

## IMCA Safety Flash 10/13

June 2013

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](mailto: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](http://www.imca-int.com/links). Additional links should be submitted to [webmaster@imca-int.com](mailto:webmaster@imca-int.com)

### I High Potential Near Miss – Lifting Equipment Failure

A member has reported an incident in which there was a potentially catastrophic failure of a lifting sling. The incident occurred during repair and maintenance operations for a trenching ROV, when the trencher was being lifted onto axle stands to assist with on-going maintenance. The crew planned the lift using a single sling, as standard lifting strops were missing. The single sling was placed around the box section and it was identified that the lift point had a sharp edge which could have damaged the lifting sling. It was decided to pad the sharp edge with wadding to prevent damage to the sling. The crane started to take the weight of the trencher, and when it reached approximately 18T of tension, the sling failed. Upon inspection, it was found that the sharp edge identified had cut through the padding and sliced the sling causing it to part under load. No damage occurred as the trencher was never lifted off the ground.

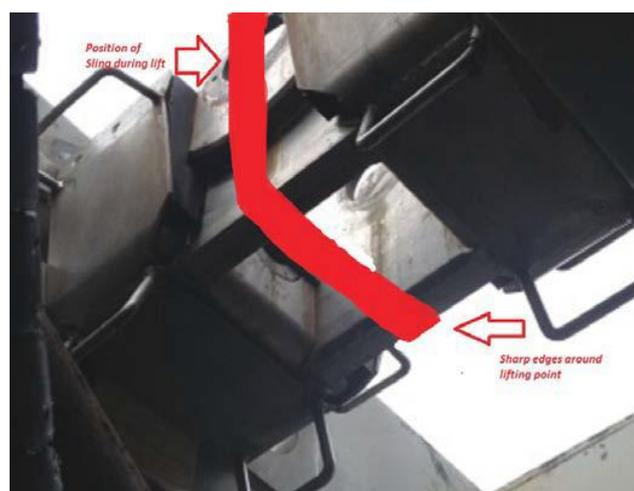


Figure: Showing initial lifting point arrangement used during incident



Figure: Showing re-assessed lifting point arrangement used after incident

Our member identified the following immediate causes:

- ◆ Inadequate planning – other lift points were available to complete the lift without the sharp edge affecting the lift;
- ◆ No management of change or 'stop the job' completed – the 'stop the job' process should have been implemented as soon as the missing strops were identified;
- ◆ Planned method continued despite identification of sharp edge – crew assumed that padding the sharp edge would be sufficient to complete the lift safely;
- ◆ No specific planned method was identified for completion of the lifts – planning was completed at site as requirements developed.

Our member identified the following root causes:

- ◆ Inadequate equipment available
  - There was insufficient lifting equipment to complete the assigned tasks, leaving the crew to borrow equipment from elsewhere; the job should have been stopped in this context;

- ◆ Poor pre-work planning
  - There was no lift plan developed before arrival at site;
  - Correct lift points were not identified;
  - Lift plan was developed at site developed with available rigging in mind, rather than correct lift points in mind.
- ◆ Lack of situational awareness
  - All aspects of health and safety planning were completed, as required with regards to lift plans, job safety analysis and tool-box talk; however, an assumption was made regarding the application of padding around the sharp edge.

The following lessons were learnt:

- ◆ Ensure sufficient and appropriate lifting equipment is always available;
- ◆ Reiterate importance of ‘stop the job’ and management of change processes;
- ◆ Ensure lift planning is conducted with reference to correct and safe lifting, rather than “making do” with what is available on site;
- ◆ Members may wish to refer to [IMCA SEL 019 - Guidelines for lifting operations](#) for further information.

## 2 Loading and Securing of Cargo

A member has highlighted two recent occasions in which containers and vehicles were inappropriately loaded and transported with their contents unsecured, which resulted in unnecessary manual handling of cargo. Unsafe packing of containers and loading of vehicles is something that still occurs. The potential exists for injury, environmental impact or equipment damage caused by unsecured cargo and/or not loading vehicles correctly.



