

MARINE OCCURRENCE REPORT

COLLISION

**BETWEEN THE CONTAINER SHIPS
"CAST BEAR" AND "CANMAR EUROPE"
ON LAC ST. PIERRE, QUEBEC
16 AUGUST 1995**

REPORT NUMBER M95L0070

The Transportation Safety Board of Canada (TSB) investigated this occurrence for the purpose of advancing transportation safety. It is not the function of the Board to assign fault or determine civil or criminal liability.

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Summary

On 16 August 1995, the deep-draught container ships "CAST BEAR" and "CANMAR EUROPE" were transiting Lac St. Pierre in opposite directions at reduced speeds of 11 and 12 knots respectively because of restricted visibility in fog. After the vessels detected each other on their radars, the pilots agreed, by radiotelephone, on a port-to-port meeting. About two cable lengths upstream of buoy S74, the bridge watches on both vessels noticed the masthead light of the other vessel at close quarters on the port bow. A few seconds later, a slight jolt was felt on the "CANMAR EUROPE". However, the "CAST BEAR" had to be informed of the collision by radiotelephone, because no jolt was felt by that vessel's crew. Both vessels were slightly damaged, but there were no injuries or pollution as a result of this occurrence.

Ce rapport est également disponible en français.

Other Factual Information

Particulars of the Vessels

Name	"CANMAR EUROPE"	"CAST BEAR"
Port of Registry	Hamilton, Bermuda	Port-Louis, Mauritania
Flag	Bermuda	Mauritanian
Official Number	7027540	8619053
Type	Container ship	Container ship
Gross Tonnage	30,491	23,761
Length	231.55 m	201.53 m
Draught	Forward: 7.75 m Aft: 9.1 m	Forward: 9.24 m Aft: 9.3 m
Built	Steel	Steel
Propulsion	One Sulzer engine, 21,331 kW	One Sulzer engine, 10,350 kW
Owners	Canada Maritime Ltd., Hamilton, Bermuda	A/S Thor Dahl Shipping, Sanderford, Norway

The "CANMAR EUROPE" was under the conduct of a pilot with a bridge watch consisting of the first officer, a midshipman and the helmsman; the second officer, who had just finished his watch, was still present on the bridge. As visibility was poor, the master was asked to come to the bridge, but he was not present on the bridge when the collision occurred.

The "CAST BEAR" was also under the conduct of a pilot, and the bridge watch consisted of the master, an officer of the watch and the helmsman. Visibility deteriorated so rapidly that there was not enough time for either vessel to post a look-out outside.

To avoid bank suction effect, the two vessels, which are 30.64 m- and 28.41 m-wide respectively, were sailing near the middle of the 244 m-wide channel. Both were navigating by radar, and landmarks were used as references for determining the vessel's distance from the middle of the channel. Both vessels kept to their respective sides of the channel to ensure a safe meeting. To that end, the pilot of the "CANMAR EUROPE" ordered a course of 252°(T) from 250°(T) while the pilot of the "CAST BEAR" altered course to 071°(T) from 070°(T).

At about 0410, the bridge watches of both vessels noticed the masthead light of the other vessel at close quarters on the port bow.

¹ All times are EDT (Coordinated Universal Time (UTC) minus four hours) unless otherwise stated.

The two vessels collided two cable lengths upstream of buoy S74. The contact between the two vessels was light and reportedly could not be felt from the "CAST BEAR" bridge location. The point of contact between the vessels was hidden from view by the containers loaded on deck. The bridge watches on both vessels reported that their vessel had kept to the right side of the channel and that the other vessel had crossed the middle of the channel to collide with them.

Analysis

In addition to radars, the "CANMAR EUROPE" is equipped with an electronic map connected to a Differential Global Positioning System (DGPS). Analysis of the data recorded on the electronic map shows that the "CANMAR EUROPE" was sailing about seven metres from the middle of the channel. At the time of the occurrence, the Canadian Coast Guard's experimental DGPS network was in operation and transmitting corrections with an accuracy of 10 m or better 95 per cent of the time. Experience shows that the accuracy of the DGPS system on Lac St. Pierre is usually between one and five metres. Although the electronic map shows the "CANMAR EUROPE" going toward the starboard side of the channel, the possible margin of error in the accuracy of the DGPS system on Lac St-Pierre makes it impossible to determine with certainty the exact position of the collision relative to the middle of the channel.

Findings

1. The pilots of the two vessels agreed, by radiotelephone, on a port-to-port meeting.
2. Both deep-draught vessels were sailing near the middle of the channel to avoid bank suction effect.
3. Neither vessel had posted a look-out outside.
4. Because of restricted visibility, navigation was mainly by radar.
5. The data recorded on the electronic map connected to the DGPS of the "CANMAR EUROPE" indicated that the vessel was sailing about seven metres from the middle of the channel.
6. Because of the possible margin of error in the DGPS, it was not possible to determine the exact position of the collision relative to the middle of the channel.

7. The bridge watches on both vessels did not assess accurately their vessel's position relative to the middle of the channel to ensure a safe meeting.
8. The impact caused by the collision was not felt by the bridge watch of the "CAST BEAR".

Causes and Contributing Factors

A collision occurred between the "CANMAR EUROPE" and the "CAST BEAR" as the bridge watches on both vessels did not assess accurately their vessel's position to ensure a safe passing distance. Both vessels had planned to sail near the middle of the channel to avoid bank suction effect due to their deep draughts. This situation left the vessels little sea room to react in an emergency.

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board, consisting of Chairperson, Benoît Bouchard, and members Maurice Harquail, Charles Simpson, and W.A. Tadros, authorized the release of this report on 23 April 1997.