

## IMCA Safety Flash 22/18

September 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](mailto: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](http://www.imca-int.com/links). Additional links should be submitted to [info@imca-int.com](mailto: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 Seamanship: Vessel Collision with Fishing Boat

#### What happened?

A vessel was in collision with a fishing boat. The incident occurred in foggy, zero visibility conditions on a ballast voyage. Our members' vessel was passing through some scattered fishing boats at the location. The vessel's starboard quarter hull came into contact with the fishing boat when the duty officer manoeuvred to avoid collision with the boat.

After the contact, the fishing boat was manoeuvred away on her own power. The Master was called by the duty officer after the incident. The vessel's attempt to contact the fishing boat was not successful, as no reply was received. Our members' vessel had paint scratches at the starboard quarter hull, above water line, where the contact had happened. Flag, Protection and Indemnity insurance (P&I) club and the owner were officially notified.

#### Why is this of interest? What went wrong?

Our member identified some failings in seamanship which may have contributed to the causes of this incident.

- ◆ The duty officer didn't call the Master to bridge as per standing order for restricted visibility;
- ◆ The engine was not on standby as per standing order when in restricted visibility and heavy traffic
- ◆ The auto fog signal was not on for restricted visibility;
- ◆ Radar management:
  - course plotting was done in radar no.1 only (if at all)
  - radar range was kept on 6nm on both radars for most of the time
  - most of the right ahead targets were not plotted in radar in time for collision avoidance
  - variable range markers (VRM) and electronic bearing lines (EBL) were not fully used to verify the target info; the full functionality of the radar set was not used
  - north up display was used on both radars during the entire process. Head up display would have been more suitable/efficient for collision avoidance
  - rain clutter was used substantially, when no rain was encountered at the time
  - tuning of Radar was on auto.

#### What were the root causes?

- ◆ Non-compliance, or insufficient compliance, with applicable rules, whether company rules or International Regulations for Preventing Collisions at Sea (COLREGS);
- ◆ The Master's standing instructions were not followed.

### What actions were taken? What lessons were learned?

- ◆ Review and implement procedures, reiterate that the Masters' standing instructions are there to be followed;
- ◆ Ensure that the crew are trained in proper and effective use of radar and visual lookouts when determining if risk of collision exists;
- ◆ Action towards collision avoidance should be early enough to be sufficient and large enough to be readily apparent to the other vessel.

Members may wish to review the following incidents:

- ◆ [Collision between crew boat and anchored barge](#)
- ◆ [Navigational near miss in restricted visibility](#)
- ◆ [Collision whilst drifting](#)

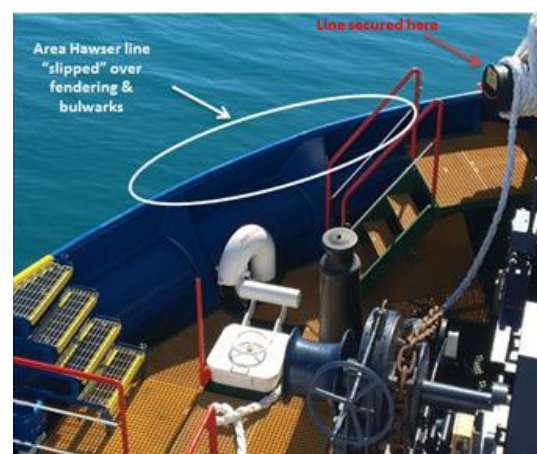
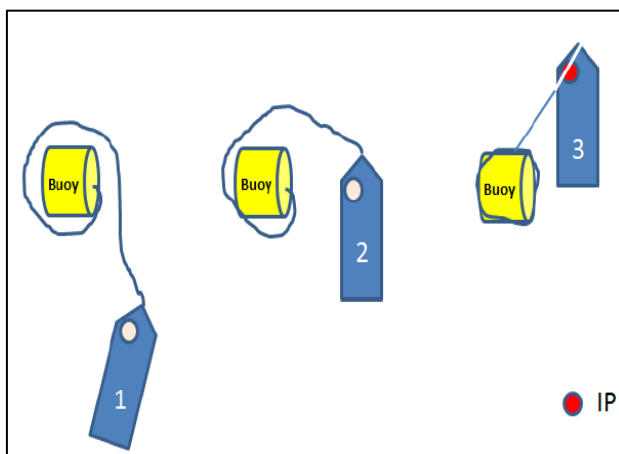
## 2 High Potential Near Miss: Line of Fire During Mooring Operations

### What happened?

A seafarer was caught in the line of fire and temporarily trapped by a mooring line, but fortunately escaped without serious injury.

