IMO – ΕΙΔΙΚΗ ΟΜΑΔΑ ΕΡΓΑΣΙΑΣ

Συμπεράσματα και Συστάσεις από τη διερεύνηση και ανάλυση ατυχημάτων

Η Διεύθυνση Ασφάλειας Ναυσιπλοΐας του ΥΕΝ με εγκύκλιό της κυκλοφόρησε την πρόσφατη αναφορά της Ομάδας Εργασίας Ανάλυσης Ναυτικών Ατυχημάτων του ΙΜΟ. Έργο της Ομάδας Εργασίας είναι η ανάλυση των αιτιών και συνθηκών των ναυτικών ατυχημάτων μέσω των εκθέσεων διερεύνησης που υποβάλλονται στον ΙΜΟ από τα Κράτη Μέλη, με σκοπό την εξαγωγή ασφαλών συμπερασμάτων και την παροχή συστάσεων προς αποφυγή επανάληψης παρόμοιων ατυχημάτων.

Πιο κάτω αναφέρονται μερικά παραδείγματα της εργασίας αυτής.

DRAFT TEXT OF LESSONS LEARNED FOR PRESENTATION TO SEAFARERS

1. MAIN ENGINE TURBO CHARGER FAILURE

What happened?
The second engineer was in the engine-room carrying out some maintenance jobs when he noticed that the main engine's turbo charger was over speeding at a dangerous rate. Before he could reach the control room to shut down the main engine, the turbo charger exploded. This was the second turbo charger explosion in four months, but no one was injured.
Why did it happen?
1. The turbo charger compressor sustained a centrifugal overload condition, resulting in a radial fracture of the impeller;
2. A scavenge fire may have provided sufficient energy to the turbo charger turbine to over speed to a dangerous rate;
3. Poor cleanliness of the scavenge space;
4. A leaking piston crown O-ring resulted in oil forming a gummy residue on the scavenge reed valves and liner ports; and
5. Blocked liner ports contributed to fuel after burning.
What can we learn?
• Thorough scavenge space inspection and cleaning is very important, especially when the vessel is operating on short voyages with prolonged low load running of the main engine.

2. A COLLISION LEAVING PORT

What happened?
A ship left port in the late evening with a pilot onboard Just before passing the harbour entrance, the pilot left and the ship proceeded full ahead On the starboard bow was another ship, approaching the pilot pick-up area.

The pilot to the approaching ship was still in the pilot boat and delayed. He saw that a close-quarter situation was coming up and called the outgoing ship via VHP, asking for intentions. He was answered that the outgoing ship was keeping course, due to obstructions. He therefore advised the incoming ship to go to port, which it did However, it was too late and a collision occurred.

The outgoing ship had damage in the hull and took in water. The anchors were dropped, but with assistance of tug-boats and after the anchor chains were cut, the ship was beached close by. The approaching ship could berth without assistance.

Why did it happen?

If the pilot on the outgoing vessel had stayed a little longer, the accident may have been prevented. Both ships claim that they did not hear the conversation of the other ship. The outgoing ship did not apply to the COLREGs, claiming obstructions. The investigation shows however, that there was space and water enough for her to change course.

What can we learn?

• Keeping a VHP-traffic listening watch help you to keep up to date with what is happening
around you.
• Follow the COLREGs and keep to standard procedure. It may reduce confusion.
• Pilots should stay on board until their task is completed.

3. SHIP MISSING

What happened?
A tug, towing an unmanned ship, left port for a long and slow journey. Fifteen days later the last noon-report was received at the company. Another 4 days later, the company requested a radio station to call the tug. No answer was received.

A month later, an EPIRB-signal was picked up and traced to the tug. The position was searched, but only the EPIRB, a small drifting plate and a small oil-slick was found.

Investigation found that the EPRIB had been manually activated. The batteries last for only 92 hours.

Later, the towed unmanned ship was found, but not the tug: The rescuer found the tow rope snapped and two emergency towing rigs had failed.

The tug and a crew of 13 were never found.

Why did it happen?

The reason why the tug was lost is unknown.

What can we learn?

If the company asked for search earlier, there might have been better possibilities finding the crew.

4. CONTROLLABLE PITCH PROPELLER FAILURE

What happened?
While entering the port, the Master noticed that the speed of the vessel was greater than usual and that it did not correspond to the pitch settings. The emergency system was selected, but the starboard propeller remained set on full ahead. The starboard anchor was let go, causing the vessel to deviate from its course. Subsequently, the vessel struck a dolphia The shock from the impact resulted in a blackout and a loss of propulsion.
Why did it happen?
The starboard propeller pitch failed to reverse. The servo control piston had seized inside the cylinder. It was later determined that there was presence of water and rusted particles in the hydraulic pitch control system. The master opted to engage the emergency system and not to stop the starboard engine.
What can we learn?
• Regular tests of various pitch commands are necessary to confirm the operational state of the equipment.
• Regular maintenance of the hydraulic control systems and the frequent testing of the oil, prevents the degradation of the equipment and allow for early detection of water and other particles in the system.

