

IMCA Safety Flash 30/20

October 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.

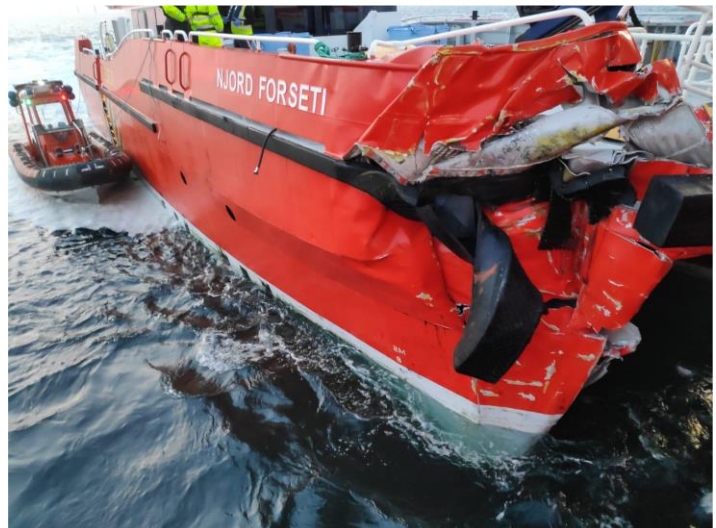
A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at www.imca-int.com/links. Additional links should be 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 Windfarm Support Vessel *Njord Forseti* hit wind turbine tower – Jersey Maritime Administration

What happened?

The Jersey Maritime Administration has published a report into its investigation of the causes of an allision between a windfarm support vessel and a windfarm tower in the Southern North Sea on 23 April 2020. The report can be found on the web [here](#).



What went wrong?

Shortly after 1800 local time, the vessel was released from duties on a windfarm and at 1811 departed for the return passage to port. Aboard the vessel were three crew members, and one windfarm technician who was being transferred ashore. Sea conditions were calm with light winds and low swell. Weather was fair with good visibility.

Whilst transiting between windfarms at approximately 20 knots, *Njord Forseti* hit a turbine tower. The impact resulted in serious damage to the vessel. Two crew members were evacuated by air to hospital, and the third was required to have a subsequent medical examination. Immediate assistance was provided by a nearby offshore construction vessel. The *Njord Forseti* returned to port under her own power with temporary crew members provided by a sister vessel.

Findings

The Jersey Maritime Administration report drew the following conclusions:

- ♦ For an indeterminate period between departure from the windfarm until the incident occurred, the vessel crew were not keeping a proper look out as required by Rule 5 of the International Regulations for Preventing Collisions at Sea (COLREGS);
- ♦ The primary reason why a proper lookout was not being kept was because the Master was distracted from his primary role;
- ♦ It is possible that the Master was distracted from his primary role as he may have been adjusting of settings on the VHF radio which is mounted immediately to starboard of his seat. However, this has not been positively determined and distractions caused by other means cannot be ruled out;

- ◆ At the time of the incident the vessel was not following the established passage plan from the windfarm to port, but was undertaking an alternative route. Whilst this route was safe, ineffective monitoring of the vessels track, position and proximity to navigational hazards contributed to the incident.

Recommendations

The Jersey Maritime Administration report made the following recommendations:

- ◆ There should be renewed emphasis on the importance of compliance with COLREGS, and particularly Rule 5;
- ◆ Identify tasks, equipment and functions that may give rise to possible distractions for the person having the conduct of a vessel whilst underway, and implement measures to ensure that the safe conduct of the vessel is not impaired by these or other factors;
- ◆ Review the methods by which Masters monitor the safe progress of a vessel's passage and make changes as necessary, including where necessary, additional training;
- ◆ Under the Workboat Code, other than the need for at least one person to ensure the safe conduct of the vessel whilst underway, there is no specified minimum number of (deck) watchkeepers required. Operations should be assessed and policies updated where necessary to **ensure that the wheelhouse is always sufficiently and appropriately manned**. Where appropriate, specific guidance should be provided to the Master in exercising his / her judgement in setting the wheelhouse manning level during the course of a voyage (IMCA emphasis);
- ◆ Develop principles and techniques of crew resource management (CRM) to ensure that whilst underway the conduct of the vessel is carried out in the most effective and efficient means possible.

Members may wish to refer to

- ◆ [Seamanship: Vessel Collision With Fishing Boat](#)
- ◆ [Small Workboats used on offshore wind farms: combined report on *Windcat 9* and *Island Panther* incidents](#)
- ◆ [Collision Between Crew Boat And Anchored Barge](#)

2 Firefighting (FiFi) Tank Outlet Blockage

What happened?

A member reports a blockage of the outlet of a dive chamber fire fighting water tank, caused by the failure of a floating plug.