During the mooring of an offshore support vessel at a sea mooring, the crew noticed that the hawser had become fouled. The chief officer, who was in charge of the watch, decided to manoeuvre the vessel around the buoy to ensure that the line would provide a clear lead once the hawser had been made fast. After securing the hawser to the mooring bits, the chief officer started manoeuvring the vessel around the sea buoy in an anti-clockwise direction. He was not aware that a seafarer was still located on the foredeck area, coiling a grapple rope.

As the vessel was manoeuvring around the buoy, the swell and sea state affected the vessel's rate of turn, causing it to move ahead rather than turn as planned. This subsequently resulted in the direction of the mooring buoy to lead aft of the vessel's port beam and place the hawser line under tension; the taut line slipped over the bow fender and bulwarks arrangement and pinned the seafarer against the handrail of the stairs for approximately 4-5 seconds. The vessel moved in the seaway; the line tension subsided, and the seafarer was freed. He escaped serious injury but experienced some post-event shock and localised bruising and pain.



### What went wrong? What were the causes

- ◆ The design of the sea buoy allowed the floating hawser and messenger to become fouled when floating free;
- ◆ The location of the sea mooring was subject to strong and fluctuating currents (a replacement low profile sea buoy was ready to be deployed upon the vessel's next arrival in port);
- ◆ The chief officer believed the foredeck to be clear of personnel immediately before starting his manoeuvre around the sea buoy to clear the hawser;

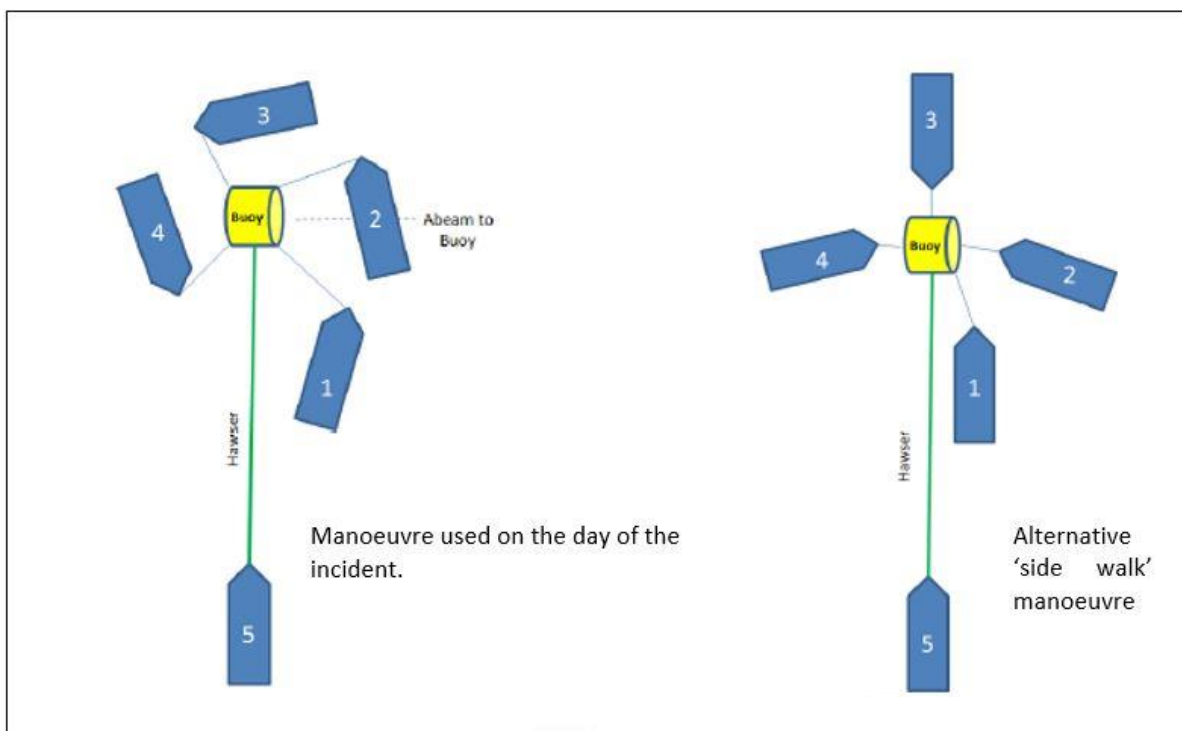
- ◆ The conning position at the forward console has inherent blind spots, caused by vertical window stanchions, which prevent an uninterrupted view of the foredeck area unless the person manoeuvring the vessel moves his field of view;



