

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 Dropped Object Risk

A member has reported finding the 'job-made' lifting hook shown below, rough cut from half inch steel plate, during a routine safety check at a vendor's shipyard. The lifting hook was lying near a pad eye on a lifting frame for a piece of equipment about the size of an office desk and estimated to weigh 500-750kg. The company concerned confiscated the hook and intend using it for safety training of new staff, as an example of unsafe practice.



The lessons learned by the company concerned were:

- ◆ Use only certified lifting gear in good condition;
- ◆ Routine inspections of all lifting gear, such as wire rope slings, nylon slings, shackles, hooks, etc. for good condition and proper certification is a necessary practice;
- ◆ All lifting frames for equipment should be fitted with properly certified and suitably rated lifting gear when put in service by the rigging supervisor.

2 Negative Pressure Injury to a Diver

A member has reported this recent incident, concerning negative pressure when breaking containment in subsea pipework.

During diving operations on a subsea manifold in 140 msw, work was being undertaken to install additional four inch pipe spools in a well bay, to enable connection of a well to the manifold. The spools had been transported to the vessel with wooden blind protectors on the flange faces to prevent impact damage. These did not have pre-drilled vent holes and were to be replaced onboard the vessel with standard donut protectors. However, two assemblies were apparently overlooked and were subsequently deployed subsea with the unvented wooden blinds still in place.

At the time of the incident, the diver had manoeuvred the spool piece close to its final position, removed the tie wrap and then attempted to lever the wooden blind off the flange face using his knife. It appears that the blind then imploded, due to the build-up of negative pressure, pulling the diver's hand through the blind and into the spool, causing a fracture to the arm and dislocation of the thumb, bruising and swelling.

Initial investigations indicate that a number of the existing checks and controls in the company procedures and safe working practices failed because they had not been adhered to:

- ◆ The actions documented in the project risk assessment to check blinds for vent holes were not systematically closed out;
- ◆ The assembly was overboarded with the wooden blind in place and this went unnoticed;
- ◆ The diver should not have attempted to lever the blind off the flange face; nor should he have placed himself in front of the flange.

While this safety flash is concerned with a negative pressure incident, it is important to recognise the seriousness of any incident involving uncontrolled pressure (positive or negative) when breaking containment in subsea pipework. These incidents inevitably have a high potential for injury and have, in the past, led to diver fatalities.

3 Serious Incident while Checking Man-Overboard and Buoy Smoke Marker

A member has informed us of a serious incident that occurred when a person was injured while checking the service date on one of the man-overboard and buoy smoke marker units.

The injured person placed his right hand on top of the smoke marker as located on the vessel's railings and, as he bent over the device, it ignited and the canister burst. The injured person was struck in the chest, face and hand with burning powder and was thrown backwards off his feet by the force of the impact.

The injuries sustained were: bruised right hand and small lacerations on the right hand, small burn on the left cheek, small burn on the right hand and slight bruising to the cheek. The injured person was wearing normal personal protective equipment (PPE), which included flame retardant coveralls and safety glasses, which significantly contributed to protecting him from more serious injury.

The company involved has carried out the following actions as a result of the incident: the manufacturer has been informed and has reviewed the systems employed in the device and cannot determine the cause. The manufacturer is confident that the systems incorporate stringent tests and standards to such devices that they stated that they consider external influences contributed to the incident. These influences have not been determined and dialogue with the manufacturer continues.

The company involved has instructed its personnel that if anyone needs to check the service details of such equipment, they should not lean over or lean on the equipment. Full PPE should be worn, which includes full face visor over safety glasses.

4 Incident as a Result of Failure of a Bollard

A member has reported the following incident. A cargo barge loaded with 525 tons was moored to a pipelay barge, when one of the bollards on the cargo barge broke and was pulled away on the pipelay barge's deck by the mooring rope. The bollard first hit the lay barge hand rail and then bounced on the deck, where the rigging team leader was working on another operation, approximately 10 m from the cargo barge. The bollard broke his helmet and caused serious injury to the right side of the front of his head.

