IMCA Safety Flash 11/08

June 2008

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 Catastrophic Failure of Vessel Main Crane Wire

A member has reported a serious incident onboard a vessel where the main hoist wire rope of the main crane parted whilst deployed subsea. The vessel crane was involved in operations in which a 20 tonne clump weight was suspended from the crane main hoist wire. The water depth at the location was approximately 1600m. It is not known to what depth the crane was deployed at the time of failure though it is believed there could have been in excess of 1400m of wire rope deployed.

The crane was a pedestal crane articulated box jib with active heave compensation and had been in operation for approximately two years.

Immediate investigation identified the failure point of the wire rope to have been at the second sheave of the knuckle boom. Subsequent inspection of the sheave has identified significant damage that would be consistent with the sheave failing to rotate during the operation of the crane, and the resultant wear on the wire rope is potentially the cause of the rope failing.

The crane was operating with the heave compensation engaged at the time of the failure.

It is recommended that members operating vessels with cranes of this type carry out regular inspection of crane sheaves to identify any signs of wear that would indicate a potential failure of the sheaves to operate as designed. Members operating cranes with active heave compensation are recommended to check sheave integrity and visibly check rotation of all sheaves.

Photograph shows the wear in the crane sheave that has potentially caused the wire rope to fail

2 Incorrect Lifting Equipment Used

Deck crew were lifting a full 200l (40 gallon) drum of Oceanic HW 443 (ethylene glycol) with the crane using a cargo strap drum lifter. As the drum was being lifted over some deck equipment it slipped out of the span set type drum lifter and dropped approx 6m to the deck. No one was in the area under the drum when it slipped out. The top of the plastic drum split and 40-45l of the fluid within spilled on to the deck. Shipboard oil pollution emergency plan (SOPEP) equipment was deployed and the spill contained to the immediate vicinity. No fluid was lost overboard.

IMCA does not have details of the risk assessments, lift plans or toolbox talks, all of which could have identified the potential hazards, but the member's further investigation revealed that the following factors were contributory to the incident:

- Poor choice of drum lifting device – a barrel span set lifting strop designed for lifting metal drums was used to lift a plastic one with sides that curved in slightly towards the lid which allowed the drum to slip out of the strop;
- There was a change in the lift plan without a reassessment of hazards;
- Lack of knowledge of the correct applications for this type of drum lifting gear.

Members are recommended to ensure that personnel are fully capable of identifying and using the correct drum lifting equipment.

Plastic drum with curved sides with barrel span set lifting strop – poor choice as intended for metal drums

Metal drum showing intended use of barrel span set lifting strop

Plastic drum with curved sides held securely in appropriate lifting equipment