IMCA Safety Flash 05/03

June 2003

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learned 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

1 Fall Hazards Associated with Temporary Deck Openings

Keywords: Fall

A member has provided a note on one of the outcomes of a joint US Coast Guard (USCG)/Minerals Management Service (MMS) review of accidents on fixed offshore facilities resulting in fatalities and/or serious injuries.

It was observed that a number of incidents occurred during operations in which grating or other deck covering had been temporarily removed. Some cases involved personnel working at temporary deck openings who became entangled in equipment, tripped or simply forgot that the openings were there. Other events involved personnel who were not aware of temporary deck openings and who were passing through work areas when the accidents occurred.

USCG regulations require that deck openings not in use be covered, guarded or otherwise made inaccessible. Further, in cases where there is a hazard of falling ten or more feet when engaged in an activity, such as during and after removal of decking, personnel are required to wear secured safety belts. MMS regulations require that lease operations do not result in injury or loss of life and that operators perform work in a safe and workmanlike manner.

The reporting company has given the following instruction to its personnel:

In order to reduce fall hazards associated with temporary deck openings, employees shall wear secured safety belts when:

- removing gratings or other deck coverings to create a temporary deck opening;
- working within the perimeter of the guard rails; or
- near the temporary opening when a portion of a temporary guard rail is removed.

Employees may work outside an opening without safety belts if temporary guard rails are installed that completely encompass, and are in close proximity to, the deck opening. These temporary guard rails should be of a contrasting colour to the immediate environment and should be substantially constructed to prevent an accidental fall through the opening by an employee.

Routine safety meetings and notices regarding work hazards should continue to highlight the dangers associated with temporary deck openings.

Further details on the review are available from Mr David M Moore of the MMS (telephone +1 703 787 1637) or LCDR Eric Walters of the USCG (telephone +1 202 267 0499 or e-mail ewalters@comdt.uscg.mil).

2 Fatality During Cable-Pulling Operations

Keywords: Pulling

A member has reported the following incident, which occurred while a 76mm diameter wire rope cable was being pulled off of a passive reel mounted on an anchored flat top barge moored some 600m from shore. The cable was to be pulled around a sheave block anchored on the beach and, hence, towards a pipelay barge, which was on anchors approximately 400m from the shoreline. Because of the weight of the wire rope and the length being pulled, the pulling force itself was exerted by the pipelay barge, which was drawing itself forward on anchors. A series of 96mm diameter polyprop hawsers were linked from the stern of the pipelay barge to the wire rope cable.

The wire rope connector became jammed in the sheave while the pulling barge continued to move forward. The hawsers were stretched beyond their safe working load and one eventually snapped. The flaying ends of the ropes sprang back and killed a member of the team on the beach.

The company involved has carried out an extensive investigation, which identified the following points, recommended as reminders to all people involved in beach pulling operations:

- Every operation must be fully engineered, taking into account pulling forces, with detailed instructions for those involved setting out the methodology, risk reduction measures to be adopted and contingency procedures;
- A detailed risk assessment must be carried out by the onshore project team, following the company's procedures, and supplied to the site team;
- Where changes to the methodology are required, where things have not gone according to plan, revised processes are to be fully risk-assessed and the revised methods approved before work continues, in accordance with company procedures;
- Toolbox talks are to be used to brief all those involved in the work regarding the work to be done, risks involved, each person's role and their positions;
- Warning alarms, barriers, etc. are to be used to prevent those not involved in pulling operations from coming close to wires/ropes under tension;
- The importance of good communication between people at different locations has been re-emphasised – in this instance, including the reel, beach, pipelay barge deck and pipelay barge anchoring control. The person in charge of an operation needs to maintain a clear understanding of movement in all locations at all times in order to clearly relate how movement at one location affects the others.

The company has restated that all personnel have the right and obligation to stop the work at any time if an unsafe condition is seen to be developing.

3 Jet Pump Incidents

Keywords: Fall

A member has reported the following incident, whereby a man, part of a team racking jet hose, sustained an injury to his left knee.

A power sheave had been utilised to assist personnel in retrieving the hose. One person was located on the deck, guiding the hose to another person, who was located on top of the jet pump. Due to the placement of the jet pump, personnel had to route the jet hose up and over the jet pump to place the hose on the racks, which were located outside of the jet pump.

Prior to competing this task, personnel located on the deck were directed to assist with tending of a diver.

This left the person located on top of the jet pump to complete the racking of the jet hose alone. Upon grabbing for another section of the hose, the person twisted their left knee.

The company involved has reported the following lessons learned:

1 Equipment should be placed in such a way to allow personnel adequate access to all areas of the unit, without the need to climb on or over equipment;

2 Adequate deck space should be provided for personnel to safely retrieve and store hoses;

3 The top of a jet pump is not considered a 'work platform' and should not be utilised as such;

4 The racking of a jet hose is a minimum of a two-man operation, even with the assistance of a power sheave;

5 A job safety analysis should be completed, identifying proper body mechanics to be utilised prior to performing this task.

