IMCA Safety Flash 03/08

February 2008

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

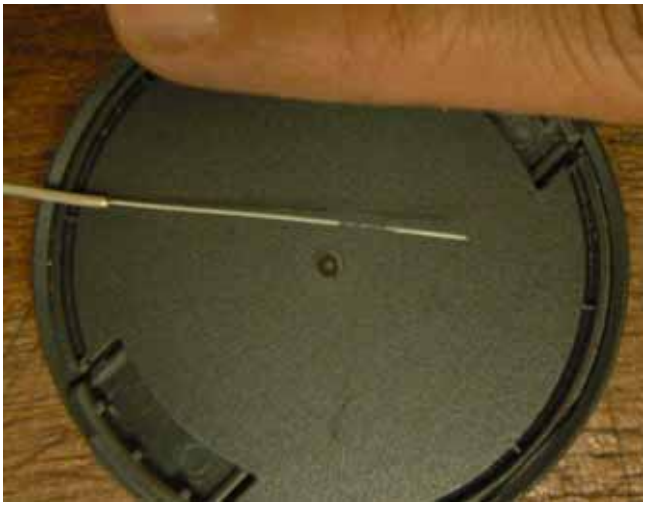
1 ROV Pilot Injured by Fibre Optic Glass

An incident has been reported to IMCA in which an ROV pilot working on an umbilical tether was injured by a shard of fibre optic material. Work was being conducted in a workshop on the umbilical tether of an ROV. Measurements and repairs were being undertaken on the fibre optic cables inside the tether. The pilot leaned forward, close to the fibres, and one of the fibre-optic cable ends pierced his skin at the shoulder and broke off.

Approximately 12mm of glass fibre entered the skin of his left shoulder at an angle and was just under the surface of the skin.

The pilot was treated by a doctor and went ashore for further examination. Vessel operations were stood down and a 'time-out for safety' was undertaken.

Investigation revealed that there was a lack of awareness of the danger caused by sharp fibre-optic cable ends and consequent at-risk behaviour.



Fibre optic material that caused the injury

2 Lifting Incident

An incident has been drawn to IMCA's attention in which a load was being moved from deck to engine room on a vessel at sea. The crated load slipped from its slings and fell to the deck in the engine room below. There were no injuries. The incident occurred during daylight at sea. The vessel was underway, manoeuvring, in a sheltered bay awaiting wind speed to drop.

The operation of lowering the crate into the engine room through one of the engine room hatches had been discussed with those to be involved, about and hour or two earlier, at the daily work planning and safety meeting, but not documented, nor had a formal risk assessment or toolbox talk been carried out.

The seaman in charge of the operation contacted the Third Engineer to inform him that the lift would be coming down into the engine room. The Third Engineer sent an engine room assistant (ERA) to stand by to receive the load.

The weather situation was that the wind was at 30 knots, with a combined sea/swell reported as on the bow at Beaufort 4 (1.75 metres). The vessel was reported to be rolling approximately 1 to 2 degrees.

The lift team on deck comprised three deck personnel, one of whom acted as signalman, one as crane operator and one held a tagline.

The aft port stores crane was utilised, lifting the crate from the port side towards and into the port side engine room stores hatch located inboard from the crane. The crate was secured to the crane using two slings rigged as chokers (see sketch below). There was a single tagline in use and the crane operator and signalman were in full view of each other throughout the operation.

The seamen involved were unaware of the contents of the crate. There were no officers present during the actual lifting operation.

The crate was secured to the crane hook using two 20 ft straps, described to be of SWL 8250 lbs when used as choker. The crane operator proceeded to lift the crate, holding it suspended for 20-30 seconds to ensure it was balanced properly. The crane operator received instruction from the seaman acting as a signalman while the other seaman controlled the tagline. An ERA was stationed in the engine room at the workshop deck preparing to receive the crate onto this deck. The crane operator proceeded to swing the lift inboard over the port hatch and began lowering the crate into the engine room.

All personnel noted that the lift was swaying slightly due to vessel movement, but no more than they had experienced with previous similar lifting operations. As the lift came horizontal with the ducting immediately below the coaming/deckhead the vessel experienced a larger roll and the crate swung to port and made contact with the ductwork. The signalman both signalled and verbally told the crane operator to stop lowering, which he did. The crate suddenly tipped to one side and the lifting sling on the high side of the crate slipped off, resulting in the crate tipping suddenly and falling to the deck below.

