

IMCA Safety Flash 05/14

April 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 Decompression Illness (DCI) Incident during Routine Decompression of Divers from Saturation

A member has reported a decompression illness incident during a routine and planned decompression of divers in saturation chambers from a storage depth of -160 metres sea water (msw). During the course of the decompression one of the divers complained of pain in his pelvis and knees. The pressure in the saturation chamber at the time of the incident was -93 msw.

Following this report a Diver Medical Technician (DMT) inside the chamber carried out a physical and neurological examination of the affected diver. This found that, aside from the presence of pain in both knees and hips, the condition of the diver appeared essentially normal. On a scale of one to ten the pain experienced by the diver was described as a two. An initial diagnosis of Type I (mild) decompression illness was made.

In accordance with standard diving procedures the diver was recompressed to a depth where the pain disappeared (-128 msw). He was then provided with a suitable therapeutic gas treatment mixture through the chamber built-in breathing system (BIBS). On advice from the contracted diving specialist medical adviser the diver (and his two colleagues) were then stabilised and observed at -128 metres for a period of twelve hours. Thereafter normal decompression was recommenced. No re-occurrence of symptoms was experienced by the diver and the team reached surface without further mishap. Following a standard bend watch period all the divers were released to return to their homes.

An investigation team considered if any of the following physiological and environmental factors known to influence DCI had caused or contributed to the incident:

- ◆ dehydration;
- ◆ age;
- ◆ physical fitness/obesity;
- ◆ meals;
- ◆ exertion;
- ◆ temperature;
- ◆ previous history of DCI;
- ◆ multiple dives;
- ◆ nature of dive profiles, including upwards and downwards excursions;
- ◆ omitted decompression;
- ◆ drugs and alcohol;
- ◆ sleep pattern and conditions;
- ◆ emotional state / stress.

In addition the investigation team examined the competence and compliance to process of key personnel.

The investigators concluded that the incident could only be attributed to the individual diver's physiology. However, the following findings were identified:

- ◆ The diver's level of hydration at the time of the incident could not be categorically confirmed;
- ◆ Non-approved personal vitamin/protein supplements were taken into saturation;

- ◆ No deviations from approved procedure were observed;
- ◆ Competence levels were high;
- ◆ The diving contractor maintained a very good diving safety culture.

The following recommendations were made:

- ◆ Health check, water/fluid intake and urine colour questions should be asked on a daily basis, and the results should be recorded;
- ◆ Bag searches should be conducted prior to entering saturation to ensure only controlled items can be taken into saturation;
- ◆ Personal vitamin/protein supplements need to be declared prior to entering saturation.

Members may wish to look at the following similar incident:

- ◆ [IMCA SF 04/04](#) – Incident 3 Late Onset of Decompression Illness (DCI)

2 RWC: Injury to Foot Caused By Moving Roller

A member has reported an incident in which a person sustained an injury to his right foot caused by a moving roller in pipe-handling equipment. The injury happened when a crewman took a window of opportunity during a short repair period to paint pipe numbers on the ends of the pipes. The operator of the roller did not ensure that the area was clear moving the roller, and the crewman was caught by the roller and sustained a crush injury to the right foot.



Figure: (L) showing position of injured person's right foot



Figure: (R) Showing injured person's position at time of incident

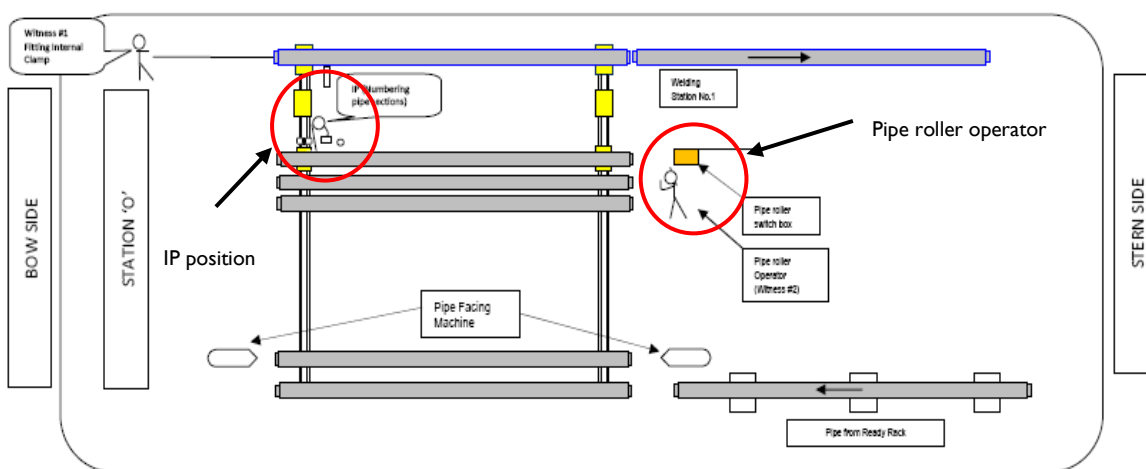


Figure: (Above) diagram of incident site

Our member's investigation revealed the following:

