

## IMCA Safety Flash 05/16

February 2016

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 [webmaster@imca-int.com](mailto:webmaster@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.

### Summary

In the interest of timely publication, this safety flash is a combination of different incidents. We again cover the issue of downdraft from helicopter rotors; a near miss incident during a shallow water saturation dive involving a diver's umbilical becoming fouled (no harm came to the diver); and a failure to follow instructions on the part of a senior crew member that led to him slipping on deck during rough weather and breaking his arm. Finally, two recent email scams highlight the importance to members of good IT security or cybersecurity.

### 1 Helicopter Rotor Downdraft Hazards - Oil & Gas UK (OGUK)

Following a recent near miss incident, OGUK has drawn attention to the hazards of blown objects from helicopter downdraft, particularly where loose or inadequately secured equipment has been lifted into the air and fallen either overboard or been dropped onto a lower area of the vessel or installation.

An S92A helicopter landed on a platform helideck, and the downdraft force lifted and blew two bags, each weighing 10kg, from the baggage cage. They landed on a lower level 10m below – fortunately no personnel were on the lower level at the time.

OGUK also note the following previous occurrences:

- ◆ An aluminium locker was situated on a level below the helideck – a door was detached by the helicopter downdraft;
- ◆ A wooden crate lid blew off and went over a handrail and into the sea;
- ◆ Two large mats were lifted from the deck area during helicopter operations – this incident resulted in one mat landing on the deck below.

Similar incidents keep occurring in other parts of the world. All of these objects were unsecured and/or inadequately stored. All incidents had the potential to cause serious injury to personnel or damage to the vessel or the platform structure – or in some cases the helicopter.

With regard to helicopter downdraft, OGUK provides the following information:

- ◆ Rotor downdraft forces, combined with prevailing wind speeds, can generate winds equivalent to a Category 1 Hurricane over distances of 25m from the aircraft;
- ◆ Very heavy objects within the downdraft zone can become airborne if not restrained;
- ◆ Unsecured/unlocked locker doors in the vicinity of helidecks have been found to be a hazard due to high winds and helicopter operations;

- ◆ Wooden crates and loose equipment may be at particular risk – the following points should be noted:
  - Lockers, wooden crates and loose equipment are often stored in areas that may become exposed to high winds or helicopter downdraft. Consideration should be given to the object becoming lighter and more susceptible to high winds or helicopter downdraft once opened and equipment is removed
  - Adverse weather guidelines and checklists should be used when adverse weather is forecast – these should include checking that pallets, crates and lids are secured or sheltered
  - Crate lids can sometimes be inadequately re-secured due to existing nail/pin holes being used to fasten the lid
  - Where a secondary securing method is applied it can sometimes be ineffective or inappropriate e.g., *ad hoc* equipment or weight being placed on top of the lid to hold it down. This equipment or weight is often removed for various reasons by persons unknown.

Members may wish to:

- ◆ Review risk assessments and assure robust procedures are in place;
- ◆ Ensure that HLOs and helideck crews are fully aware of the risks involved;
- ◆ Use team briefings and tool box talks to raise awareness of windblown objects caused by helicopter downdraft or severe weather;
- ◆ Make careful checks of all areas adjacent to the landing area and flight path to identify areas at particular risk. Secure or remove all materials susceptible to rotor downwash before flight arrival and take off, and ensure such checks are discussed during tool box talks;
- ◆ Confirm that lockers and wooden crates are stored in an appropriate location not exposed to high winds or helicopter downdraft, and include the requirement for secondary securing method to be applied.

Members may wish to refer to the following incidents (search word: *downwash*):

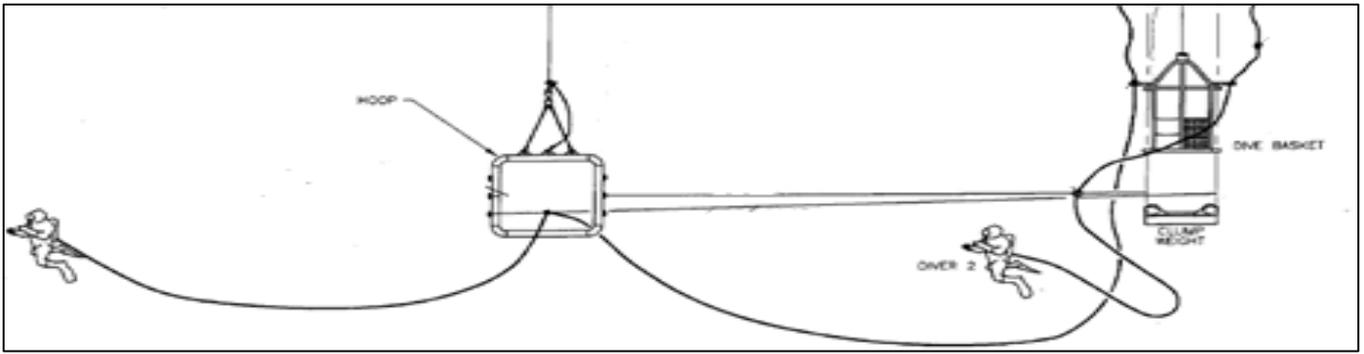
- ◆ [IMCA SF 08/14](#) – Incident 2 – *Unsecured object lifted by helicopter downwash* (this incident may be the same one as the second one identified above by OGUK).