Figures: Showing items loaded directly onto a trailer with no pallets (making further manual handling by yard crew necessary)



Figure: Equipment packed into a container unsecured

The following simple suggestions may be of use to members:

- ◆ Place items being shipped in suitable containers, giving consideration to the possible cargo handling capabilities of those receiving the load (i.e. forklift availability, access, container type);
- ◆ Ensure loads are distributed in a balanced and even way;
- ◆ Place heavier items at the bottom with lighter items on top – do not place heavy cargo on top of fragile cargo;
- ◆ Use packing to prevent damage between items of cargo;
- ◆ Lash down (and wedge if necessary) cargo, to prevent movement in transit;
- ◆ Do not pack sharp items next to soft skinned drums;
- ◆ Certain chemicals and materials, when combined (possibly through transit damage), can become toxic, highly flammable or explosive – it is imperative that such materials are kept apart;
- ◆ Ensure the doors and locking mechanisms are secure with locking device attached (including secondary securing device) and, where applicable, use door safety nets;
- ◆ Ensure no loose items have been left on the roof of the CCU (Cargo Carrying Unit) or container;
- ◆ Loading of cargo should be properly planned and implemented, to facilitate the ease of unloading on arrival at the destination;
- ◆ Members may wish to refer to:
  - International Maritime Dangerous Goods (IMDG) Code - [www.imo.org/blast/mainframe.asp?topic\\_id=158](http://www.imo.org/blast/mainframe.asp?topic_id=158)
  - Oil & Gas UK Guidelines for the Safe Packing & Handling of Cargo to and from Offshore Locations - <http://info.ogp.org.uk/liftingandhoisting/RPR/OilAndGasUKPacking.pdf>.

### 3 Use of Portable Electrical Deck Equipment

A member has highlighted some recent examples of portable electrical deck equipment being used with incorrect plugs and sockets. This safety flash serves to bring to members' attention the issue of plugs and sockets for electrical equipment used in the outdoor marine environment.

During routine portable appliance testing, it was found that plugs and sockets on portable electrical equipment used in the deck environment had an IP44 ingress and integrity rating, which is not sufficient for use on the back deck or an open deck marine environment. Also, it was found that 9" grinders with a rating of 2000W and 19A had their 32A plugs removed and 16A plugs fitted instead, with subsequent potential for overheating, burns or electric shock.



Figure: 110v/2000W/19A 9” grinder with 32amp IP67 plug and the IP44 16amp plug removed.

The following actions were recommended:

- ◆ Socket outlets, appliance inlets and portable equipment operated in an open marine environment should have a minimum IP rating of IP56; alternatively the socket should be located inside an enclosure with a minimum ingress integrity rating of IP56;
- ◆ Regular checks should be made of hand tools and extension leads, to ensure portable equipment and extension leads to be used on the back deck are fitted with suitable IP 56 plugs and sockets, (IEC plugs and sockets are usually rated IP44 or IP67; the more robust IP67 ones should be used);
- ◆ Incorrect equipment should either be removed from use and fitted with the correctly rated plugs/sockets, or substituted with equipment that is correctly rated (i.e. the appliance in use may have been taken from a workshop to be used on the open deck, the IP rating is adequate for indoors, but not outdoors);
- ◆ Ensure personnel are fully aware and informed with regard to the appliance voltage and load rating current, size and type of plug fitted, condition of flex/cable, and same for any extension leads, including plug and socket and the fixed socket outlet;
- ◆ Ensure that personnel always check and inspect equipment before use, to ensure the equipment is fit for use and purpose. All deficient equipment should be removed from use and either repaired or disposed of;
- ◆ Check and ensure that deck power sockets and circuits are fitted with correctly rated plugs and sockets, or swap/replace appliances with equipment that is fit for purpose;
- ◆ Members may wish to refer to IMCA’s handy pocket card [IMCA SPC 22 - Electrical Hazards](#).

#### **4 Surge Protective Devices Onboard Vessels**

The United States Coast Guard (USCG) published in April this year a Marine Safety Alert on surge protective devices. Subsequently, an updated and corrected version of this information was made available as Marine Safety Alert 03-13b. The alert covers the risk of fire arising from the misuse of certain voltage surge protective devices used in mains electric circuitry onboard vessels. A marine casualty investigation of two separate stateroom fires onboard a US flagged container ship revealed that the sources of the fires were attributed to the use of surge protective devices plugged into a lighting circuit.

Further information is available from [www.uscg.mil/tvncoe/Documents/safetyalerts/SurgeProtectiveDevices.pdf](http://www.uscg.mil/tvncoe/Documents/safetyalerts/SurgeProtectiveDevices.pdf)

## **5 Fuel Oil Bunkering Safety**

The Marine Safety Forum has published the following safety flash regarding a safety issue that occurred during fuel oil bunkering. A vessel had prepared to take fuel oil on board, all precautions were in place and the checklist had been completed correctly and the crew had completed a toolbox talk. During bunkering, a quantity of fuel oil was spilled into the engine room.

The safety flash can be downloaded from [www.marinesafetyforum.org/upload-files//safetyalerts/msf-safety-flash-13.18.pdf](http://www.marinesafetyforum.org/upload-files//safetyalerts/msf-safety-flash-13.18.pdf)