- ◆ Operator operating the roller machines failed to ensure the ramp way/area was clear before activating the pipe transfer machines;
- ◆ There was a lack of supervision from the work supervisor;
- ◆ The operator of the roller machine was not able to communicate effectively with other workers.

Our member took the following corrective actions:

- ◆ The task of numbering of pipes was transferred to another, safer, location;
- ◆ An alarm warning system was installed to alert the operator of the presence of personnel in the path of the rollers;
- ◆ Signage was installed warning personnel that they were 'in the line of fire' in this location.

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

- ◆ [IMCA SF 08/06](#) – Incident 2 *Serious injury during pipestalk rolling operation*;
- ◆ [IMCA SF 10/02](#) – Incident 1 *Pipe stacking fatality*.

3 Snubber Failure

A member has reported the discovery of a failure to a snubber on an ROV launch and recovery system. This was discovered during maintenance and annual load test of the ROV. When the tether management system (TMS) was separated from the ROV to facilitate maintenance work, this highlighted that the snubber did not appear to be sitting level. Upon investigation, it was found that the starboard snubber guide runner had detached from the snubber. Whilst this did not prevent the snubber function from operating, it did result in the snubber not maintaining its level when operating. On closer inspection, the port side snubber guide runner was found to have cracked welds also. The failed items were not associated with the load path and therefore there was no risk of dropped objects.



Figure: (Above) showing cracked welds

The incident emphasises the need for thorough inspections during routine maintenance tasks in order to capture any damage, fatigue or abnormalities.

Our member took the following corrective actions:

- ◆ Cleaned and prepared area for repair and welding;
- ◆ Close visual inspection of the other ROV onboard the vessel. No cracked welds were observed, but the welding was reinforced as a contingency;

- ◆ Added a six monthly visual inspection of the snubber assembly to company preventative maintenance system.

Members may wish to review the following similar incidents (key words: *weld, failure*):

- ◆ [IMCA SF 08/07](#) – Incident 1 *Failure of Welding on Hyperbaric Rescue Chamber Medical Lock Door Assembly*;
- ◆ [IMCA SF 09/13](#) – Incident 1 *High Potential Near Miss: Dropped ROV/TMS Leading to Equipment Damage*.

4 EPIRB Precautionary Bulletin

It has come to IMCA's attention that there are a very small number of instances where certain EPIRB (Emergency Position Indicating Radio Beacons) have failed a self-test procedure. A consequence of such failure may mean the EPIRB will not operate in an emergency situation.

The affected devices are designed and manufactured by Standard Communications Pty Ltd and they are marketed globally under the GME brand.

Further information can be found from www.sarsat.noaa.gov/epirb%20safety%20alert.pdf

5 Overloading Leads to Catastrophic Failure of Crane Boom

The United States Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) has published the following safety flash regarding an incident in which a crane boom collapsed after being massively overloaded. Investigation revealed a number of causes, one being that an incorrect load chart was used at the time of the incident. There were no injuries.

The safety flash can be downloaded from www.bsee.gov/uploadedFiles/BSEE/Regulations/Safety_Alerts/SA-308.pdf

Members may wish to look at the following similar incidents (key words: *crane, boom, failure, overload*):

- ◆ [IMCA SF 03/98](#) – Incident 3 *Fatal accident involving a boom crane*;
- ◆ [IMCA SF 07/01](#) – Incident 2 *Dangerous Occurrence involving a Mobile Crane*.

6 Misuse of Beam Clamps as an Electrical Earth

The United States Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) has published the following safety alert regarding the use of beam clamps on many Outer Continental Shelf (OCS) facilities. It is determined that the use of beam clamps as electrical grounding conductors could potentially cause fires and present electrical hazards to personnel.

Many offshore construction support vessel (OCSV) facilities are utilizing beam clamps as current carrying external ground to meet the requirements in the American Petroleum Institute (API) RP 14F. The beam clamps are approved by the manufacturer to mount and support conduit and cable from structural beams, but NOT as temporary or permanent external equipment electrical earthing conductors.

Further information can be downloaded from www.bsee.gov/uploadedFiles/BSEE/Regulations/Safety_Alerts/SA-309.pdf