## 2 Near Miss: Fouled Diver Umbilical

A member has reported an incident in which a diver's umbilical became fouled around a seawater discharge caisson. The incident happened during a shallow water saturation dive (15msw), whilst using extended umbilicals routed through a submerged intermediate hoop to reach the worksite from the diving bell.

The diver had made his way to the structure through the hoop. He was preparing to move into the structure by pulling the required length of slack umbilical through to his location at the edge of the structure, before moving to the work location. This meant the diver had to pull through approximately 23m of working umbilical in order to access the job, which was in the centre of the jacket. The umbilical was slightly negatively buoyant. Whilst the diver was pulling through the 23m of working slack at the jacket, a bight formed below him. The bight was carried by the prevailing current (which was setting towards the aerated discharge), and was drawn into the aerated discharge. As the caisson base was only 2m below the 15m elevation, the aerated water lifted the bight of umbilical upwards and around the caisson resulting in diver 2 being unable to pull through his slack.

The platform was subsequently shut down to allow the umbilical to be freed. Both divers then returned safely to the diving bell and the bell was recovered to the vessel.



*Camera view of fouled umbilical.*

Our member noted the following contributory or underlying causes:

- ◆ The risk assessment identified the caisson as a hazard, but did not identify the aerated nature of the water around the caisson discharge as a hazard;
- ◆ The risk assessment did not identify that 'safe' standoff distances should take into account the maximum length of a diver's 'slack' umbilical that could be deployed in conjunction with tidal direction etc., when establishing safe standoff distances;
- ◆ The aerated nature of the water was considered a nuisance rather than a hazard with regard to the divers' umbilical.

The following lessons were learnt:

- ◆ Take into account the length and potential route/location of the diver's umbilical in relation to discharges and other hazards (inlet and outlets, snagging points) in addition to the physical location of the diver;
- ◆ Understand that gas entrained discharges can produce significant general upward flow of the surrounding water in their location even if the outflow from the discharge is downward.

Our member suggested the following immediate actions:

- ◆ Ensure all potential hazards are considered during umbilical management – and not just vessel thrusters;
- ◆ Take into account diver routing and access and umbilical management techniques during pre-job engineering;
- ◆ Ensure specific review of the risks of working on extended umbilicals and/or within structures is considered during the risk assessment process.

Members may wish to refer to the following incidents (search words: *fouled*):

- ◆ [IMCA SF 01/10](#) – Incident 1 – *Diver fouled on descending load.*

### 3 Slip/Trip Resulting in Lost Time Injury (LTI)

A member has reported an incident in which a crewman slipped on deck and fell, resulting in a broken arm. The incident occurred when the chief engineer was returning to the engine room from the bridge via the accommodation. In spite of instructions to stop personnel going on deck during heavy weather, the chief engineer decided to leave the accommodation in the winch housing area to return to the machinery spaces.

Outside, there was a small raised deck area, with two steps down to the main deck. The non-skid paint in this area was worn and as the chief engineer stepped out onto this area he slipped and fell forward. His fall and impact caused a fracture of his right upper arm. He received first aid treatment on-board, before being medevac'd ashore for further treatment.

The diagram to the right shows the injured persons path and incident cause. He left the accommodation via **Position 1** into the winch housing area.

At **Position 2**, there was a small raised deck area, with two steps down to the main deck. Here he slipped and fell.

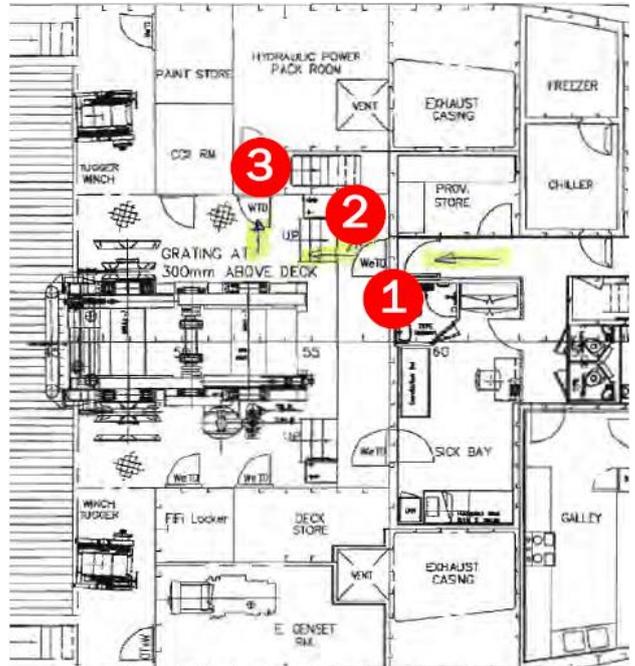
As he fell, he hit the watertight door in **Position 3**, which was secured open. This impact caused a fracture of his right arm.