4 Thumb Cut – Removal of Guarding/Safety Observation

Keywords: Trapping in machinery

A member reports that while cutting a sheet of paper on a manual cutting machine, an employee's left thumb was placed into the cutting line as the blade was pulled down. Upon investigation it was learned that the barrier guard had been removed from the paper cutter by another employee.

The company concerned has noted the following points:

- Guarding/Barriers – The barrier guard (a small metal rod preventing the thumb or fingers entering the cutting line of the blade) should never be removed from a paper cutter. If a guard has been removed, the cutter should not be used.
- Inspection – All paper cutters should be checked for proper guarding.
- Caution – Even with a barrier guard in place, care must still be taken to keep free hands and other objects away from the blade. It is still possible to cut oneself if above the barrier guard height and into the cutting line of the blade.

5 Trapping Incident related to Mooring System

Keywords: Mooring

IMCA has received a report of an incident onboard a platform supply vessel which resulted in a member of the crew fracturing his forearm. This was the consequence of an event that happened during activity in which the crew engaged frequently – a 'routine' activity.

While the vessel was preparing to enter port, two crew members became engaged in recovering ropes from the enclosed foc'sle head space onto the upper foc'sle head in preparation for mooring alongside. This operation involved the transfer of mooring ropes from the starboard to the port side of the vessel's foc'sle head, using the ships anchor/mooring windlass. Under-turns on the windlass drum were used to improve the rope lead towards the port drum on the windlass. One cre member was driving the windlass with the other engaged with the rope at the drum end.

While putting a third turn onto the drum end, the crew member in that position lost his footing and, while steadying himself, found that his glove end had become trapped between the mooring rope and the drum end, causing his forearm to be pulled into the drum end. As a result, he received a fracture to his arm and was unable to continue at work. The potential was even worse.

The company has advised each of its vessel crews to review the task-based risk assessment used for preparation and stowage of mooring systems in advance of entry into or after departure from port, in order to maintain focus on the potential hazards associated with this type of activity.

The type and fitting of hand gloves (PPE) used by vessel crews should be examined to ensure that gloves remain reasonably tight-fitting on the wearer and also to ensure that any looseness in the finger area does not comprise the safety of the wearer.

6 Potential for Fire from Misuse of a Coffee Thermos

Keywords: Fire

Not all incidents seem to be of extreme significance, but the smallest errors can lead to disastrous consequences. An incorrect connection on a coffee cup heater has led to the loss of accommodation on a large bulk carrier in the past.

In this instance, a plastic coffee thermos container was placed on a hot plate. The container involved appeared to be stainless steel on its sides, but the bottom was black plastic. There was no sign of fire, but the bottom was melted from being placed on the hot plate.

The company involved has noted that only glass coffee containers should be used on such hot plates and, more generally, that all employees need to be aware of potential fire hazards and need to report them to relevant senior colleagues.

7 Robbery at Gunpoint

Working ashore or going ashore from vessels in various locations around the world has its own dangers. A member reports a recent event where an employee was robbed at gunpoint. The incident happened while the individual was at the roadside and in need of motoring assistance. He engaged an offer of support from strangers who subsequently produced a firearm and demanded his cash and wallet. At the time of the incident the employee did not possess a mobile telephone/cellphone and was only able to obtain assistance from a local service station.

The company concerned has issued the following advice to its employees:

- Never solicit help from strangers for roadside assistance;
- When travelling on company business, a company 'pool' mobile 'phone is required;
- Plan your travel in advance (routes, stopovers, etc.) in order that you are familiar with your surroundings should you be stopped unexpectedly (e.g. by mechanical breakdown). In addition, ensure you are familiar with the vehicle you are using ,whether personal, company or third-party hire;
- Be extra careful when travelling in poor weather conditions.

The company has also repeated the following advice from the local police department on action to take during a robbery:

- Remain calm and do not resist – don't try to be a hero, take no action that could jeopardise your own safety;
- Follow the robber's directions, but do not volunteer more than asked for;
- Advise the robber of any unusual moves you must make in advance and assure them that you will co-operate;
- Make mental notes on:

i) the robber and accomplices (including number) – approximate height, age, build, sex, race, clothing (colour, brand, material, etc.), complexion, hair (colour, length, style), eye colour, etc.

