IMCA Safety Flash 21/20

July 2020

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 Double Man Overboard Resulting in one Fatality

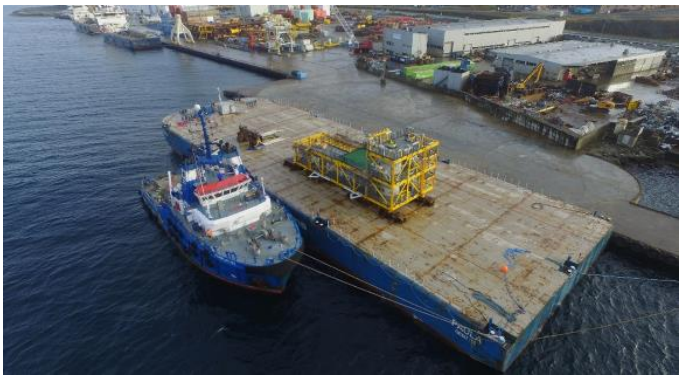
Applicable Life Saving Rule:  Bypassing Safety Controls

What happened?

During preparations for disconnecting a tow tug which was moored to a barge in turn moored to the jetty, a crew member of the tow tug fell into water between the tow tug and the barge. A second crew member also fell into the water during attempts to rescue his colleague.

Following a worsening of the weather, it was decided to disconnect the tow tug from the barge. The Chief Mate stepped over to the barge to check certain equipment, but found that he needed a torch to do so. He called for a torch by radio. An AB collected a torch and made his way to deck where the 2nd Mate was acting as safety watch for the Chief Mate. The AB handed over his radio to the 2nd Mate, who did not have a radio. Whilst the 2nd Mate was occupied with the radio, he took his eye off the AB who, at this point, fell into the water. When the 2nd Mate realised what had happened he shouted “Man Over Board” and attempted to rescue the AB. During his attempts he also fell into the water. In the meantime the MOB alarm was raised and all hands were on deck. The 2nd Mate was helped out of the water. The AB was still in the water and had now lost consciousness. After a number of attempts he was pulled towards the rescue zone door by a boat hook, where he was manually lifted out of the water. The 2nd Mate was treated for hypothermia. The AB was administered CPR and AED by the crew until medical assistance arrived. The AB was medevaced by helicopter but did not survive.

What went wrong?



- Vessel to vessel transfer was accepted and regarded as a routine activity;
- Risk awareness did not deal with specific risks of routine activities in non-routine circumstances. The focus is on what has to be done, not on how/risks involved;
- MOB between two stationary vessels was not specifically addressed in procedures, risk assessments or drills related to MOB. Rescue equipment was not primarily suitable for rescuing MOB from between two vessels.

What were the causes?

Our member notes that both the AB and the 2nd Mate were wearing inflatable lifejackets which slipped up their heads whilst they were in the water.

- Procedures and risk assessments:
  - Procedures allowed direct transfer from vessel to vessel in adverse weather conditions, exceeding defined conditions (captain's discretion);
  - There was no requirement for "last minute risk assessment" (LMRA) before starting routine activities under suboptimal circumstances;
  - Toolbox talks were primarily focused on which activities, less on how to execute and risks involved;
  - Risk of hypothermia was not specified in the client's procedures/risk assessments;
- Man overboard!
  - MOB drills and processes tend to be related to open sea situations, and do not address falling in between two (stationary) vessels;
  - Inflatable jackets are not part of drills.
  - Rescue equipment was not suitable for swift retrieval of MOB between stationary vessels.
  - The wearing of thermal suits was not mandatory.
  - Inflatable life jackets with crotch straps was not mandatory.