On this particular DSV the saturation diving chamber complex has six firefighting water tanks. Each tank has a water outlet at the bottom with a floating plug that blocks the outlet if all the water drains from the tank. See line drawing of the bottom of one of the FiFi tanks.

The floating plug assembly consists of a buoyant float and a nylon conical endcap plug with recessed O-ring, which sinks in water. The floating plug assembly is highlighted red in the line drawing. The float is connected to the endcap plug with a threaded rod through the centre, as shown on Figure 3. The floating plug is retained in the tank by a guide tube.

What were the causes?

The endcap plug unscrewed itself over time and eventually detached from the float. Because the endcap plug is heavier than water it sank to the bottom of the guide tube and blocked the tank outlet.



Figure 1 - Endcap Plug detached from float and blocked tank

That would result in no water being supplied from the tank, and therefore it could have **life-threatening repercussions in the event of an emergency**. In normal circumstances it would only be detected during routine 6 monthly maintenance. (IMCA emphasis).

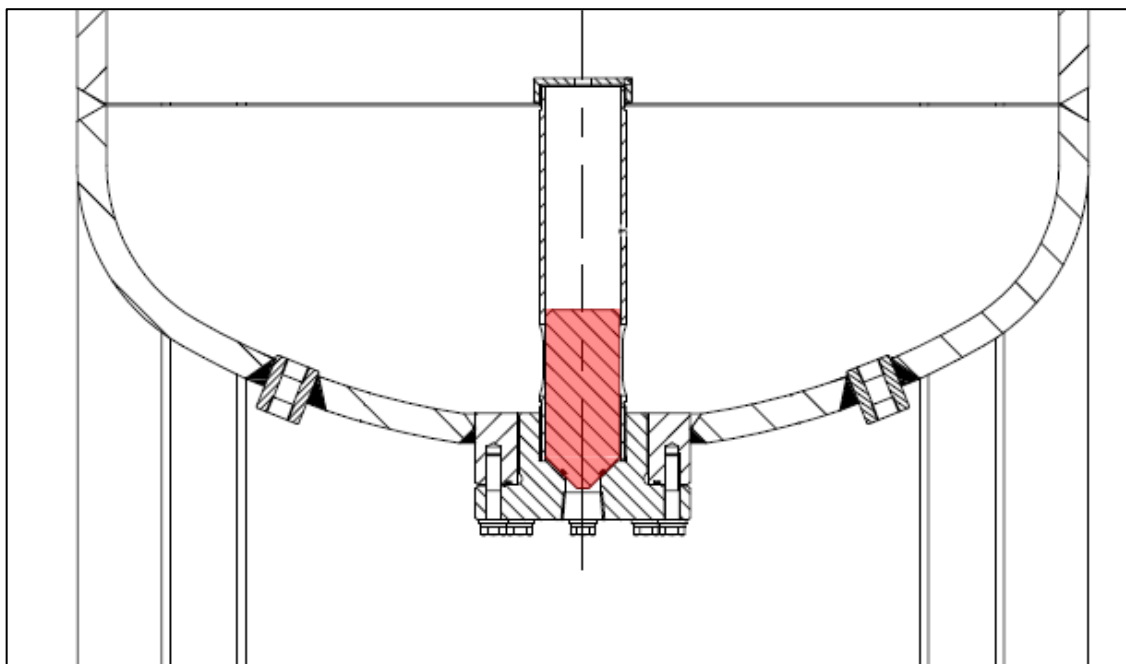


Figure 2 Drawing showing bottom of FiFi tank



Figure 3 – Floating Plug with threaded rod position shown in red



Figure 4 – Blocked Guide Tube Float

Actions taken? lessons learned?

The floating plug assemblies were removed from all 6 x FiFi tanks on the vessel and the endcap plugs were permanently bonded to the floats to prevent this failure from happening again.

Each DSV should review the water storage tanks in their system for any similar failure mechanisms. This failure was identified in a dive system FiFi tank, it could equally occur in other water tanks in any vessel.

3 Two deaths of military divers

What happened?

Incident 1 - UK

The UK Health and Safety Executive has issued the Ministry of Defence (MoD) with a “Crown Censure” after a military diver died during training. The UK HSE press release, dated 2 September 2020, is found [here](#).

In March 2018, a diver being trained was brought back to surface after he stopped responding to lifeline signals while he was underwater. He was sadly pronounced dead after CPR was performed. He had been on a training course at the National Diving and Activity Centre in Chepstow. The diver and his dive buddy were tasked with attaching a distance line from the base of a shot line to the underwater wreck of a helicopter at a depth of 27m. When he was recovered his cylinders were found to be empty.

The UK HSE served two Crown Improvement Notices relating to the failure to train all army divers how to undertake air endurance calculations and to assess the risk of a diver running out of air.