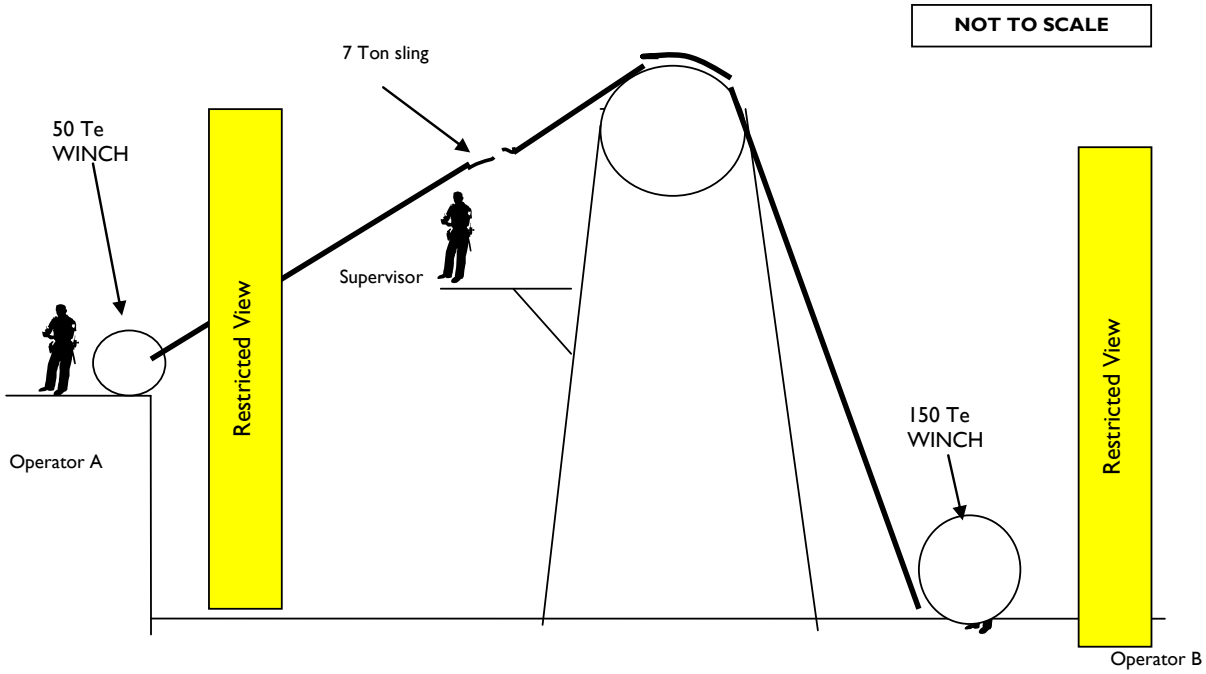
ii) what they may have touched (for fingerprints);

iii) how they left the scene (direction of travel, vehicle used, vehicle registration/license plate number, etc.)

8 Incident during Winch-to-Winch Wire Transfer Operations

A member has reported a serious incident which occurred recently on an offshore vessel when a 7 ton SWL wire sling parted.

From the diagram below, it can be seen that the operation was totally reliant on the use of co-ordinated radio communications, as both winch operators were unable to maintain a line of sight with the operation.



As the wire connection arrived at the work platform, the supervisor called an 'all stop', which was not heard by 'Operator A'. The 50te winch continued to pull the 150te winch wire and the resulting tension caused the trip on the 150te winch to cut out. The 150te winch was fitted with a cut-out switch to prevent overloading, which had been previously set at 32te.

The supervisor called out two more 'all stop' commands, that were also not heard by Operator A. The tension in the rigging continued to rise as the 50te winch continued to pull. When the tension reached 42te, the 7-ton wire sling parted and the resulting whiplash destroyed the handrails on the work platform.

From the supervisor calling the initial 'all stop' command to the wire parting a total of six seconds had elapsed.

The company issued the following instructions for future operations:

In any winch or crane operation where a line of sight cannot be maintained, it is fundamental to use correct radio procedure and protocol. All such operations are to be subject to a formal JHA and as a minimum a toolbox talk is to be held with all personnel involved in the operation.

- When carrying out lifts or winch operations that are out of the line of vision of the winch/crane operator (normally deemed 'blind lifts'), ensure that winch/crane operator receives a full briefing of the intended operation. Paint a verbal picture of the manoeuvres that are about to be carried out and do not proceed until he/she gives an acknowledgement of understanding.
- Full radio communication checks are to be made prior to the start of any winch or crane operation where line of sight between the operator and banksman cannot be maintained. If any doubt exists as to the efficiency of the radio communications, the operation must not proceed until full radio contact is established.
- During 'blind winch/crane operations' the criticality of the operation is such that the winch/crane operator must acknowledge and repeat all instructions he has received over the radio. The operation must not proceed unless a precise acknowledgement has been received from the winch/crane operator.
- During 'blind winch/crane operations' a hand signalling method and more than one banksman is to be used to relay instructions to the winch/crane operator. Each banksman should stand in a position where he/she can be clearly seen by the next person in the chain. All signals should be clear and precise. Wherever possible, the banksman at the load should have a complete overview of the activity.

9 Slip on Stairs

Keywords: Fall

A member reports that an able seaman slipped on an external stairway and fell heavily on his elbow, injuring himself. He had been washing down and had cleared away his bucket before heading down to the mess room. The stairway had a handrail on

either side, but he used neither. The treads on the stair were in good condition and well painted, but were wet and the surface was quite smooth. One of his feet slipped forward and he fell backwards onto the stairs.

The company involved has noted the immediate cause of the accident as the slippery stair treads, which it has noted can be fixed by applying a good coat of non-skid paint and ensuring it remains 'non-skid'.

In addition, the company has expressed concern as to why the able seaman did not hold on to the handrails provided. He was experienced, had been trained and was well aware that ships are continuously moving. The company notes contributory factors in this incident as being poor judgement, lack of concentration and inadequate reinforcement of critical safe behaviours. The company has undertaken to address these behavioural issues through training, awareness-raising initiatives, advanced safety auditing and regular safety meetings.