

IMCA Safety Flash 08/14

June 2014

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 webmaster@imca-int.com

I Crewman Struck by Dropped Object

A member has reported a high potential incident in which a crewman was struck by a dropped object. The incident occurred when the crewman was ascending a ladder to reach the access/egress of a scaffold platform, and he was struck on his right arm by a dropped object. After the object struck the person it fell down under the scaffold platform. The person looked up and saw another crewman standing on the scaffold platform receiving a bucket with scaffolding materials from further above. The bucket was being lowered on a rope from a windlass room.

The crewman descended the ladder to investigate the object that had struck him and found that it was a swivel coupler (scaffold material). He 'stopped the job', informed a nearby foreman, and asked other crewmen working in the vicinity of the tank if they had witnessed the incident; unfortunately no one saw exactly what happened, and therefore the origin of the dropped swivel is unknown. The foreman made a fresh visual risk assessment of the scene which included proper housekeeping (swivels stored on the boards next to gate/access) and discussion of the potential consequences of dropped objects. The importance of using correct lifting equipment (in this case, soft scaffolding lift sacks) rather than buckets was reinforced.

The crewman reported to the medic for a medical check-up which revealed no injuries.



Figure 1: Showing worksite at time of incident



Figure 2: Swivel coupler



Figure 3: Illustrating buckets (wrong) and soft-sided sacks (better) for lifting

Our members' investigation revealed the following:

- ◆ The origin of the swivel could have been:
 - A swivel fell from the bucket
 - A swivel laying on the scaffold board fell. (Possibly kicked but unlikely due to kick plate and gate)
 - While emptying the bucket a swivel bounced and fell;
- ◆ Direct cause:
 - Improper lifting, handling or storage - improper lifting equipment was used to transport the scaffolding materials down (buckets attached to approximately 20 metre rope)
 - Poor housekeeping - some swivels were left behind next to the access gate near the ladder;
- ◆ Root cause:
 - Improper handling of materials - lowering scaffold materials (approximately 20m) down from height with buckets attached to a rope
 - Improper storage of materials - The temporary stored swivel couplers were stored too close to the ladder access/entrance of the platform.

Members may wish to refer to the following similar incident (key words: *dropped, bucket*)

- ◆ [IMCA SF 11/12](#) – Incident 2: *Near miss: dropped object.*

Members' attention is drawn to the following IMCA material which may be of assistance:

- [IMCA SEL 019](#) – *Guidelines for lifting operations*
- [IMCA SPP 04](#) – *Avoiding dropped objects*
- [IMCA SPC 05](#) – *Lifting equipment*
- [IMCA SPC 06](#) – *Working at height*
- [IMCA SPC 12](#) – *Avoiding dropped objects*

Members may also find useful information from www.dropsonline.com.

2 Unsecured Object Lifted by Helicopter Downwash

A member has reported an incident in which a bench cover was lifted into the air by the downwash of a helicopter coming into land on the nearby helideck. The incident occurred when the vessel received the first crew change helicopter of the day. During the final approach of helicopter, the downwash of its rotors caused the cover of the bench to be lifted into the air and flung onto the deck some 6m below. The object was 180 cm x 50 cm. There was no-one in the area where the object landed.



Figure 1: The cover of the bench on deck



Figure 2: The bench without the cover on

Our member's investigation revealed the following:

- ◆ The bench was recently made onboard;
- ◆ The cover of the bench was not secured;
- ◆ The Helicopter Landing Officer (HLO) and assistant had both checked the helideck and the area nearby before the first helicopter arrived;
- ◆ The immediate cause of the incident was **failure to secure the object** - the cover of the bench was not secured nor was a requirement for this identified during inspections;
- ◆ The root cause of the incident was:
 - **Inadequate verification of design** – the benches were made for an area affected by downwash during helicopter approach over starboard towards the aiming circle of the helideck. The design of the benches failed to include hinges or securing aids
 - **Failure to identify hazard and risk** – during manufacturing, installation of the benches and afterwards during pre-helicopter operation inspections, this hazard and the significant risk it posed, was not identified.

Our member took the following actions:

- ◆ Performed additional inspections to verify if all equipment and materials are properly secured;
- ◆ Ensured that placement of additional/new equipment on or near helideck would be properly risk-assessed before installation.

There are a large number of safety flashes in which one of the causes of the incident is **failure to secure** objects, whether at height or otherwise, for example:

- ◆ [IMCA SF 10/08](#) – Incident: Unsecured Object Fell and Injured Crewman.

IMCA has received no similar incidents involving any objects caught and lifted by helicopter downwash. Keywords used: *debris, object, helideck, downwash.*

3 Crewman Suffered First Aid Injury during Cutting Operations

A member has reported an incident in which a crewman cut his thigh whilst using a hand grinder. The incident occurred when he was cutting a 900 mm diameter pipe's bevel side to make a proper gap between the pipes. While beginning to work

on the pipe, the cutting disc did not enter the cutting point (of the gap) correctly. This made the grinder slip and move away from its position and hit the injured person's right inner thigh. The job was stopped immediately and the injured person was sent to the clinic for medical treatment (cleaning and dressing the wound). As per the medical treatment administered by the medic, the incident was classified as a First Aid Case.