5. COLLISION BETWEEN AN OIL TANKER AND RO-RO VESSEL

What happened?
An oil tanker was proceeding in a westerly direction. Visibility was good. The OOW of the oil tanker saw a ro-ro vessel ahead, proceeding in an easterly direction. Hie oil tanker made a number of small alterations to starboard with the intention to pass ahead of the ro-ro vessel. When the two vessels were about one-half mile apart, the oil tanker called the ro-ro vessel. The ro-ro vessel proposed a "green-to-green" passing. Realizing that it would have to make a large course alteration to port, the oil tanker proposed a "red-to-red" passing and, because it was not permitted to be closer than two miles from shore, it would maintain its course and speed. Two minutes before the collision, the ro-ro vessel indicated that it would manoeuvre toward die oil tanker. The ro-ro vessel struck the port side of the oil tanker. Both vessels sustained damage, but there was no release of pollution. Escorted by a tug, the vessels proceeded to port under their own power.

Why did it happen?

Neither vessel monitored the developing situation involving a risk of collision and did not take frequent relative bearings. The arrangement for passing was made only a few minutes prior to the vessels colliding with each other. Furthermore, the OOW on board the ro-ro vessel became perceptually confused by the discussion with the oil tanker to make passing arrangements. The OOW only called the master when the oil tanker was about one mile away.

What can we learn?

• Closely monitor vessel traffic in the vicinity to enable the early identification of developing collision situations.

• Take early and substantial action to keep well clear of vessels. A succession of small alterations of course is to be avoided. Avoid taking action that does not conform to International Regulations for Preventing Collisions at Sea.

• If in any doubt as to the other vessel's actions or intentions, the OOW should seek clarification from the vessel and, if doubt still exists, notify the

master immediately and latever action is necessary before the master arrives.

6. EXPLOSION ON BOARD A CHEMICAL TANKER

What happened?
A chemical tanker docked at a terminal to discharge a cargo of methanol. About 15-20 minutes into the unloading of the cargo, an explosion occurred in way of one of the cargo tanks. The fire was extinguished by die crew. There was minor damage to the vessel, but there were no injuries.
Why did it happen?
There was an accumulation of combustible vapours in the cargo tank - the vessel was not equipped with an inert gas system. Hie intermediate shaft of the cargo pump was rubbing against the casing, providing a source of ignition.
What can we learn?
- Suitable maintenance of shipboard machinery and equipment used in hydro-carbon-related cargo operations is necessary to ensure the safety of die vessel and crew.
- Use of an inert gas system helps to prevent explosions in cargo tanks.
- Shore-based inert gas systems may be available for use in some ports.

7. KILLED BY THE RELEASE OF CARBON DIOXIDE

What happened?
While attempting to release a large quantity of high pressure CO2 to atmosphere, to rectify an earlier error, the resulting reaction from the force of the gas exiting the open unsecured pipe fractured the gas manifold in the CO2 room. The escaping gas killed all four people within the CO2 room at that time.
Why did it happen?
The Chief Engineer did not fully understand the Fixed Fire Installation and during maintenance work inadvertently discharged CO2 from storage cylinders into the discharge manifold where it was trapped.

The Management of the vessel failed to take the opportunity of calling in expert assistance to rectify the original mistake while the vessel was in port and, instead, embarked on a misguided and dangerous attempt to release the trapped gas to atmosphere.

Ship's staff failed to understand the reactive forces occurring when high pressure gases are released from an open pipe/nozzle. Whenever a high pressure fluid - especially a gas - is allowed to discharge through a nozzle the pipe must be adequately restrained from movement.

In the attempts to rectify the situation, the ship was placed in an unsafe condition since the Fixed Fire Installation had been rendered inoperable.
What can we learn?
- Utmost care should be taken when carrying out any maintenance, inspection or testing of CO2 Fixed Fire Installations. Full instructions must be available and studied before commencing work. Effective training in the maintenance and operation of such systems is essential.
- Maintenance work should only be carried out by fully competent personnel.
- When in doubt - ask.
- If a Fixed Fire Installation is rendered inoperable, the Flag Administration, Classification Society and, in some instances, the Port Authority must be informed immediately.
- The energy content of compressed gases should never be under-estimated.

8. A FATAL DRY BULK CARGO OPERATION

What happened?
Three days after a bulk carrier loaded a cargo of DRI Fines, and while the crew were routinely opening cargo hatches to ventilate the cargo, a series of explosions occurred, resulting in the death by injury of the master. Five members of the engineering staff remain missing, presumed dead The vessel was lost.
Why did it happen?
There was some confusion over the nature of the cargo and the manner it should be cared for during transit However it was known that there was a possibility that the cargo would give off hydrogen gas if in contact with water and there were instructions from the shippers to open hatch covers if the temperature of the cargo was seen to rise. The accident investigation concluded that an accumulation of hydrogen ignited. The source of ignition was not determined but was most probably from hot spots within the cargo.
What can we learn?
- Vessel's Master and Crew should be properly informed and instructed on the handling of cargoes of doubtful hazard characteristics, such as DRI, and be made aware of all associated hazards. The recognized competent person and the vessels owners and managers should be involved in the loading and transport process. Shipper's certification should be double-checked and records verified ascertaining the pre-loading condition of the cargo; the cargo should be stabilised as far as possible prior to loading.
- Any discrepancy between the instructions on cargo care and monitoring provided by the prospective shipper, the vessel's owner/manager and external guidance such as the BC Code should be settled to the mutual agreement of all parties and the satisfaction of the Master before commencing loading.
- Special consideration should be given to the potential evolution during transport of hydrogen. Operators of vessels required to cany bulk cargoes susceptible to exothermic reactions should ensure that suitable and appropriate monitoring equipment, correctly calibrated to a recognized standard, is carried and utilised throughout the loading period and subsequent voyage. Full instructions on the use of the equipment, supplemented if necessary by appropriate training, must be provided. Records of the condition of the cargo should be maintained.