When the crate landed on the deck it broke open and the contents, an electrical high voltage circuit breaker weighing 250 kg., was damaged. There were no injuries, but the damaged circuit breaker had to be taken ashore to ascertain and repair the extent of damage incurred.

The company instigated an investigation which revealed to them that the immediate cause(s) of the accident were:

- failure to check and secure the contents of the load – although the piece of equipment had been transported to the vessel in a crated condition, the contents of the crate were not checked prior to lifting to ensure that no shifting had occurred which might lead to unbalancing the load;
- improper slinging, no method of preventing the slings from slipping – the crate measured 50" L x 35" W x 54" H so it was a very high load, subsequently likely to be more subject to tipping/tilting if not balanced and rigged properly. The choking method was used to lift the crate, but there were no securing points to prevent the slings from slipping off if the load did become unbalanced;
- susceptibility to vessel motion – the motion of the vessel was not considered as a deterrent to performing the operation. The effect of a suspended load being much more susceptible to vessel motion was not recognised.

Root causes were found to be:

- Although those involved had crane operator familiarisation training, this needed to be supplemented by further computer based or practical training;
- Higher level of supervision of the lift should have been implemented;
- Company policy on lifting operations needed significant improvement. Risk assessment and permit to work procedures existed, but no formal lifting operations procedures;
- No formal risk assessment was conducted. Although a review of the task was conducted, there was no follow up risk assessment or toolbox talk;
- The lift was considered to be routine in nature with a failure to appreciate the endemic risks;
- No recognition of the effects of the vessel's motion, particularly on this load where the cargo had resultantly moved inside the crate;
- No check of the security of the load inside the crate;
- The vessel had performed numerous similar operations in the past without incident hence leading to a 'routine job' mentality by all involved.

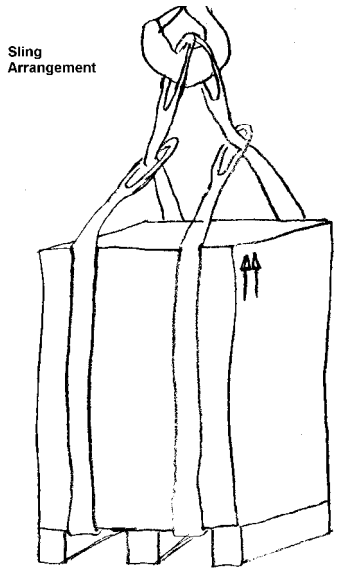
It was also noted that:

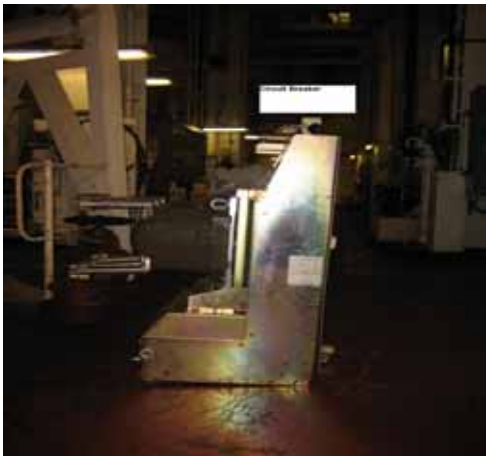
- no notification was given to all engine room personnel that a heavy lift was being conducted overhead;
- there was a need for established lifting procedures, especially when negotiating areas like the engine room access hatch.

The following recommendations were made:

- As failure to conduct/review a formal risk assessment prior to the lifting operation led to this incident, it was recommended that a formal risk assessment is to be conducted for all lifting operations;
- Lifting operations to be supervised by a responsible officer;
- Updated crane operations training to be provided for all personnel normally involved in lifting operations;
- Rigging training should be investigated for key personnel;
- Company investigation report to be sent to other company vessels and industry;
- Method of incident investigation to be publicised;
- Awareness of benefits of risk assessment highlighted for all tasks, routine or otherwise;
- Company investigation to be carried out regarding its training programmes;
- Training modified to include lifting operations and to include deck and engine room ratings;
- Paint marking and safety barriers to lift landing zone areas to be improved;
- Investigation to be carried out regarding improved ways of caging lifts to prevent loss by inadequate slinging;
- Formal supervised risk assessment to be conducted for all lifting operations;
- Appropriate and up to date crane operations training to be provided for all personnel normally involved in lifting operations.

Members can note that had guidance provided in IMCA SEL 019/M 187 – *Guidelines for lifting operations* – been followed, the incident should not have occurred.





Circuit breaker out of its crate