Julian Tuvey, a HSE inspector who specialises in diving, said: *“This was a tragedy for all concerned however just like any other employer, the MoD has a responsibility to reduce dangers to its personnel, as far as they properly can. The scenario of a diver running out of air is a very real risk that needs to be managed.”*

The Ministry of Defence accepted the Crown Censure and hence admitted breaching its duty under Section 2(1) of the Health and Safety at Work etc. Act 1974 in that they failed to ensure, so far as was reasonably practicable, the health, safety and welfare at work of all its employees, in relation to the risks associated with diving exercises.

Incident 2 – New Zealand

The New Zealand Defence Force was sentenced at the Auckland District Court for health and safety failings following the death of a trainee diver. In March 2019 a group of trainees was taking part in an 18 week advanced diving course. Following a full day of dive exercises, the trainees were undertaking a night dive when one of the trainees was identified as in trouble and pulled unresponsive from the water. The trainee later died as a result of a brain injury due to oxygen deprivation.

Investigation found the exercise went against the Defence Force’s own training standards. It also found trainees were covertly switching their breathing apparatus from nitrox to oxygen mode, which ran the risk of leading to oxygen deprivation. This switching activity was known between trainees but not to their supervisors in the Defence Force.

Further information can be found in the press release here: <https://worksafe.govt.nz/about-us/news-and-media/defence-force-sentenced-over-diver-fatality/>

IMCA notes: These incidents reinforces IMCA’s published position that self-contained underwater breathing apparatus (SCUBA) has inherent limitations and is not a suitable technique for work covered by the *IMCA International Code of Practice for Offshore Diving* (IMCA D 014).

4 UK HSE: employee foot crushed by forklift at maritime freight logistics company

Applicable
Life Saving
Rule:



What happened?

The UK Health and Safety Executive has prosecuted a maritime freight and logistics company after a worker suffered multiple bone fractures to his foot when a forklift truck was driven over it. The worker was injured when a 15 tonne forklift truck drove over his foot during unloading and stacking of steel coils in a shed at premises in South Wales.

What were the causes? What went wrong?

HSE investigation found that there was inadequate control of workplace transport risks. The company had also failed to conduct a suitable and sufficient assessment of controls for workplace transport.

The HSE inspector said *“Failure to ensure that workplace transport is managed safely is a serious breach of fundamental health and safety duties.”*

See the press release [here](#).

Members may wish to refer to

- ◆ [IMCA SEL 032 Guidance on safety in shipyards](#)
- ◆ [Crewman Struck And Injured By Forklift Truck](#)
- ◆ [Two Yard-Based Fatal Road Traffic Accidents \(UK HSE\)](#)
- ◆ [Fatal Traffic Accident On Board A Large Vessel](#)



5 MSF: Grub screws and perished valves – trouble with methanol transfer

What happened?

The Marine Safety Forum (MSF) has published [Safety Alert 20-06](#) relating to problems with methanol transfer caused by problems with grub screws and perished valves. A vessel was advised by an installation of a discrepancy in the quantity of methanol received compared to what was expected.

Investigation revealed that these discrepancies whereby a quantity of methanol was unaccounted for, had been occurring for years. Unknown to the crew, during the transfer of methanol to the installations, a quantity of the methanol was also being discharged to sea via the system flushing line. This was possible as a spool piece was incorrectly left in place and two valves either side of the spool piece were passing fluid.

What were the causes? What went wrong?

One rubber valve was found to be perished and the other Teflon valve was found with signs of corrosion. On closer inspection it was found that a grub screw, for limiting the movement of the gears was too far in and was restricting the range of movement. This resulted in the Teflon valve not closing fully and had been that way most likely from newbuild.

The MSF's member identified the following root causes:

- ◆ Insufficient knowledge of the methanol cargo system;
- ◆ Insufficient Planned maintenance;
- ◆ Insufficient transfer procedures in place;
- ◆ Poor communication.

Actions and recommendations

- ◆ Proper and recorded confirmation from the receiving installation that they have received the correct quantity of cargo;

- ◆ Review cargo systems or any appropriate liquid transfer systems to ensure that any set-up designed to avoid discharge to sea is correctly in place;
- ◆ Update planned maintenance system.

Members may wish to refer to

- ◆ *“The Carriage of Methanol in Bulk Onboard Offshore Vessels”* recently published in conjunction with Oil Companies International Marine Forum: <https://www.marinesafetyforum.org/guideline/the-carriage-of-methanol-in-bulk-onboard-offshore-vessels/>
- ◆ [High Potential dropped object near-miss: antenna fell to deck](#) [immediate cause: two grub screws were found to have come loose.]
- ◆ [Failure Of Chamber Door Hydraulic Actuator](#) [immediate cause: All the seals inside the actuator were found to be completely perished inside.]