IMCA Safety Flash 10/09

July 2009

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

1 Compact Fluorescent Lights Interfering with Communications Equipment

Members' attention is drawn to the attached announcement from the United States Coast Guard regarding possible radio frequency interference with vessel communications equipment which may arise from the use of compact fluorescent lights.

2 High Potential Near-Miss During Back Loading

A member has reported a high potential near miss incident which occurred during the back loading of a crane boom section from an offshore installation. Although no injuries were sustained as a result of this incident, two members of the deck crew working on the main deck at this time could potentially have been fatally injured.

A platform supply vessel (PSV) was alongside an offshore installation back loading a section of a crane boom. The crane boom section was first landed on deck with no clearance from adjacent tote tanks. However, it was necessary for deck crew to pass between these tote tanks and the crane boom section to access the crane hook for unlatching. Therefore, the crane operator was asked to move the back loaded crane boom section towards the port side of the main deck to create a safe gap to allow the crew members clear access.

The crane operator moved the back loaded crane boom section 1-2m to port and asked the bridge whether the new position was satisfactory. The bridge then confirmed with the deck crew that this new position was acceptable for them and advised the crane operator accordingly. The crane wire was then slackened and the crew members started to pass between the back loaded crane boom section and the nearby tote tanks to unlatch the crane hook.

Crane boom section

Crane boom section and tote tanks

The crane operator then started to heave and raised the back loaded crane boom section by about 1m to approximately waist height whilst personnel were between the crane boom section and the tote tanks. There was very high potential for the two crew members to be crushed between the crane boom section and the tote tanks. A warning was given on UHF radio to the crew members, who were already aware of the hazardous situation and were already moving to a safe position. The crane operator then lowered the crane boom section to deck. Weather conditions at the time of the incident were within acceptable working limits, consisting of wind speed 19 knots and significant wave height of between 1.5 and 2.0m.

Further investigation revealed the following:

- The crane operator lifted the back loaded crane boom section off the deck but failed to effectively communicate his intention to the vessel personnel;
- The crane operator assumed that the deck was clear of personnel.

The following recommendations were made:

- Crane operators should:
  - communicate their intentions to all relevant installation and vessel personnel before proceeding with any lifting operation
  - ensure that all communications are fully understood and verified by all relevant installation and vessel personnel before proceeding with any lifting operation
  - avoid making assumptions and verify that the deck area is clear of all personnel before proceeding with any lifting operation

Members are also referred to the following IMCA publications:

- IMCA SEL 019 – *Guidelines for lifting operations*
- IMCA SEL 020 – *Guidance on operational communications: Part 2 – Lifting operations.*

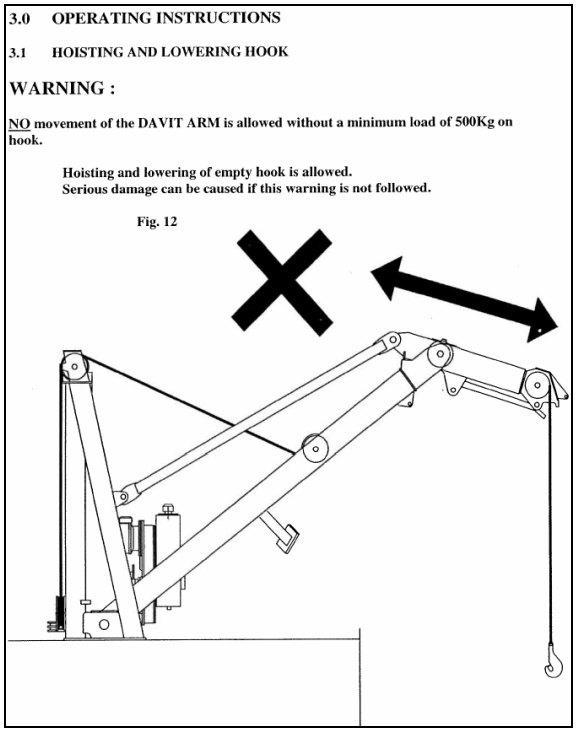
3 Lifeboat Davit Failure

Following a refit, sea trials were being conducted on a member's vessel in preparation for a return to operations. Defects were discovered on the davit tilt arms on both the forward and aft legs of two lifeboat davits. Both tilt plates on each leg of the aft davits were found to be cracked and distorted. It was evident after inspection that the initial defects were historical and may have existed for some time unnoticed. The defects may have been compounded by load tests conducted during the recent refit, during which the davits had been upgraded to allow new lifeboats to be installed.

