Case study for onboard safety meeting

Case study no. 23: Lines in the water

Please read the below story of an incident. Keep our vessel's procedures in mind while reading to compare with the actions of the crew below as we will discuss the factors which led to the incident occurring.

The Captain was apparently ready to leave port with his 26 000GT fully laden containership, bound for Rio de Janeiro. After the completion of all tests of machinery and navigational equipment, the vessel started to single up lines. The pilot boarded the vessel and one tug was assigned to assist with the departure. The tug fastened two ship lines on the aft of the ship, and soon after the tug and the ship's bow thruster moved the ship in a parallel direction to the pier.

Both the pilot's and the Master's intention was to make a turn to starboard into a fairway channel. When the ship was about 50 metres away from the pier, the towing lines were suddenly released from the tug's hook – without the bridge team instructing to do so nor having been notified of the intention to do so.

A few seconds later and after a conversation in the local language between the pilot and tug Master, the Master ordered to let go of the tug. This order was confirmed by the pilot immediately thereafter. In reply to the order the third officer, who was stationed at the aft station advised the bridge that the towing lines had already been released by the tug before the order was given. At that moment, the engines were stopped and the propeller idle. The aft station now started to heave lines in order to get the lines out of the water and away from the propeller area. In the meantime the Master used the bow thruster at full to port to keep the vessel away from the pier.

The tug had now shifted position to starboard side and started pushing as ordered.

The towing lines in the water, left by the tug, were caught by the strong current and went underneath the stern. The crew on the aft station were not able to pull the lines out and recover them from the water, the 2 lines were eventually blocked. When the Master heard this he did not attempt to set the engine telegraph to "Dead slow ahead" and the engines remained stopped and propeller idle.

After a successful turn into the channel, the Master ordered that the engines be shut down and to rotate the propeller shaft by means of turning the gear hoping that this maneuver would release the blocked lines. However, after several attempts it became clear this would not succeed and that professional help was required. The Master decided to put the ship alongside again and 30 minutes later the ship had all lines fastened to the pier again.

A diving company was hired to assess the situation and it was then discovered that the two lines were stuck in the propeller. The ship was delayed for 4 days while retrieving the line from the propeller shaft.

Keywords for discussion:

- Evaluate the effect of local current on the lines in the actual port
- Awareness of crew on aft station to report situations promptly
- Departure briefing with parties involved
- Time spent on and content of a Master/ Pilot exchange of information
- Involvement of tug master in briefing
- How to monitor the communication between the pilot and tug Master (local language?)
- Test of communication equipment between involved parties prior to departure

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Risk assessment form

Based on the case, we will now perform an onboard risk assessment of the incident and the factors which led to it. Bearing in mind our vessel's procedures:

In addition to the case, the "Keywords for discussion" can also be used in your safety discussion.

Hazard Identification

Based on the case description and/or the "keywords for discussion", identify at least 5 contributing factors resulting in the incident.

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Risk Assessment

Probability (From very likely to very unlikely): How often could such factors be present onboard your ship?
Severity (From very serious to not serious at all): How bad is the possible outcome of the identified factors?

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Risk Acceptance

Are the different risks identified acceptable in our company or should any of the identified risks be reduced?

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Risk Treatment

How can the identified risks be reduced? (Both probability and severity of a hazard should be assessed to determine the risk. Consider factors such as equipment, procedures and training.)

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