- ◆ Confirmation by very high frequency (VHF) radio that the deck was clear, was not obtained;
- ◆ The vessel manoeuvre used to un-wrap the hawser from the sea buoy had the potential to place sudden tension on the hawser line as the vessel rotated around the sea buoy. It also had the potential to place an adverse lead on the line from the vessel's central panama lead.

**What actions were taken? What lessons were learned?**

- ◆ A new low profile sea buoy has been deployed that is more suitable to areas experiencing strong and fluctuating currents;
- ◆ A strict clear deck policy has been enforced for future operations involving vessel manoeuvres while attached to a mooring hawser, including VHF communications confirming that the deck is clear prior to commencing the manoeuvre;
- ◆ A toolbox talk (TBT)/job safety analysis (JSA) review will be held prior to manoeuvring the vessel around a sea buoy that emphasises the clear deck policy and VHF confirmation;
- ◆ An alternative method, used by other persons performing the manoeuvre in previous occasions, involved using the azimuth drives to 'side walk' around the buoy, while keeping the buoy facing the bow and not under tension. This method would be used henceforth.



IMCA notes that mooring incidents have very high potential for serious injury. Just two incidents are highlighted here:

- ◆ [Lost Time Injury \(LTI\): Hand Injury During Mooring Operations](#)
- ◆ [Lost Time Injury \(LTI\) During Mooring Operations](#)

Members may wish to refer to the following:

- ◆ [Mooring practice safety guidance for offshore vessels when alongside in ports and harbours \(IMCA HSSE 029\)](#)
- ◆ [Line of Fire \(Be prepared to work safely video\)](#)
- ◆ [In the Line of Fire \(IMCA SEL 036, classic safety video\)](#)

### 3 Lost Time Injury (LTI) – Fall on Staircase

#### What happened?

A crewman on a vessel lost his balance going down some stairs and fell, resulting in a fractured ankle. His foot got caught in a gap as he landed at the bottom of the stairs. He suffered 3 broken bones and his foot was dislocated. He was evacuated by helicopter to hospital, where surgery was performed a number of days after the event.

#### What went wrong?

- ◆ The injured person lost footing when descending staircase:
  - he was not rushing, and it was stated he was not showing any signs of pressure or stress prior to the event
  - there was no significant vessel movement (wave height 2mHs, wind NE 25knots)
  - person stated he was holding the handrail;
- ◆ His safety shoes were in a poor condition and did not meet company standard (ankle height).

#### What were the causes?

- ◆ Immediate causes:
  - person lost footing and fell forward
  - complacency/lack of situational awareness
  - potentially poor standard of footwear, however soles of shoes were not excessively worn;
- ◆ Underlying causes:
  - potential for tiredness/fatigue – the incident occurred on a nightshift
  - failure to identify that the gap at the bottom of the staircase may present a hazard. Although it should be noted that the stairs were classified in accordance with local regulatory standards.

#### What lessons were learned?

- ◆ Worn out personal protective equipment (PPE) should be checked regularly and replaced when required;
- ◆ Never rush on stairways and always keep one hand firmly on the handrail, utilising the trailing hand technique where possible.

