

MARITIME AUTHORITY OF THE CAYMAN ISLANDS

FLYER TO THE SHIPPING & YACHTING INDUSTRY

Fatal accident during anchoring



A **Passenger Ship** (Length 124m, 8,506 GT) was operating as a private yacht and cruising with a party of guests around the Similan Islands of Thailand. On the afternoon of 13 March 2016, the ship was approaching the island of Koh Tachi in calm seas and light winds intending to anchor approximately 0.7 miles east of the island.

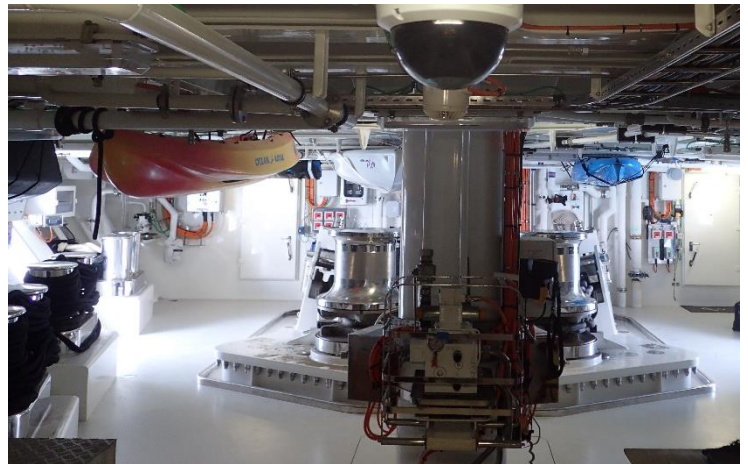


Figure 1: Mooring Station

The third officer and a deck hand were assigned to the forward mooring station to anchor the vessel on the command of the master. Communication was established between the mooring station and the bridge by radio. In addition, the master could observe activity in the mooring station via the ship's CCTV system.

Water depth was approximately 34m and the first shackle (27.5m) of chain for the starboard anchor was "walked out". The windlass brake was applied and the clutch disengaged in preparation for "letting go" the anchor. The anchor was then let go with the third officer controlling the paying out of the chain with the windlass brake, while the deck hand monitored the orientation of the chain in the water. Due to the light winds and lack of current it was necessary to apply small astern movements to the ship to lay the chain on the seabed. With 4 shackles in the water the chain was stopped while lying "Up & Down" or on a slight "Short Stay".

The master requested a total of 5 shackles in the water and the third officer continued paying out the anchor chain. At this point the windlass brake failed catastrophically and the chain started to run out in an uncontrolled manner. When all 9 shackles had run out, the bitter end failed and the loose end of the chain left the chain locker and struck the third officer. The third officer suffered extremely severe injuries from the force of being struck by the loose anchor chain. Despite prompt and comprehensive medical treatment being administered by the on board emergency response team, the third officer died of his injuries.



Figure 2 & 3: Brake Failure

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Safety Issues

The cause(s) of the catastrophic failure of the windlass brake is still under investigation and it is not possible to draw any definitive conclusions at this stage of the investigation.

- Anchoring is a routine activity carried out on all ships, however the potential hazards should be rigorously assessed and all identified risks mitigated as far as possible.
 - “Danger Areas” and “Snapback Zones” around anchoring equipment should be identified and clearly marked. Such areas will vary depending on the orientation of the chain gypsy and capstans (horizontal or vertical axis).
- Only properly qualified and experienced personnel who are aware of the potential hazards should be employed in anchoring operations.
 - Personnel involved in anchoring operations should be aware of the actions to be taken in the event of any equipment failure.
- Regular inspection and maintenance of anchoring equipment is essential to reduce the possibilities of mechanical failure. Particular attention should be paid to equipment such as brakes, chain stoppers, locking pins, clutches, etc. whose purpose is to arrest, control or prevent the movement of the anchor chain while either anchoring or holding the ship at anchor.
- Working procedures for all anchoring activities should take full account of the guidance and best practice provided in the chapter 26 of the Code of Safe Working Practices for Merchant Seafarers and the Nautical Institute publication “Mooring and Anchoring Ships, Volume 1” (ISBN: 978 1 870077 93 4).
- All of the above should be documented in the ship’s Safety Management System and fully understood by all personnel involved in anchoring operation.

NOTE

This document, containing urgent safety information, has been produced for marine safety purposes only, on the basis of information available to date. The sole objective of the investigation of any accident which is conducted under the Cayman Islands Merchant Shipping Law (2011 Revision) is the prevention of future accidents through the ascertainment of its causes and circumstances. It is not the purpose of an investigation to neither determine liability nor to apportion blame.

The Maritime Authority of the Cayman Islands (MACI) is carrying out an investigation into this accident. MACI will publish a full report on completion of the investigation. The report will be publically available from www.cishipping.com.

21 March 2016