The weather conditions at the time were: wind 34 knots, waves 1.5m. Propylene rope of 64 mm diameter, maximum tensile strength (MTS) 46 tons, was being used on the bollard. The rope did not break, but the 8" diameter 400 mm high bollard broke close to the weld on the deck at ~15 mm.

The following corrective actions have been taken to avoid recurrence of the incident:

- ◆ Reassess the scenario of mooring cargo barge to the lay barge when the weather conditions are bad. No vessel or cargo barges should be moored alongside the lay barge when wind speeds exceed 25 knots;
- ◆ Physical inspection of bollards. On investigation, the steel quality of the bollard in the weld area was questioned. A qualified third party was to inspect the other bollards for evidence of fatigue and steel hardening.

5 Failure of Cable Socks (Chinese Fingers) on Subsea Rigging

We have been passed information on the following incident. A 2" diameter pipeline dewatering hose had been deployed to the seabed, supported at 20 m intervals by cable socks (Chinese fingers) on a winch wire. The water depth was 380 m.

After a period of several hours it was found that most of the cable socks had moved down the winch wire, causing the full weight of the hose to be taken on the cable socks above, which subsequently broke. The weight of the hose was then transferred to the slack section of hose on the deck of the deployment vessel. The dewatering operation was aborted and a controlled abandonment of the hose and support rigging onto the vessel was carried out.

The investigation found that the cable socks were not suitable for this duty:

- ◆ Their design load was much higher than their working load and they did not develop an adequate grip on the winch wire;
- ◆ They were constantly tensioned due to swell heave on the hose and were, therefore, able to relax their bite on the wire;
- ◆ The use of cable socks on a winch wire (a very hard surface in comparison to a cable's outer sheath) was not appropriate.

The investigation also identified some important system causes into the failure:

- ◆ Although a simulated test on a cable sock was carried out on the deck of the vessel, it wasn't representational of the cyclic loading conditions subsea;
- ◆ The risk assessment process, although extensive, had not addressed this use of cable socks. This rigging feature was added at a later date and was not adequately risk assessed.

Subsequently, an alternative method of rigging was developed, employing clamps onto the support wire and the dewatering operation was successfully completed.

6 Medical Device Recall – Defibrillator

We have been passed a recall notice, copied below, put out by Laerdal Medical Ltd regarding its Heartstart 3000 and 3000QR defibrillators.

URGENT: MEDICAL DEVICE RECALL

AFFECTED PRODUCT	Product: Laerdal Heartstart 3000 and Heartstart 3000QR Semi-Automatic Defibrillator Manufactured by: Laerdal Medical As, PO Box 377, N-4001 Stavanger, Norway
REASON FOR RECALL	Affected Laerdal Heartstart 3000 and Heartstart 3000QR Defibrillator may cease operation and display <i>Service Mandatory NO 9 Transistor Voltage</i> during charging period due to failure of a component on the High Voltage Board. The instance occurs when the unit is subjected to the combination of high humidity and high temperature. There is no early indication or warning that the fault has or will occur before the charging for shock delivery. Laerdal Medical AS have confirmed 6 such failures among approximately 1400 devices shipped since 1998. All these failures have been in one country, namely Japan, during conditions of both high humidity and high temperature: no such failure has been reported from any other country. Nevertheless, although this number of failures is low and restricted to one country, we are taking this action because there is a potential for additional failures.
HAZARD INVOLVED	<ul style="list-style-type: none">• The clinician would be unable to get the device to function• The patient would be prevented from receiving therapy
HOW TO IDENTIFY	<ul style="list-style-type: none">• Laerdal Heartstart 3000 and Heartstart 3000QR• Serial Numbers: 19230-21718
REQUIRED ACTION	<ul style="list-style-type: none">• You will be receiving a call from a Laerdal Medical representative within the next 4 to 6 weeks to schedule a repair. We have identified the correction and are in the process of providing new components.• If an affected unit is likely to be used during conditions of both high humidity and high temperature, we recommend the affected unit is tested in similar conditions by giving a series of three shocks into a tester or other appropriate device.• If you have questions about this recall notice, please call your local Laerdal Medical company or Laerdal Medical dealer.