#### What actions were taken?

- ◆ Additional warning signage was placed at top of the staircase;





- ◆ Review of instructions/expectations regarding company standard of safety footwear;
- ◆ Improvement modification was added to staircase in order to prevent a person's foot from becoming caught between the single protruding step and the staircase.

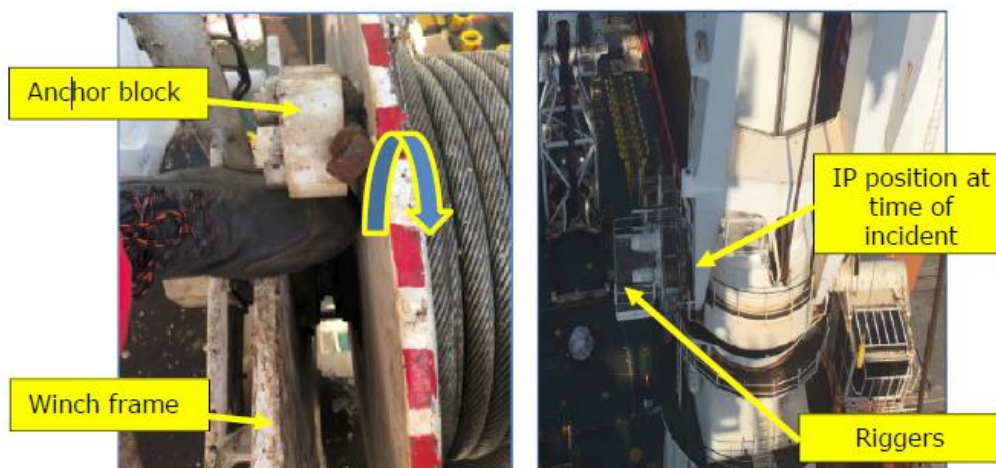
Members may wish to review the following incidents:

- ◆ Badly sprained ankle resulting in LTI
- ◆ Lost Time Injury – person slipped on the stairs and broke his arm
- ◆ Recent slips, trips and falls involving stairs

#### 4 Serious Injury from Rotating Winch

##### What happened?

A person involved in spooling a wire onto the main crane forward tugger winch drum suffered a serious foot injury. To facilitate the operation, he positioned himself in a restricted space inboard of the winch and opposite to the supporting riggers on the crane tugger platform. When he decided to leave this location, he placed his left foot on the winch frame to help step over a protrusion. This resulted in his foot being placed directly into a line of fire position, extending beyond the handrail. The anchor block, fitted to the outside of the still rotating winch drum, struck the extended boot which resulted in all five toes being amputated.



##### What went wrong? What were the causes?

Our members' findings were that:

- ◆ The task risk assessment (TRA) was inadequate for the work and did not recognise hazards associated with rotating equipment during the spooling operation;
- ◆ The TBT did not discuss positioning for the personnel involved in the task, and did not emphasise the rotating block as a hazard;
- ◆ The rotating anchor block was unguarded as it was thought to be safe and barriered by the handrail;
- ◆ Safer options were available to the work team but not taken;
- ◆ There had been no time pressure to complete the task.

Our member took the following actions:

- ◆ Conducted a 'hazard hunt' on winches to identify further potential line of fire hazards;
- ◆ Re-assessed the effectiveness of the existing safety controls (safe use of work equipment), barriers, implemented required improvements and reporting findings back to shore-side management;

- ◆ Reinforced importance of specific risk assessments, effective TBT preparation and delivery for every activity, and the importance of last-minute risk assessment at work-site to ensure that all hazards have been identified prior to work starting;
- ◆ Reiterated importance of 'Stop Work Authority'.

Members may wish to refer to:

- ◆ [Toolbox talks \('Be prepared to work safely' video\)](#)
- ◆ [Toolbox talks \(IMCA SEL 026\) \(video\)](#)
- ◆ [LTI: Tugger Winch Incident \(MSF\)](#)
- ◆ [Winching Equipment](#) [this is an old incident from 2000 but covers the exact same issue as this incident]
- ◆ [Hydraulic Umbilical Winch Operation – Trapped Thumb](#)

## 5 Fatal Traffic Accident on Board a Large Vessel

### What happened?

A member reported a fatal incident which occurred on a large Ro-Ro vessel during loading operations. A trailer loaded with two large wooden boxes drove down the ramp to deck number one and parked shortly after clearing the ramp on the port side of the cargo hold. With guidance from the stevedore foreman, the wooden boxes were unloaded by a forklift. When the unloading was finalised, the trailer reversed back up the ramp to deck two and hit the duty officer currently observing the cargo operations. The duty officer received medical assistance from shore very quickly, but unfortunately died in the ambulance on the way to hospital.



