

IMCA Safety Flash 11/14

July 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 Failure of Master Link during Subsea Lifting Operations

An incident has been brought to IMCA's attention in which a master link (lifting ring) fitted to a 10t air lift bag failed in use during subsea lifting. This style of master links are also fitted to 10t water load bags.



Showing the overall size of the master link, and the part number embossed on the flat section

Unique Seaflex has identified the batch number of the parted master link. However, as these links are interchangeable, as a precaution, the company has decided to advise all owners or users of 10t air lift bags and 10t water load bags to inspect the master links fitted to their bags and quarantine any products marked with the following two possible lot numbers (which can be found embossed within the pressed section opposite the weld in the centre of one long side):

- ◆ IWA;
- ◆ LWA

Members using 10t air lift bags or 10t water load bags fitted with a red master link marked IWA or LWA should contact Ian Margham at ian.margham@uniquegroup.com for further information in regards to ring change-out and replacement instructions.

Members may wish to consult the following similar safety flashes:

- ◆ [IMCA SF 12/11](#) Incident: 1 – *Offshore tank container rigging failure;*
- ◆ [IMCA SF 07/14](#) Incident: 6 – *Master link and sub-link failure on lifting equipment.*

2 LTI – Hand Severed During Mooring Operations

An incident has come to IMCA's attention in which a crewman lost his right hand during mooring operations. The incident occurred when a service vessel was moving floating hoses away from an incoming tanker (a routine procedure) using soft 'pick up ropes' attached to each hose. Members of the deck crew and Bosun picked up and secured the first pick up rope. They had difficulty in securing the second hose. The Chief Mate (the injured party) came down from bridge and physically took over the job. He held the pick-up rope close to the 'panama eye' of the vessel with his arm through the eye of the rope. A sudden sea swell tightened the rope. His right hand was caught against the hard edge of the panama eye, and severed.



Showing elbow linked through pick up rope soft eye



Showing pick-up rope (re-enactment)

Investigation identified the following root causes:

- ◆ The Chief Mate 'stepping down' to crew task without preparation;
- ◆ A potential high consequence hazard was not recognised;
- ◆ The injured person did not follow accepted practice of seamanship for handling mooring lines;
- ◆ Others who might have challenged him and stopped the job were hindered by cultural norms regarding challenges to formal lines of authority.

Members may wish to refer to the following similar incidents (key words: *mooring, hand*):

- ◆ [IMCA SF 02/08](#) Incident: 1 – *Finger injury whilst casting off towing line;*
- ◆ [IMCA SF 07/12](#) Incident: 3 – *Two recent cases of hand and arm injuries;*
- ◆ [IMCA SF 16/13](#) Incident: 4 – *LTI: Crewman injured foot during offshore renewables mooring operation.*

Members are reminded to encourage personnel to look after their hands and arms. IMCA produces a range of safety promotional material on hand and arm safety, as well as a poster on mooring safety:

- ◆ [IMCA SPC 08](#) – *Watch your hands: you've only got one set*
- ◆ [IMCA SPC 11](#) – *Stay safe at the wheel - Cutting and grinding safety*
- ◆ [IMCA SPC 16](#) – *Caught between and pinch points: What you should know and a poster* [IMCA SPP 09](#) – *Watch out for pinch points*
- ◆ [MCA SPC 17](#) – *Hand-arm vibration: Control the risks*
- ◆ [IMCA SPP 12](#) – *Mooring safety*

3 LTI - Severe Hand Injury in Galley

An incident has come to IMCA's attention in which a member of the galley staff sustained severe injuries. The individual was grinding tomatoes when his arm got trapped in the feeder tube of a meat grinder machine. His colleagues freed him from the machine and transported him to the onsite clinic in a private vehicle. The victim received immediate treatment at the onsite clinic. When he was stabilised, he was transferred to a local hospital. During emergency surgery at the hospital his right hand had to be amputated.



Showing INCORRECT set-up with no plunger or top tray



Showing CORRECT set-up with plunger and top tray

The on-going and as yet incomplete investigation has revealed the following:

- ◆ The equipment was not properly configured for safe use – see photographs;
- ◆ All the necessary guards were not in place;
- ◆ The machine was being operated by someone who was not fully familiar with how to operate it;
- ◆ The machine was not being used for the purpose for which it was intended.