Actions

- Procedures, risk assessment and toolbox talks:
  - Review procedures with regard to direct vessel to vessel personnel transfer;
  - Include the risk of hypothermia in procedures and risk assessments related to falling in the water;
  - Review MOB procedures and drills to include MOB situations between two stationary vessels/between vessel and quayside;
  - Ensure that toolbox talks not only deal with what has to be done, but also with how it should be done and the specific situational risks involved, including changes in operating conditions. Ensure that when work cannot be carried out safely anymore, the **Stop Work authority** is applied.
  - Properly assess additional risks of carrying out **routine activities under non-routine conditions**;
- Equipment
  - Ensure that heaving line and bag are applied for transfer of equipment/tools (such as a torch in this case) from vessel to vessel;
  - Ensure that the required equipment/tools are defined prior to carrying out a non-routine job;
  - Review MOB equipment and techniques used for rescue in limited situations, for example between two stationary vessels or between vessel and quayside;
  - Consider introducing life jackets with crotch straps.

Members may wish to refer to

- HSSE 025 *Guidance on the Transfer of Personnel to and from Offshore Vessels and Structures*
- HSSE 029 *Mooring practice safety guidance for offshore vessels when alongside in ports and harbours*
- SEL 035 *In the line of fire* video
- SEL 038 *Mooring incidents* video
- Non-Fatal Man Overboard Incident [during mooring operations]
- MAIB: Fatal Man Overboard Incident Whilst Boarding Tug [during mooring operations]

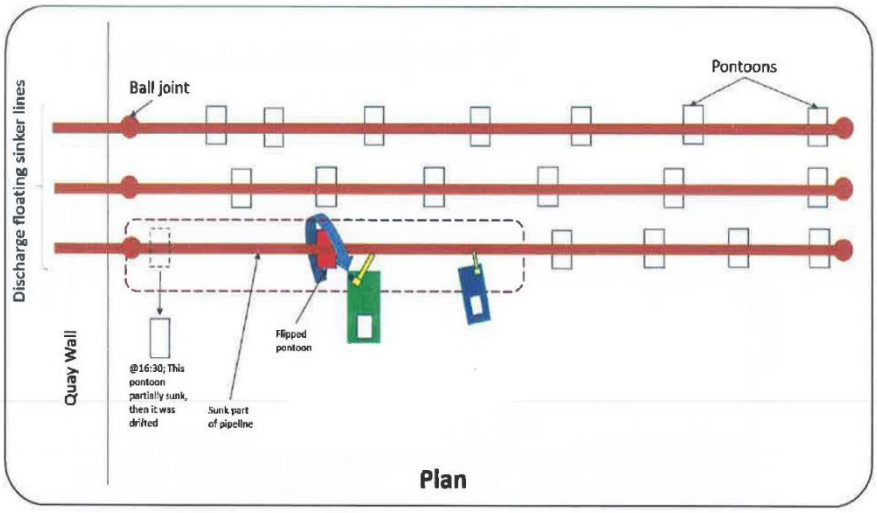
2 MOB fatality from multi-cat

Applicable Life Saving Rule:

- Bypassing Safety Controls
- Stored Energy
- Line of Fire
- Safe Mechanical Lifting
- Work Authorisation

What happened?

A member reports a man overboard fatality which occurred from a multi-cat engaged in shallow water construction in an inshore environment. The task involved recovery and re-arrangement of a pipeline configuration, consisting of 3 x 300m sinker-pipe, which was connected to shore using 7 floating pontoons. Three separate pipes were used for dewatering a reclamation site. One of the pipes including pontoons was partly submerged. The operation took place in low light conditions during the hours of darkness.



The initial plan was to re-float the pipeline with a technique using compressed air. Whilst the task was ongoing, there was a change to the plan, and it was decided to lift the floating pipeline configuration using the crane on the multi-cat. As the lift started, one of the floating pontoons flipped over the pipeline and hit the Chief Engineer who was operating the crane, causing him to fall overboard. Immediately an AB on deck jumped overboard to help him; the Chief Engineer was recovered and first aid /CPR undertaken. He was transferred to hospital but was unfortunately declared dead later that evening.

What went wrong?

During the operations, the decision was made on-site to change the plan and use the deck crane of the multi-cat to lift the pipe-line and use another workboat to place a pontoon underneath. One of the pontoons was not secured to the pipeline; this came loose, surfaced and flipped over the floating pipeline, hitting the multi-cat crane and the Chief Engineer, who was driving the crane.