### What went wrong?

Our member made the following findings:

- ◆ No one witnessed the trailer hitting the duty officer;
- ◆ The site of the accident is in a blind spot for the CCTV cameras;
- ◆ The noise level on the cargo decks on this kind of large vessel during loading and discharging is rather high, particularly on cargo deck one. It is not clear that an audible reversing alarm would have changed the outcome in this case;
- ◆ There was no indication that the duty officer was standing outside the yellow safety zone on the ramp when he was hit by the trailer;
- ◆ The duty officer was not wearing his safety helmet as was required. Based on his injuries, the assumption was made that he was hit by the trailer when he was looking up towards deck two;
- ◆ The driver of the trailer did not use any signal man/reversing assistant, nor did he look backward through his trailer window before starting to reverse;

- ◆ Criminal proceedings in the country in which this incident occurred resulted in:
  - the driver of the trailer being prosecuted for negligent driving and sent to prison for 10 months
  - the Stevedore foreman and the head of the stevedore contractor were both fined.

#### What were the causes?

- ◆ The immediate causes were found to be:
  - the trailer driver failed to ensure that there were no obstructions when starting to reverse
  - driver did not use a signal man/reversing assistant when reversing, even though he was driving a heavy vehicle;
- ◆ A causal factor was inadequate supervision/planning – the requirement to use a signal man/reversing assistant when reversing larger vehicles and trailers on board was not followed;
- ◆ The **root cause** of the incident was found to be an inadequate management system, which was not strict enough. The sub-contracted stevedore company did not ensure that the owners' cargo handling instructions were followed.

#### What actions were taken? What lessons were learned?

- ◆ Better situational awareness is required, particularly in the cargo holds, during cargo operations, and anywhere where vehicles are working;
- ◆ A strengthening of PPE requirements particularly for high visibility clothing. Vessel management teams to ensure that existing requirements for hard hat or safety helmet is always complied with;
- ◆ A better awareness should be developed of control measures for non-routine operations.

Members may wish to review the following incidents:

- ◆ [Fatality: crew member struck by forklift during quayside operations](#)
- ◆ [Worker fatally injured in falling from a scissor-lift platform which collided with another vehicle](#)
- ◆ [Two yard-based fatal road traffic accidents \(UK HSE\)](#)
- ◆ [Two Industrial Vehicle Incidents](#)

## 6 Recurring Hand Injury

The Bureau of Safety and Environmental Enforcement (BSEE) has published [Safety Alert No. 336](#) regarding a hand injury sustained during lifting procedures.

During a slow lifting process to remove a rubbish bag from a storage container, the storage container itself also began to lift. The crane operator was unable to see the lifting operation due to a blind spot, and therefore had another employee guiding him through the lift. The employee placed his hand on the container in order to free the bag. As the container began to lift, the metal frame began to part, which caused the container to fall onto the production deck and the individual.

The employee was left with a large laceration (see image) on his left hand, which required 8 stitches.



#### What went wrong?

- ◆ The correct personal protective equipment (PPE) was not worn by the employee guiding the crane operator.

### What action was taken?

- ◆ The storage container was removed from service and discarded.

### What lessons were learned?

- ◆ Offshore personnel should always wear appropriate PPE when performing tasks;
- ◆ The BSEE also recommends that operators use job safety analyses (JSAs) on each job/task undertaken and ensure that they properly identify the risks and hazards of the job, and to mitigate the risks to as low as is reasonably practicable (using the hierarchy of controls promoted by NIOSH).

The BSEE noted that there has been a large number of hand injury incidents, which range from burns and cuts to blunt trauma. Further information on these incidents can be found in the [BSEE Safety Alert No. 336](#).