The following toolbox talk/safety meeting points were suggested:

- ◆ What kind of machinery is there in your galley or catering facility that could cause harm;
- ◆ Are these machines being operated safely? Are all the necessary guards in place and functional;
- ◆ Are the cooks and galley staff trained and competent to use the machines properly and safely;
- ◆ Is there anything that can be done to further improve galley safety;
- ◆ Are your emergency response procedures adequate to deal with an injury of this sort.

Members may wish to refer to the following similar incidents (key words: *hand, finger, guard, removed, galley*). All of these incidents except the final one have as a cause, **failure to have physical safeguards in place** to avoid finger or hand injuries.

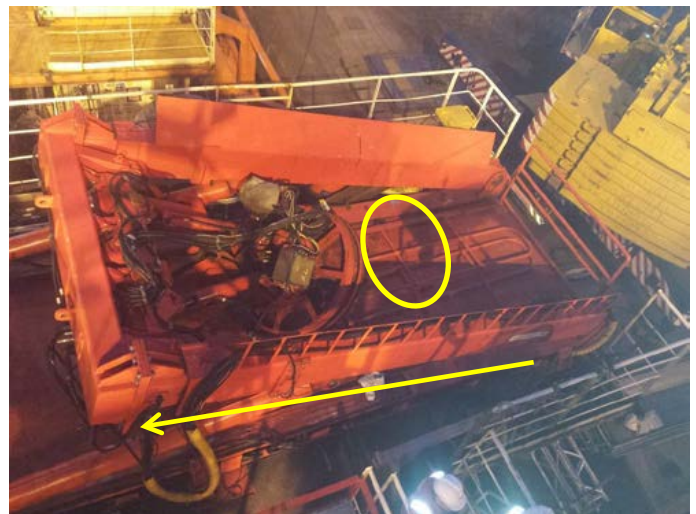
- ◆ IMCA SF 06/01 Incident: 3 – Use of hand-held disc grinders;
- ◆ IMCA SF 03/05 Incident: 2 – Injury while grinding without PPE;
- ◆ IMCA SF 07/12 Incident: 1 – LTI – Incident with circular saw leads to loss of thumb;
- ◆ IMCA SF 05/13 Incident 4 – Finger and hand injury [in the galley].

Members may wish to make use of the IMCA DVD 'Slips, trips and finger nips' and also the IMCA pocket card 'Watch your hands' www.imca-int.com/media/102527/imcascp08.pdf.

4 Near Miss: Collapse of ROV Launch & Recovery System (LARS)

A member has reported an incident in which a launch and recovery system (LARS) collapsed causing damage to the sheave, snubber and LARS deck plates. The incident occurred during the demobilisation of an ROV spread. A Lawson type ROV LARS 'A' frame was required to be lowered into its stowage position and lifted from the vessel onto the quayside. During this process the 'A' frame collapsed.

During the disassembly of the LARS, existing company procedures were not consulted by the ROV team. As a result, an ROV supervisor attempted to lower the 'A' frame with his own perceived method, and subsequently the 'A' frame fell in an uncontrolled manner to the deck. The method of lowering one supporting hydraulic ram at a time whilst the other is firmly bolted into place was not followed. The supervisor removed all the securing bolts from the feet of both the hydraulic rams, believing the system would gently slide down into the stowage position. To aid the initial movement of the rams, the two supervisors stood on the LARS platform and started striking the feet with a sledge hammer, one ram at a time. Once the first ram moved approx. 13cm, they then struck the second ram which resulted in the 'A' frame collapsing at speed. Both supervisors were extremely fortunate that they were not struck by the falling 'A' frame - they were unharmed, but this incident had the potential for serious injury/loss of life.



'A' frame in final position after collapse – showing where bolts were removed from feet of hydraulic rams

Position of the two supervisors after 'A' frame collapse

NB: Actual worksite after event. Yellow arrow denotes direction in which 'A' frame collapsed

Our member's investigation noted the following:

- ◆ An important opportunity to STOP the job was missed – an able seaman not involved in the operation asked the ROV team if they would like the assistance of the vessel crane to support the 'A' frame during the lowering process. He explained that he had seen this done before during other demobilisations and the process the ROV team were using did not seem safe. His advice was not taken - **If in doubt STOP the job;**
- ◆ No proper control of work – no toolbox talk, risk assessment, method statement or hazard identification and risk assessment (HIRA);
- ◆ Procedures were not followed;
- ◆ Poor hazard awareness and poor risk perception of the task;
- ◆ Insufficient management and control of the work;
- ◆ Poor supervision and poor leadership at the work site;
- ◆ Incomplete technical understanding of the equipment;
- ◆ Personnel were not competent for the task in hand.

