

IMCA Safety Flash 15/15

October 2015

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

Focus: incidents occurring lifting operations

I Dropped Object Fatalities: Workers Struck by Fallen Loads During Lifting Operations

The Workplace Safety & Health Council of Singapore (WSH) has published two recent safety alerts regarding dropped object fatal incidents where workers have been struck and killed by falling loads during lifting operations.

Incident 1

Four workers were on a barge, coiling the hoses (about 30m long) of a hydraulic power pack as the hydraulic power pack was being lifted by a crane. During the lifting operation, the drip tray at the bottom of the power pack suddenly became dislodged and struck the workers as it fell onto the barge. All four workers were sent to the hospital. One of the workers succumbed to his injuries and died later the same day.

Click [here](#) for further details.

Incident 2

A crawler crane was lifting bundles of reinforcement bar links (rebar links) from a trailer bed to a six-storey high work area. During lifting, one bundle detached from the entire load and hit a worker working on the trailer bed. He was subsequently pronounced dead on scene by paramedics.

Click [here](#) for further details.

Though only one of these incidents occurred offshore, they form a timely and tragic reminder to crews that **no one should be directly under the load during lifting operations**. Members may wish to review [IMCA SEL 019 – Guidelines for lifting operations](#).

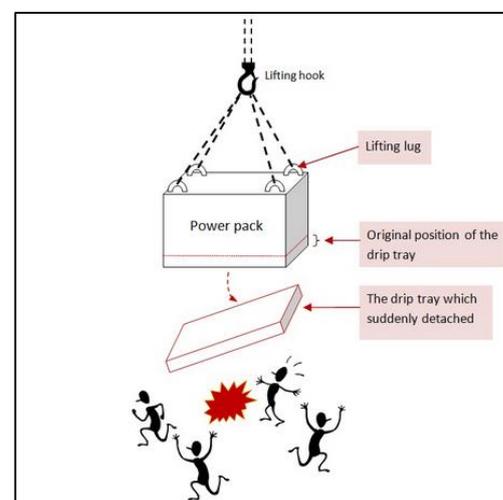
IMCA also has a video or DVD, [IMCA SEL 030 Rev. 1 – Safe lifting](#). It can be viewed online or downloaded, and DVD copies of this safety video, in ten languages, are available from the secretariat for a small fee.

2 Incidents Involving Poor Crane Operations

A member has reported a number of recent incidents resulting from poor crane operations on the part of the crews of platforms, barges and other installations operated by third parties, clients or operators.

A few recent examples are:

- ◆ Vessel bulwark damaged by a crane hook – installation signalman not paying attention;
- ◆ Vessel attempting to abort crane operations and withdraw from installation due to weather deterioration – installation crane driver lowered cargo container despite instructions to cease, resulting in asset damage and spill of methanol cargo (this incident is covered in detail in **incident 3** below);



- ◆ Unexplained delays from an installation crane in releasing mooring ropes when vessel attempting to leave due to weather deterioration – deck team exposed to hazard as mooring rope parted;
- ◆ Backload cargo found to be incorrectly slung when landed on deck – near miss from dropped objects (3t cargo unit);
- ◆ Crash rail damaged due to poor crane driving and ignoring deck crew instructions;
- ◆ Crane driver ignored directions, resulting in cargo catching vessel's dry cargo line and rupturing pipe;
- ◆ During backload with the cargo container above deck, the container door opened – door had not been secured on-board installation;
- ◆ Crane driver ignored direct instructions on where to place a cargo unit, and subsequently lowered the unit onto a rack of gas cylinders which fell over;
- ◆ During bulk cargo operations close to a fixed platform, the crane driver simply left his cabin with no notification or warning to deck crew. The response from the support vessel was to withdraw from the safety zone;
- ◆ Tubular cargo package was loaded from shore – when landed on deck, it was noticed that the cargo slings were twisted around each other;
- ◆ Crane driver ignored directions and swung a load into the remote control stand for the vessel's crane – expensive cost of repairs and vessel crane inoperable for several days.

Example near miss: crew member almost struck by a crane hook

A crew member was almost struck by a swinging crane hook. The incident occurred during cargo operations with an accommodation barge. The barge's crane operator was attempting to lower the hook of the crane to pick up some cargo from the deck of a support vessel. Whilst lowering the crane hook, the crane operator lost control of the operation and the crane hook began to swing in an uncontrolled manner. During this uncontrolled movement the crane hook almost struck a crew member who was on deck holding a tag line attached to the crane hook, in an effort to try and minimise its movement.

