DANISH MARITIME AUTHORITY

Report from the Division for Investigation of Maritime Accidents

FINOLA
Mooring Accident
4 January 2007

While the ship was alongside a swell lifted the ship and caused a mooring line to tighten during the handling of the line. The line hit the arm of the 2nd officer, who was operating the mooring winch, and he was seriously injured.

Factual information

FINOLA is a Livestock Carrier with a gross tonnage of 3228, length overall 85,36 meters. The vessel was built in Frederikshavn, Denmark in 1988 and is operated by Corral Line ApS, Denmark.

FINOLA is primarily transporting livestock between Mexico and Nicaragua.

For the past 17 years the vessel has occasionally been transporting livestock between Kawaihae, Hawaii and Vancouver. The duration of the voyage between the two ports is about 10 days in normal circumstances. This time the vessel had been on this route since December 2006.

The accident happened on the second voyage to Kawaihae. It was the third time that the 2nd officer was in Kawaihae.

The ship was manned with a crew of 15. The master, the chief officer and the ship's sole engineer was Danish citizens. The other crewmembers were Philippine citizens.

At sea the watch is divided between the master, the chief officer and the 2nd officer. In port the watch is divided between the two officers – by six hours watches.

Narrative

FINOLA arrived at Kawaihae Roads in ballast on 3 January at about 0900 hours and was at anchor until the next morning. FINOLA went alongside in Kawaihae harbour on 4 January at 0530 hours.

The loading of 2400 heads of cattle was commenced at approximately 0730 hours.

The cattle were taken on board via a ramp direct from lorries and through an opening in the ship's side on the A-deck, which is two decks above the main deck. According to the master it was important that the vessel is maintain in the same position during the loading operation and also that the ship is as close to the pier as possible at all times.

From the forecastle the vessel was moored with one long spring line and three fore lines - one short and two long fore lines. All lines were hawser-laid ropes and they were made fast on pollards on board – *see the sketch of the mooring rearrangement in the appendix.*

There were also four lines aft, which were arranged similar to the lines forward.

It was a shore crew who led the cattle from the lorries to the ship's side. The ship's crew then led the cattle to the stable deck.

There were 6 ratings occupied during the loading operation. One of the ratings was staying at the gangway at all times as ISPS guard.

After a couple of hours of loading, the vessel began to move vertically due to swell in the harbour. According to the master it is a known phenomenon that there can be a rather severe swell or surge in the harbour when the wind has been coming from North West for some time. The chief officer, who had the watch, tightened the lines regularly.

There was no wind.

The second officer took over the watch at about 1200 hours as usual. Two hours later - at about 1400 hours - two of the lines forward snapped due to the increasing swell. The master, who was at the bridge at that time, saw what happened and he called the 2nd officer by his portable vhf.

The 2nd officer and an AB came to the forecastle and they began to replace the broken lines.

The master went to the ship's office.

According to the 2nd officer they were about to secure the last fore line when a swell suddenly lifted the ship. The AB had put on the "stopper" on the line and the 2nd officer was then easing out the line by the mooring winch.

Due to the sudden pull on the line, the AB was not able to hold the line by the "stopper" and line laid around the winch drum was tightened and hit the 2nd officer on his arm. It all happened very fast.

The 2nd officer went to the ship's office and reported what had happened and the master immediately arranged for transportation to the hospital.

Additional information

The normal mooring operations during arrival and departure are normally performed by two AB's. The 2nd officer's role during the moorings operations is to attend the communication with the bridge and to lead and supervise.

The working language on board is English and according to the master, the risk assessments on board are issued in English. This also includes risk assessment for mooring operations.

The day after the accident an extraordinary safety meeting was held on board.
It was emphasised at the meeting that the crew should be very cautious during mooring operations. It was also concluded at the meeting that the 2nd officer's limited practical experience with the operation of the winch might have been a contributory factor to the accident.

Analyse and conclusion

The mooring arrangement was used in the way that it was constructed for and in the usual manner.

There is no indication that there were any technical failures besides the broken lines.

The information about the accident indicates that the 2nd officer either was handling the line or standing in a position close to the winch drum at the time of the accident. It all happened very fast and the 2nd officer is unsure as to how exactly the line hit him.

There is always a latent risk for the crew being hit by a line if positioned in a danger zone. In this case the condition with swell / surge posed a risk out of the ordinary. It is the opinion of the investigation division that both the 2nd officer and the AB were in a very unsafe position when the situation developed.

The strong force on the mooring line caused by the swell / surge was foreseeable and a known factor before the replacement of lines was commenced.

At the time of the accident both the 2nd officer and the AB were occupied with the practical work of making the line fast. None of them were therefore prepared for the sudden force on the line caused by the movement of the ship.

The following factors contributed to the accident:

- Lack of planning of the actual task appropriate to the conditions
- The 2nd officer had limited practical experience with the operation of the winch
- Number of crew allocated for the task. None of the two involved crewmembers were able to keep an eye on the outside of the ship at all times

14 May 2007
The Division for Investigation of Maritime Accidents

Appendix – Mooring arrangement

Archive photo of FINOLA received from the owners

A–DECK

Principle of the mooring arrangement at the time of the accident.