

M-177e AI-4

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: February 18, 1982

Forwarded to:

Mr. Erik Falkenberg
Vice President
Høegh Lines (U.S.), Inc.
80 Broad Street
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} SAFETY RECOMMENDATION(S)

M-82-8

About 0716 e.d.t. on May 6, 1981, the Norwegian cargo vessel M/V HØEGH ORCHID, inbound from sea to a berth in Brooklyn, opposite The Battery, collided with the New York City ferry AMERICAN LEGION in dense fog in Upper New York Bay near buoy No. 24. The ferry was en route from Staten Island to Manhattan with approximately 2,400 passengers aboard. The ferry was damaged from below the main deck up to and including the bridge deck, the uppermost passenger deck. A total of 71 passengers were treated for injuries; 3 passengers were hospitalized. The HØEGH ORCHID suffered minor damage, and there were no injuries to persons aboard. The estimated cost of repairs to both vessels was \$520,000. 1/

Upon arrival at the pilot station at the entrance to New York Harbor, the HØEGH ORCHID had completed a 2-day voyage from Halifax, Nova Scotia, Canada, in dense fog. It made the approach to the pilot station, boarded a pilot at 0555 approximately 1 nmi east of the sea buoy at the entrance to Ambrose Channel, and proceeded up the Ambrose Channel without incident. The master and pilot agreed that half ahead was a safe speed to navigate the 2,000-foot-wide channel in fog because both radars were functioning properly and there was little vessel traffic. According to the table of propulsion settings and the associated speeds for the HØEGH ORCHID, the half ahead speed is 12 knots. Although a full range of propulsion settings and associated speeds was posted in the wheelhouse for the pilot's use, he gave orders in the established practice of half ahead, slow ahead, and dead slow ahead. The various speed increments available between these settings were not utilized.

The HØEGH ORCHID passed under the Verrazano-Narrows Bridge at 0701. Based on a distance of 12.25 nmi from the sea buoy to the bridge, the average speed was 11.14 knots. After passing the Verrazano-Narrows Bridge, the pilot reduced the vessel's speed to slow ahead (9 knots) and dead slow ahead (5 knots) to allow the TILLY, the inbound vessel ahead, to clear the main channel and proceed into the Bay Ridge Channel. He then increased the speed to half ahead, followed immediately by slow ahead. The Safety Board believes that the pilot, believing that reducing to slow ahead was a sufficient reduction in speed to proceed in the Upper Bay, did not realize that the established slow ahead speed on the HØEGH ORCHID was actually 9 knots.

1/ For more detailed information read "Marine Accident Report—Norwegian Cargo Vessel HØEGH ORCHID and New York Ferry AMERICAN LEGION Collision, Upper New York Bay, May 6, 1981" (NTSB-MAR-82-1).

Lloyd's Register of Shipping indicates that the sea speed of the HØEGH ORCHID is 17 knots. According to the table of propulsion settings posted in the wheelhouse, the maneuvering full ahead speed is 14 knots. A speed of 9 knots is considerably more than what would be expected when ordering slow ahead on a vessel capable of the aforementioned speeds. On vessels with fixed-pitch propellers, where speed is controlled by revolutions per minute (rpm), a slow ahead order is normally established to be about one-third of maneuvering full ahead speed. The HØEGH ORCHID's controllable-pitch propeller, however, produces thrust by varying both pitch and rpm with 15 available propulsion settings. Using the same criteria, one-third of the HØEGH ORCHID's maneuvering full ahead speed of 14 knots would be approximately 5 knots, or a propulsion setting of 1.5 on the vessel's speed control lever.

Although the pilot discussed the ship's maneuvering characteristics with the master when the pilot first took the conn, the Safety Board believes that the distance required to stop the vessel dead in the water from slow ahead was never mentioned. If this fact had been discussed, the significance of the slow ahead speed might have been more obvious to the pilot. Based on the times recorded in the HØEGH ORCHID's bellbook, the average speed of the vessel from the Verrazano-Narrows Bridge to the vicinity of buoy No. 24 was more than 10 knots. Speed in fog has historically been a concern in collision avoidance. Moderate speed cannot be expressed definitely in terms of knots, but is rather a speed which will allow sufficient time to hear fog signals and take appropriate action to reduce the likelihood of collision. At a speed of 9 knots, the HØEGH ORCHID advanced over 912 feet (0.15 nmi) per minute. Although the master of the HØEGH ORCHID testified that with the controllable-pitch propeller his vessel was highly maneuverable, the fact remains that the vessel did not stop in time to avert the collision with the AMERICAN LEGION. The Safety Board believes that the HØEGH ORCHID's speed of 9 knots was excessive in the prevailing fog conditions. Although the pilot took evasive action when he became aware of the close proximity of the ferry, the effects of the action were limited by the vessel's excessive speed.

As a result of its investigation, the National Transportation Safety Board recommends that the Høegh Lines (U.S.), Inc.:

Review the appropriateness of the currently established maneuvering speeds of the HØEGH ORCHID. (Class II, Priority Action) (M-82-8)

BURNETT, Acting Chairman, and McADAMS, GOLDMAN, and BURSLEY, Members, concurred in this recommendation.



By: Jim Burnett
Acting Chairman