What went wrong?

- ◆ The crane operator on the accommodation barge was being complacent and rushing the operation; this contributed to the uncontrolled manner in which the crane hook was swinging;
- ◆ Although he acted with good intentions, the crew member holding the tag line put himself in harm's way by trying to control the movement of the crane hook by using the tag line;
- ◆ There were failures to enforce both the **STOP WORK POLICY** and the **CLEAR DECK POLICY** during the operation.

Our member took the following actions:

- ◆ On noticing the swinging of the crane hook the Master instructed the deck crew to move to a safe area until the crane hook was stabilized;
- ◆ The Master contacted the accommodation barge crane operator and instructed him to take his time and be more diligent during cargo operations.

Key Lessons Learnt:

- ◆ A **CLEAR DECK POLICY** should be effectively complied before all lifting operations;
- ◆ All employees are empowered to exercise the **STOP WORK POLICY** if unsafe conditions arise;
- ◆ Where taglines are to be used, they should allow crew members to stand clear of hazards. If taglines are not effective, crew members should wait until hooks/cargo are grounded or completely heaved away from the work site, to bring them under control;
- ◆ Assets and equipment can always be replaced but someone's life cannot; eliminate risk by not putting yourself in harm's way.

Members are referred to IMCA SEL 019 – *Guidelines on lifting operations*;

Members may wish to refer to the following incidents (search words: *crane operator*);

- ◆ **IMCA SF 07/11** – Incident I *Reliance on crane limits caused crane damage and dropped objects*;
- ◆ **IMCA SF 01/12** – Incident I *Near miss: Crane hook block dropped to deck*.

3 Spillage of Methanol during Cargo Operations

A member has reported an incident in which the valve on a cargo tank was damaged, causing a leak of approximately 1000 litres of methanol. The incident occurred during cargo operations; an FPSO crane operator was lowering an empty methanol tank onto the deck of a support vessel. On lowering, the empty tank struck another full tank of methanol already on deck, causing damage to a valve, which caused the spill.

The Master of the support vessel immediately instructed the FPSO to remove the leaking tank and it was rigged for hoisting by the FPSO crane. Despite this request, the crane operator failed to lift off the leaking container and simply lowered it back to the deck. The crew of the support vessel responded immediately by deploying fire hoses and continuously dousing the deck area and leaking container, to disperse the spilt cargo.



Damaged leaking valve of the methanol tank after the incident

Our member noted the following:

- ◆ The crane operator on the FPSO failed to follow instructions given by the deck crew and Master at a critical moment;
- ◆ Existing procedures were not properly followed:
 - The support vessel's DGC (Dangerous Goods Certificate) did not allow for methanol cargo to be carried; this was not reviewed by vessel staff prior to cargo operations
 - There had not been a full review of the cargo's MSDS (Material Safety Data Sheet) before operations started;
- ◆ Had the officers on the support vessel correctly reviewed the necessary documents, they would have been able to proactively exercise the **STOP WORK POLICY** and prevent this incident from occurring.

Our member's crew took the following actions:

- ◆ Immediate request for assistance from Master to FPSO to remove the leaking container;
- ◆ Following aborted cargo lift, Master immediately departed the Safety Zone to safe distance;
- ◆ Immediate and effective action from deck crew to flush the deck with water, douse the tank and subsequently also flush the tank out until all traces of methanol had dispersed.

Key Lessons Learnt:

- ◆ Dangerous Goods Certificates and Material Safety Data Sheets should be reviewed on-board before starting cargo operations, to ensure that full compliance is assured at all times. In case of doubt, Masters should check with appropriate company authority ashore;
- ◆ In this case despite the identified failings and high potential to become a serious incident, the entire crew responded swiftly and effectively to prevent the incident escalating, highlighting the importance of good drills, exercises and emergency response awareness.

Members may wish to refer to the following incidents (search words: *cargo, spill, leak, container*)

- ◆ **IMCA SF 11/08** – Incident. 2 *Incorrect lifting equipment used* [leading to spillage of 45l of ethylene glycol]
- ◆ **IMCA SF 09/15** – Incident. 1 *“Routine” task, non-routine result: batteries stored sideways leak battery acid.*