- There was an unplanned change, from using the air compressor to lifting the pipeline using the multi-cat crane;
- There was no risk assessment nor Management of Change (MoC) process applied to the changed plan;

What were the causes?

Our members' investigation identified the following root causes:

- Inadequate worksite supervision
  - Site supervisor ignored the instructions to postpone the operations after the first attempt to follow the initial plan. He changed the plan, without following the appropriate MoC process;
  - Operations were conducted in hours of darkness, against company instructions;

- Unsafe Lifting Operations
  - The sunken dewatering-line was lifted using the Multi-Cat deck crane;
- Lack of Situational Awareness
  - There was no adequate (risk) assessment of the job or work area;
  - No-one involved recognized the hazardous situations and did not use **STOP WORK authority**.

Members may wish to refer to

- SEL 035 *In the line of fire* video

3 MOB fatality: person fell between vessel and jetty

What happened?

The UK Marine Accident Investigation Branch (MAIB) has published Accident Investigation Report 09/2020 into the death of the Master of dredging vessel *Cherry Sand* when he was crushed between the dredger and the jetty after he fell while attempting to step ashore to assist berthing the vessel in Rosyth, Scotland.

The Master had climbed over *Cherry Sand's* bulwark and on to the rubbing band in readiness to step ashore as part of a self-mooring operation. The chief officer was still manoeuvring the dredger towards the berth when the master took a single step towards the quayside. Cherry Sand was too far away from its berth, with the result that the Master's foot missed the quay, and his upper body struck the chains and quayside with force before he fell between the quay wall and the vessel. He was crushed by the moving dredger before slipping into the water.

The Master was wearing a lifejacket and the ship's crew were able to recover him onto the quayside, but his injuries were too severe, and he could not be revived.

What were the causes? What went wrong?

The MAIB noted:

- The method used for self-mooring *Cherry Sand* was inherently hazardous, and crew routinely stepped ashore/on board when the vessel was not tight alongside;
- Linesmen were not used, and no measures had been taken to avoid having to place a crew member ashore while the vessel was unmoored;
- Safety management system audits had not identified that *Cherry Sand's* operational practices, and the general safety culture on board, were below the expected level;
- Of the occupational accidents investigated by the MAIB over the past 5 years, more than 40% of the mariners who lost their lives were over 50 years old. Over the same period, the four persons who lost their lives while attempting to step on/off during mooring operations were between the age of 58 and 72. UK HSE guidance warns that older workers may experience more slips, trips and falls than younger workers, and recovery following an injury may take longer.

Recommendations

- The UK Maritime and Coastguard Agency (MCA) were to amend the *Code of Safe Working Practices for Seafarers* to provide guidance on mooring and unmooring operations, and when it is permissible for vessels to self-moor;
- A recommendation was made to Associated British Ports (aimed at ensuring a common approach to safety and fleetwide application of company procedures;

Members may wish to refer to

- HSSE 029 *Mooring practice safety guidance for offshore vessels when alongside in ports and harbours*
- SEL 035 *In the line of fire* video
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4 And finishing on a positive note: *A CPR success story - "we saved a life that day"*

What happened?

An IMCA member reports that a crew member suffered several cardiac arrests in front of his crew mates. Immediately CPR was started, and the medic was alerted. The patient was resuscitated, but experienced subsequent cardiac events while awaiting medical air transport. On arrival of air-lift crew, the patient was reassessed by the flight medic and further cardiac treatment administered prior to transport. At time of transport, the patient was conscious, alert, and oriented.

The patient was sent to hospital, and after an operational procedure he was able to return home to his family after three days.

The positive outcome of this story, saving a life, is the result of leadership, commitment, and preparedness for the unexpected.

What went right?

To be successful in any emergency, **training and drills are key.** The marine crew alerted the SAR helicopter, which then landed safely on the helideck. The interaction between the first aiders, medic, and the SAR crew was exceptional. Also, the doctors and nurses in the hospital did their part to make this happen. One particular crew member made an exceptional effort using leadership skills and medical expertise, to help save a life.

Actions

Our member, while noting that it can be hard to motivate for training or drills after a long shift, nonetheless suggests that this uplifting success story will encourage extra training in basic CPR.