs in the upright position. After cutting the ratchet strap, the starboard stabilizer leg deployed to approximately 35 degrees from vertical, coming to rest on the pipeline induction heat (PIH), injection moulded poly propylene (IMPP) unit. The port side outrigger released (approximately 60 degrees from vertical) until it came to rest on a nearby handrail.



What went wrong? What were the causes?

- ♦ Engineering design: there was no integral mechanical means to lock or hold the outriggers in the vertical position;
- ♦ Management of change (MoC): original drawings indicated a wire rope sling arrangement which was later changed to a flat ratchet strap;
- ♦ A risk assessment did not identify the potential stored energy hazard posed by the outriggers;
- ♦ Communication: a decision was made to introduce 6mm rope to the ratchet strap to allow for easy retrieval subsea with an ROV. This decision was made informally and intermittently conveyed between teams (field engineers and rigging), which introduced a new risk.



What actions were taken? What lessons were learned?

- ♦ Reviewed risk management process for the design of subsea structures to make the process more robust and to allow the project team to analyse structure designs and address all failure points during the design phase;
- ♦ Ensure changes to designs as supplied by a customer are managed robustly with justification documented for any engineered changes in rigging arrangements – a more robust MoC;
- ♦ Thorough review of risk management processes, particularly between teams and in the 'interface' between teams; in this case, between the fabrication and project teams;
- ♦ Reinforced the importance of clear communication during critical operations, to ensure the message/work scope is delivered in a clear manner and that any risks are fully understood by the crews.

3 LTI: Finger Injury During Lifting Operations

What happened?

A crewman suffered a serious hand injury whilst working on subsea mattress recovery using a quick release mattress handling beam. The lifting webbing slings and ROV hooks were disconnected from the mattress and then, whilst reconnecting the beam, two of the pins failed to fully engage due to the slings being caught by the pins. The crewman was in the process of freeing the sling, when another deck crew member operated the quick release bar, which re-engaged the pin, resulting in trapping the injured person's finger.



What went wrong? What were the causes?

Our member notes that this incident took place during the hours of darkness, and records the following reasons for occurrence:

- ◆ The design of the pin engagement mechanism and the width of the slings;
- ◆ On this occasion there was a breakdown in communication between the deck crew members; the injured person was not clear of the pins when the mechanism was re-engaged.



What actions were taken? What lessons were learned?

Our member suggested that when involved in mattress deployment and recovery using a quick release mattress handling beam, confirm and verify that:

- ◆ The task plans and task risk assessments clearly define the roles and responsibilities of the deck team involved in the operation, and that mitigation for entrapment hazards is fully understood, including nominating a person to control and operate the handling beam quick release bar;
- ◆ Consideration is given to attaching rope grommets or tie wraps to the end of the slings to help keep the sling in place when engaging the pins and to keep fingers out of line of fire;
- ◆ There is a clear and defined sequence of operation and communications protocol addressing what commands are to be called, when and by whom. Communication and commands to include:
 - the use of an ‘all clear’ command and a confirmation that all personnel are clear, prior to activation and operation of the quick release bar
 - the use of a ‘worksite is safe’ command when it is safe to connect/re-connect slings to the beam;
- ◆ There is a ‘run through’ and a test of the communications protocol takes place with all personnel involved in the task during pre-job TBTs, shift handovers and when there is a change of crew.

Members may wish to refer to:

- ◆ [Line of Fire LTI: finger injury during lifting operations](#)
- ◆ [Lack of safety awareness: crush injury during lifting operations](#)
- ◆ [Hand Injury](#)

4 Injury Sustained During Manual Handling of Sharp Object

What happened?

A crew member injured his leg while moving a mud agitator with unprotected blades. At the time of incident, the vessel was proceeding to port. First aid was administered immediately on-board, followed by further examination and treatment of the wound at a clinic onshore. The injured person returned to the vessel on the same day.



What went wrong? What were the causes?

- ◆ There was inadequate risk awareness – risks could have been reduced by protecting the blades before lifting/handling the agitator; waiting until the vessel reached port could also have reduced manual handling risks;
- ◆ Manual handling practice could have been improved – while the agitator was suspended by chain blocks during the work, whilst gripping the blades using pieces of rags (rather than wearing gloves), the load slipped from his hands and hit the crew members' leg. A rope or another hands-off approach could have been used to turn/move/stabilise the load.

What actions were taken? What lessons were learned?

- ◆ Better risk awareness when moving objects with blades or sharp edges:
 - protect the sharp edges
 - arrange lifting and moving of load without actual manual handling – ropes, tag lines etc
 - wait until more personnel are available and/or vessel is in port (as appropriate)
 - use proper personal protective equipment (PPE) – gloves.

Members may wish to refer to:

- ◆ [Crewman suffers cut to hand – but gloves prevented it being much worse](#)
- ◆ [Two recent cases of hand and arm injuries](#)
- ◆ [Watch your hands](#) ('Be prepared to work safely' video)