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香 港 商 船 資 訊

HONG KONG MERCHANT SHIPPING INFORMATION NOTE

Safe Towage at Sea

To : Shipowners, Ship Managers, Ship Operators, Masters and Officers

Summary

While at anchor, a Hong Kong registered very large crude oil carrier (VLCC) was hit by a heavy lift crane barge in the vicinity of Daesan, Republic of Korea. The tugs towing the crane barge lost control of its navigation in rough weather and broke one of its tow wires. As a result the crane barge collided with the VLCC causing severe oil pollution to the sea area.

The Incident

1. On 7 December 2007 at about 0706, while anchoring at a position off Daesan, Republic of Korea, a Hong Kong registered VLCC was hit by a heavy lift crane barge. The VLCC was carrying 263,541 tonnes of crude oil. Two tugs towing the crane barge lost control of the navigation in rough weather and broke one of the two tow wires. As a result the crane barge drifted towards the VLCC and collided into the cargo oil tanks causing severe oil pollution to the sea area.

2. Before collision the Master of the VLCC attempted to warn the crane barge via VHF radio but without success. As the crane barge closed in, the VLCC slackened its anchor cable and went astern with its engine to allow the crane barge to cross its bow uneventfully. Shortly after crossing, the towing wire of the crane barge parted and it drifted towards and collided with the port forward section of the VLCC.

3. After collision, the crew of the VLCC attempted to reduce the scale of pollution by transferring oil from the damaged tanks and rigging the collision mats at side of the damaged cargo oil tanks. The Master also pumped ballast to starboard ballast tanks with the intention to list the VLCC to starboard and lower the oil level in the damaged cargo tanks. These remedial actions appeared to have reduced certain amount of oil spillage and have fully complied with the provisions as laid down in the ship's Shipboard Oil Pollution Emergency Plan.

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4. The investigation revealed that the decision for the tugs and the crane barge to commence the towing voyage when adverse weather had been forecast is the main probable cause of this accident. During the voyage the towing capability of the towing convoy could not overcome the weather conditions. The parting of the tow wire caused the crane barge to drift uncontrollably and contact directly with the VLCC. Other contributory factors were:

- The towing voyage was not carried out in accordance with the conditions stipulated in the towing survey certificate;
- Towing wire not proper maintained;
- The tugs did not alert the local Vessel Traffic Service and the nearby vessels when they lost control of the navigation.

Lessons Learnt

5. The Master in charge of the tugs might have underestimated the severity of the rough weather that might affect the towing convoy. He failed to take notice of the rough weather that might further deteriorate during the voyage and did not make early preparation for rougher weather. In practice, assessment of weather conditions should be based on a weather forecast of at least 48 hours period. The Master should have considered postponing the towing voyage until more favourable weather was expected.

6. The tugs towing the crane barge lost control of its navigation in rough weather because the towing capability of the tugs could not overcome the weather condition during the voyage. Towage consideration must be taken in relation to maneuvering characteristics of the tow and the prevailing weather, route, towing arrangements, wind surface freeboard area and speed of the tow. The propulsion engine horsepower alone does not necessarily mean a tug would be suitable for a specific towing job. In this incident, a big floating crane of 140 m high was mounted on deck of the crane barge. This large deck structure could induce large wind resistance when under strong wind conditions.

7. After loss of control in navigation, the Master of the tugs did not immediately inform the local Vessel Traffic Centre of the seriousness of the situation. This resulted in delaying of early awareness by the nearby anchored vessels for them to take early precautionary actions.

8. After the accident the parted tow wire was found to be a used crane runner wire. This tow wire was put to use after it was replaced from the crane and left into a store for some time. Crane wires tend to be of different construction when compare with a towing wire due to their different mode of operation. Use of improper tow wire could be dangerous because of possible shock loading and chafing of the wire while engaging in towing.

9. Shortly before the parting of tow wire, the tug increased its speed. An increase of speed in rough sea condition might exert additional strain at the towing wire as a result of increase of force application. This would become critical if the towing wire was already pulled at its limit.

10. The attention of shipowners, ship managers, ship operators, masters and officers is drawn to the lessons learnt above.

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