Our member reflected that the reoccurrence of dropped object incidents throughout its fleet is evidence that dropped objects are still harming and have the potential to kill. This incident could have been averted if the procedures had been followed and the basic safety management tools used to control the works. Active supervision of the work site and control of works by the vessel management is vitally important to ensure safe operations are conducted at all times.

Members can find many incidents in which the immediate and root causes are inadequate control of work, procedures not followed etc. Likewise there are many dropped object incidents, and a number of dissimilar incidents involving ROVs or

LARS. It is possible that this incident, in which basic failure to follow common safety procedures led to a serious dropped object near miss involving very heavy equipment, may be without precedent amongst recorded safety flashes.

Members may wish to refer to the following similar incident in which the root causes identified included:

- ◆ The potential of falling objects was not recognised or identified as a foreseeable and significant risk;
- ◆ Work instructions were not followed;
- ◆ There was a lack of situational awareness.

IMCA SF 15/13 Incident: 1 – LTI: *dropped object incident.*

5 Hydraulic Hose Failure Caused Collapse of Heavy Haulage Trailer

A member has reported an incident in which a low loader collapsed at the quayside while carrying a 157t suction pile. Suction piles (16m x 6m, 157t) were being transported to the quayside upending and storage area. The piles had previously been received at the site and moved from the quayside to their respective storage locations without incident using the heavy haulage trailer. Around 20 suction piles had been delivered to the support base and positioned in the storage areas. In readiness for mobilisation and offshore installation the suction piles were to be moved to an area close to the quayside before being up ended (positioned vertically).

Whilst the trailer was moving at a slow walking speed along the quayside, one of its hydraulic hoses burst. The hose was located near the rear of the trailer. This caused a loss of hydraulic pressure which caused the trailer to sink on the nearside which in turn made the load lower toward the quay. The wheels on the trailer's offside lifted clear of the ground approximately 20cm and on the nearside of the trailer the suction pile saddles made contact with the concrete.

Following the incident the crawler cranes that were to offload at the upending area were tracked to the location and used to stabilise the load prior to levelling out the trailer (suspension on offside lowered). The trailer was then moved clear and the load transported to the upending area on the cranes.



Suction pile after hose failure



Damaged hose

The following lessons were learnt:

- ◆ The hydraulic hose that failed was located behind the wheel arch running along the chassis of the trailer; it was quite inaccessible for regular cleaning, inspection and maintenance;
- ◆ The location of the hose was considered a 'dirt trap' which is considered likely to have led to its deterioration and subsequent failure;
- ◆ The critical nature of this hose was not understood, and it was not recognised that failure could cause the trailer to list;
- ◆ As a consequence of the above, no hose inspection or change out frequency had been specified;
- ◆ The potential for failure of the suspension to cause the load to list was not considered at the risk assessment.

The incident highlights the need for suppliers and operators of specialist equipment to determine fully the potential critical failures of equipment and take preventative measures accordingly. Such failures should also be considered as part of risk assessments and, where appropriate, additional controls and required recovery measures agreed prior to the operation.

Members may wish to consider the following points when planning similar operations:

- ◆ Check planned inspection and maintenance systems of equipment – are critical items considered;
- ◆ Risk assessments – are potential failures and effects considered and assessed;
- ◆ Consider pre-use checks of similar trailers – can a test to working pressure be conducted prior to loading.

After much searching using various key words, it can be established that whilst there are a number of incidents involving *hydraulic hose failure*, and any number of incidents in which the amongst the causes identified were *failure to identify risks*, this incident combining the two is without precedent in the IMCA safety flash system.

6 Inadequate Snap Hooks on Life Jackets

The United States Coast Guard (USCG) has published the following safety flash regarding potentially inadequate snap hooks on certain brands of lifejacket. The USCG recommends that owners/operators that have Revere model 198 RT or 160 RT lifejackets or vests on board their vessels inspect them closely for this potential defect.

For further information please refer to http://wow.uscgaux.info/Uploads_wowII/P-DEPT/0414_snaphook.pdf.