Figure 1: Position of the injured person while cutting the bevel's gap. Person stands in unstable position where he bent a little bit forward his left leg and his knee totally lean onto the pipe.



Figure 2: (RECONSTRUCTION) Position of the injured person while the grinder accidentally hit on his right inner thigh (both hands still hold the grinder)



Figure 3: Injured area, right inner thigh

Our members' investigation revealed the following:

- ◆ The injured person was performing cutting activity standing on a portable scaffold platform that was not adjusted properly for the work;
- ◆ The scaffold was not suitable for the working height and the distance for the pipe that needed to be cut;
- ◆ This inadequate scaffold adjustment forced the injured person to stand in an unstable body position where his left leg was bent a little bit forward and the knee totally leaning on the pipe;
- ◆ The injured person had 18 months experience in this function;
- ◆ He was wearing the correct PPE;
- ◆ The grinder had been inspected before the job and all proper safeguards were found to be correctly fitted and in place;

- ◆ The incident was witnessed by the foreman at the scene.

Our member concluded that the immediate and root causes were as follows:

- ◆ **Immediate cause: improper position for task** – the injured person was standing in an unstable position where he was bent forward with his left knee leaning fully on the pipe;
- ◆ **Immediate cause: poor judgement** - the injured person or his supervisor should have stopped the job and made sure the portable scaffold was adjusted properly for the work;
- ◆ **Root cause: inadequate design criteria** - the scaffold was not suitable for the working height and the distance for the pipe that needed to be cut.

The following corrective actions were taken:

- ◆ Further safety discussion and toolbox talks;
- ◆ Proper training with the focus topic being that proper position of equipment and personnel is critical to a safe work site;
- ◆ Ensure proper working platform to be provided for working at height.

Members may wish to refer to the following similar incidents (key words: *incorrect, improper, grinder, grinding, injury*)

- ◆ [IMCA SF 03/05](#) – Incident 11: *Grinder incident*;
- ◆ [IMCA SF 06/05](#) – Incident 1: *Hand grinder injuries*;
- ◆ [IMCA SF 05/11](#) – Incident 2: *Improper use of tooling: bruising*.

4 Cutting Torch Hose Separates from Flame Arrestor

An incident has come to IMCA's attention in which an Oxy-Acetylene cutting torch hose separated from the flame arrestor, resulting in a flashback. The incident occurred during welding modification of stabbing guides inside a pile driving hammer. While cutting a steel plate with a torch, the pipefitter experienced a flashback of flames as the connection of the hose suddenly came loose. Immediately the fire watch used the standby fire extinguisher and put out the flames. The men stopped the job and called for the supervisor. The pipefitter was unharmed and no property damage occurred.

Investigation revealed the following:

- ◆ **Immediate cause:** was identified as inadequate repair using unsuitable techniques and methods. The inside diameter of the hose was larger than the one suited for this type/size of nipple so tape was used to make up the difference. The clamp could not tighten against the barb on the nipple and when the tape warmed up the hose and clamp slipped off over the barbed end;
- ◆ **Root Cause:** was use of miss-matched materials that were inadequate for the task. The correct size hoses with clamps were ordered but were unavailable at the time. An improvised repair was made using tape to secure a tight fit.

The following corrective actions were taken:

- ◆ Inspect all torch hoses and remove all with this type of improvised connection;
- ◆ Crew trained and provided awareness in proper materials and procedure;
- ◆ A 'Safety Stand Down' was conducted on-board to reiterate the importance of pre-job inspection and carrying out the job using the safest methods and materials.

Safety incidents involving pressurised gas fittings, Oxy-acetylene cutting equipment and gas cutting in general are quite commonplace. A sample is included here – please refer to the following similar incidents (key words: *flame arrestor, flashback, incorrect, acetylene*), but there may be others.

- ◆ [IMCA SF 08/01](#) – Incident 3: *Incident involving Oxy-acetylene cutting*;
- ◆ [IMCA SF 09/09](#) – Incident 1: *Poor maintenance and subsequent failure of welding equipment*;
- ◆ [IMCA SF 04/12](#) – Incident 2: *Near miss during subsea cutting operations*;
- ◆ [IMCA SF 07/13](#) – Incident 1: *Failure of gas quad fitting*;
- ◆ [IMCA SF 02/14](#) – Incident 1: *Hose fire caused Hose caused by Flashback in Oxygen & Acetylene Hoses*.

5 Near Miss: Potential Fire Hazard from Halogen Lamp

The Marine Safety Forum has published the following safety flash regarding a near miss incident in which ropes used in the pilot ladder were observed in close proximity to a halogen lamp that can create a lot of heat when in use. The ropes were promptly moved away from the lamp and stowed in a safe manner. Crew were informed to the potential risk and the proper action to take when securing the ropes.

Members may wish to review the following similar incidents: (key words *halogen, fire, hazard, overheating*)

- ◆ [IMCA SF 05/13](#) – Incident 3: *Near Miss: Exposed Live Electrical Cable*;
- ◆ [IMCA SF 14/11](#) – Incident 5 *Diver helmet hat light [caught fire]*.

The safety flash can be downloaded from www.marinesafetyforum.org/upload-files//safetyalerts/msf-safety-flash-14.14.pdf.