Following further investigation with the close co-operation of the original equipment manufacturer it was concluded that the defects to the davit tilt arms were caused by the incorrect operation of the davits. The davit arms had previously been brought inboard of the vessel without the required minimum 500kg weights attached to the davit hooks. A clear warning that this should not take place is included in this specific manufacturer's documentation.

The following actions were recommended:

- The original equipment manufacturer's documentation for the davits should be consulted and appropriate operating instructions verified to ensure existing practices do not deviate from manufacturer-recommended launching practices, nor compromise the safety and operational integrity of the equipment;
- Davit launch/recovery operators should ensure that the davit is operated in accordance with the guidance provided by the original equipment manufacturer;
- Warning notices should be posted adjacent to each lifeboat operating station (see the diagram below);
- A thorough inspection of tilt plates should be included in monthly planned maintenance checks;
- Since the defects appear to have originated some time in the past, better quality control is required of bi-annual, annual and five-yearly inspections by specialist contractors to ensure that they are conducting the thorough examination of the equipment properly and to an appropriately high standard.



Suggested warning placard to be placed near lifeboat operating station

Worn davit tilt plate and parts

Worn davit tilt plate and parts

Lifeboat davit

4 Uncontrolled Movement of A-Frame

A member has reported an incident in which there was an uncontrolled movement of an A-frame mechanism. The uncontrolled movement of the A-frame luffing function occurred whilst personnel were working on top of the tether management system (TMS). The incident occurred during the re-attachment of a main lift umbilical bullet, following a mechanical re-termination. Winch and A-frame functions had been used to manoeuvre the end of the umbilical through the top of the TMS until the bullet reached the lift point swivel. A technician was on top of the TMS to guide the umbilical and then install the clevis pins and keeper plates. The technician was in full personal protective equipment (PPE) and also using a fall arrester fixed to the top of the A-frame.

It was at this point that the A-frame started to luff out. Because the winch did not pay out at the same time the umbilical came under tension and caused the TMS to lift approximately 1m off the deck. The technician standing by at the control console immediately hit the emergency stop, turning off the hydraulics to prevent any further movement. As soon as the TMS began to lift the technician on top managed to step off to safety on to the top of the winch frame. There were no injuries or damage to equipment.

TMS and A-frame

Subsequent investigation by the company revealed that a proportional valve driver, a part of the hydraulic control system, had failed and was giving a constant output signal to the luffing valve without any input command. This caused the luffing valve to operate in an uncontrolled way, which in turn caused the A-frame to move. The valve driver was replaced and full normal operation was restored.

The following points were noted:

- The events could have resulted in a high potential incident, involving serious injury or damage both to personnel and equipment;
- The task should have had a specific risk assessment in place identifying the hazards associated with each job step;
- The availability of power to the A-frame at the point of attachment should have been identified;
- When the clevis pins were to be inserted, the hydraulics to the system should have been isolated thus avoiding any inadvertent operation.

The following actions were recommended:

- Operating procedures and risk assessments were changed so as to isolate the hydraulics whilst personnel are on top of the TMS with the bullet and lift point swivel mechanically connected;
- Modifications were made to the hydraulic control system to prevent a recurrence of this incident. The modification included the installation of a relay isolating the proportional valve driver output until the relative joystick is operated. This would prevent uncontrolled operation of the luffing rams if the proportional valve driver unit had a similar failure again.

UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

June 8, 2009 Alert 02-09
Washington, DC

Compact Fluorescent Lights

This Safety Alert serves to inform the maritime industry that energy saving Compact Fluorescent Lights (CFL) or lighting, sometimes known as radio frequency (RF) lighting devices may interfere with certain communications equipment. CFLs employ a RF lighting device to excite a gas inside a bulb in order to produce light.

The Federal Communications Commission (FCC) recognized the need for and adopted rules to control the harmful interference to radio communications services from these devices. During the rulemaking process the Coast Guard provided comments and recommended an advisory label for CFLs / RF lighting devices warning users about potential interference to communication services and particularly with respect to devices capable of producing emissions in the 0.45-30 MHz band. As a result, the FCC required manufacturers of CFLs to provide an advisory statement, either on the product packaging or with other user documentation, similar to the following: "This product may cause interference to radio communications and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz."

The Coast Guard has learned that CFLs have been installed on the navigation bridges of vessels and in other places capable of causing radio communications interference. Marine inspectors, vessel owners and operators **should be aware** of this potential safety hazard and take proper action as needed.

Below are examples of some compact fluorescent lights with different shapes and sizes.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Domestic Vessel Activities (CG-5431), United States Coast Guard Headquarters, Washington, DC.

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