Our member notes the following:

- ◆ That morning, the vessel Master had held a training brief on the bridge, advising all personnel of:
  - hazards during heavy weather;
  - the need to keep all external doors closed;
  - restrictions on using external decks.
- ◆ The chief engineer misunderstood and/or chose to ignore the instructions in the briefing and the *instructions painted on doors themselves* (see image, first right);
- ◆ Between the accommodation and the winch housing, the internal door was closed but the external, weathertight door remained open (see image, second right);
- ◆ Between the winch housing into the machinery space stairwell, the external watertight door remained open;
- ◆ The raised deck and steps in this area did not have any non-skid painting or coating applied – this was known but had not been previously addressed;
- ◆ Despite the proactive briefing held, there was no requirement to conduct rounds and verify that all weathertight openings had been closed and secured;
- ◆ No-one exercised the **STOP WORK POLICY**;

Our member suggested the following particular lessons:

- ◆ **Remain proactive** – particularly in unusual operational or working conditions;
- ◆ **Go beyond checklists** – don't be afraid to go above and beyond these requirements to further enhance safety;
- ◆ **Safety briefing apply to ALL PERSONNEL** – regardless of rank or role;
- ◆ **Follow ALL warning signs** – if a door says "KEEP CLOSED AT SEA", then keep it closed at sea regardless of previous practice;



- ◆ Particular care should be taken with maintaining watertight integrity and ensuring that all watertight doors remain closed at all times when at sea. Always **STOP WORK** in unsafe conditions. If you encounter unsafe conditions, then **STOP THE JOB** and ensure all hazards are corrected before allowing anyone else to continue.

Members may wish to refer to [IMCA Safety Flash 20/15](#) the focus of which is slips, trips and falls.

#### 4 False or Scam Emails - Warning

IMCA seeks to bring to the attention of members the increased risk to businesses of email fraud. Two events in 2015 serve to highlight this risk. Both of them were attempts to defraud business organisations using email. One of them, sadly, was successful.

##### Incident 1

Information has been brought to IMCA's attention regarding a scam or fraud attempt made, whereby an "internal" email was received which purported to be from a Chief Executive. The email appeared to come from the correct and *bona fide* email address; it was personally addressed to the correct person dealing with such matters, and it contained clear instructions, again ostensibly from the CEO, to pass certain confidential details to certain private email addresses.

It was a fake "phishing" email – an inappropriate attempt, by persons unknown, to extract information. Members should be aware of the risks of email theft and scamming of this sort and should be alert to the possibility that emails that appear to be from legitimate email addresses may prove to be fake.

As with bank phishing scam emails, close attention should be paid to the details of wording, spelling, grammar and context, which often provide clues to the fact that an email is fake. In the above example, the suggested use of private email addresses for professional purposes was the clue to the email being a scam. In this case, the attempt to defraud was not successful.

Members may have been aware of recent news items about "CEO scam", where ostensibly legitimate instructions, often for transfer of funds, appear to arrive from the CEO of an organisation.

Lessons learnt:

Members should remain vigilant, liaise with their own IT departments and to continue to work to ensure the safety and security of their internal and external email communications.

To reiterate, close attention should be paid to the following:

- ◆ Changes to bank account numbers, addresses of legal entities or any other significant information;

##### Incident 2

A member has reported an attempt in which a company was defrauded of several hundred thousand dollars through email fraud. The incident occurred when the company was seeking to legitimately purchase reconditioned equipment from a vendor in a different part of the world.

This was a deliberate attempt to defraud lasting several weeks, involving more than one email. By using a subtle and difficult to notice change to email addresses, the fraudster was able to persuade employees of the company to transfer funds into a bank account other than that specified by the true vendor of the equipment.

Whilst the incident was reported to the local police, to the banks involved and to Interpol, the international nature of the fraud meant that the funds could not be recovered.

- ◆ Details of wording, spelling, grammar and context – these can often provide clues to the fact that an email is fake;
- ◆ The use of private or personal email addresses in the business world. This can sometimes – but not always – be a clue;
- ◆ Subtle changes to the email address or to the servers or internet domains from which they are sent;
- ◆ Links provided which may inappropriately divert the user to websites other than those intended for business use.

It is of particular importance to take care when there is unfamiliarity with terminology or when administration of this sort is being carried out by persons whose first language may not be the same language as that in which the business communication is taking place.

IMCA has a Security workgroup that is a workgroup of the Safety, Environment & Legislation (SEL) Core Committee. Though initially created to address piracy and the International Ship & Port Facility Security (ISPS) code, part of its work today is to address “cyber security” issues of this sort. Further information can be found from IMCA technical adviser Chris Baldwin [chris.baldwin@imca-int.com](mailto:chris.baldwin@imca-int.com)

More information on the CEO email scam can be found [here](#).