

**NATIONAL TRANSPORTATION SAFETY BOARD**  
**WASHINGTON, D.C.**

ISSUED: October 29, 1979

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 Forwarded to:

Captain Pat J. Neely, Jr.  
 President  
 American Pilots Association  
 1055 Thomas Jefferson Street, N.W.  
 Washington, D.C. 20007

SAFETY RECOMMENDATION(S)

M-79-111

At 0750 c.s.t. on December 4, 1977, the Spanish motor tankship RIBAFORADA rammed the moored barge MB-5, three wharves, and the cargo ship M/V TIARET on the lower Mississippi River near New Orleans, Louisiana. Two of the RIBAFORADA's cargo tanks were breached. Property damage was estimated to be \$921,000. 1/

The RIBAFORADA was being navigated downriver near Algiers Point by a Crescent River Port Pilot when the rammings occurred. The Safety Board concluded that the pilot's limited familiarity with the vessel's maneuvering characteristics and his impaired attentiveness due to fatigue contributed to the accident.

There is little margin for error when maneuvering a large ship such as the RIBAFORADA around a sharp bend. The Mississippi River is about 2,100 feet wide at Algiers Point, and the outside and center of the bend curves at approximate radii of 3,600 feet and 2,500 feet, respectively. The curvature of the RIBAFORADA's track had an approximate radius of 3,600 feet. Generally, to remain a safe distance off the left descending bank, the RIBAFORADA would have had to start its turn earlier. Merely keeping to the right above the bend would not have kept the RIBAFORADA a safe distance off the left descending bank below the bend. The turn should have been started nearly a minute earlier and keeping more to the right would have enhanced the safety of the maneuver.

The Safety Board has reviewed the maneuvering characteristics for tankships about the same size as the RIBAFORADA and noted that factors such as rudder size and condition of loading have a significant effect on their maneuverability. In this instance the RIBAFORADA's turning radius would have been increased because its rudder was not fully immersed. Therefore, the maneuverability of large tankships cannot exclusively be determined from data or experience relating

1/ For more detailed information read "Marine Accident Report--Spanish Motor Tankship RIBAFORADA Collision with Barge MB-5, Three Wharves, and Cargo Ship M/V TIARET, New Orleans, Louisiana, December 4, 1977" (NTSB-MAR-79-15).

to ships of similar size because other factors can significantly alter maneuvering performance. Because of this it is important that pilots determine the maneuvering characteristics of vessels before assuming control of navigation. Had the RIBAFORADA's pilot initiated the turn with full right rudder, he might have averted the ramming. However, that was not his normal practice and without knowledge of the RIBAFORADA's maneuvering characteristics he would not have known beforehand to do this.

The necessary expertise to navigate the RIBAFORADA around Algiers Point was split between the pilot and master. The master was more specifically familiar with the maneuvering performance of his vessel and the pilot was expected to have extensive knowledge of local factors, such as current velocities, depths, and navigational practices important to navigation. Because the master and pilot did not discuss the maneuvering characteristics of the RIBAFORADA and the essential features of the downriver voyage (including rounding Algiers Point), neither was fully prepared to control the vessel's navigation. The pilot could not properly plan the approach to Algiers Point, determine when to start the turn, and determine how much rudder to apply. The master was handicapped in supervising the pilot's actions or in monitoring the vessel's progress in the turn around Algiers Point because he did not know the pilot's maneuvering plan.

The RIBAFORADA's master did not advise the pilot of the vessel's maneuvering characteristics. Without otherwise determining the vessel maneuvering characteristics, the pilot assumed navigational control of the RIBAFORADA when it got underway. The pilot did not initiate the turn until about 1 minute after the master's expressed concern that the RIBAFORADA was too close to the left descending bank. The RIBAFORADA was not sufficiently maneuverable to make the turn around Algiers Point undertaken by the pilot.

The pilot could have acted to avoid the accident by requesting the necessary maneuvering information and discussing critical maneuvers with the vessel's master before assuming navigational control. This action would have provided an important opportunity for the master to become familiar with the pilot's plan, in addition to providing the pilot with important navigation information.

The fact that the pilot got less than 4 1/2 hours sleep in the 18 hours preceding the accident, and the observations of the master, second mate, and helmsman of the RIBAFORADA that the pilot appeared tired on boarding, indicate that the pilot may have been fatigued at the time of the accident. Crescent River Port Pilots apparently are expected to serve in a duty capacity for 8 to 9 hours and then return to duty for a similar length of time after only 4 to 5 hours rest. This schedule is not considered compatible with the safe operation in any mode of transportation. The pilot suffered a stroke about 1 year before the accident. Strokes often indicate a chronic disease, and normally such persons are more susceptible to fatigue. The Safety Board considers pilot fatigue as a contributing factor in this accident.

The duty of piloting a large tankship involves a great responsibility. The RIBAFORADA and surrounding wharves and vessels could have been severely

damaged by an explosion if the gases in the vessel's cargo tanks had ignited from the heat generated when those tanks were breached during the ramming. With such great risks, every effort should be made by those who have authority over pilots to assure that they receive adequate rest and are physically fit for duty.

The Board of River Port Pilot Commissioners for the Port of New Orleans and the Crescent River Port Pilots Association are responsible for the qualification of member pilots and their assignments. The association should arrange duty assignments so that its pilots can be assured adequate rest before going on duty. Additionally, physical standards should be set to assure that the pilots are able to cope with their pilot duties. Individual pilot's qualifications should be determined by physical examination before their initial admission to membership and before returning to duty after a serious illness.

In view of the risks involved and other factors discussed in detail in our accident report, the Safety Board concludes that additional navigation safety efforts are needed on the Mississippi River. The National Transportation Safety Board has recommended that the Board of River Port Pilot Commissioners for the Port of New Orleans cooperate with the Crescent River Port Pilots Association to:

Include in the prescribed procedures for pilots under their jurisdiction a requirement that pilots specifically ascertain vessel maneuvering characteristics before getting underway, and that they discuss with the master before getting underway the essential features and relevant checkpoints for maneuvers to be undertaken. (Class II, Priority Action) (M-79-107)

Establish guidelines for pilot duty periods which provide for sufficient rest to avoid fatigue. (Class II, Priority Action) (M-79-108)

Develop physical standards for pilots to provide reasonable assurance that they are qualified for duty as pilots. (Class II, Priority Action) (M-79-109)

Require pilots to pass an initial physical examination as a condition for membership and before returning to duty after a serious illness. (Class II, Priority Action) (M-79-110)

The Crescent River Port Pilots Association is a member organization of your association. The Safety Board believes that the American Pilots Association could assist its members by developing safety guidelines which encompass the above recommendations for its member organizations. We realize that, because of variations in the local laws governing pilotage and other local factors, uniform standards might not be applicable to all association members. However, guidelines could be written for consideration and adaptation by local pilot associations.

Therefore, the National Transportation Safety Board recommends that the American Pilots Association:

Develop and disseminate, for consideration by its member associations, safety guidelines which:

- prescribe procedures for pilots to specifically ascertain vessel maneuvering characteristics before getting underway, and that they discuss with the master before getting underway the essential features and relevant checkpoints for maneuvers to be undertaken;
- set pilot duty periods which provide for sufficient rest to avoid fatigue;
- prescribe physical standards for pilots to provide reasonable assurance that they are qualified for duty as pilots;
- require pilots to pass an initial physical examination as a condition for membership and before returning to duty after a serious illness.  
(Class II, Priority Action) (M-79-111)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in the above recommendation.

  
By: James B. King  
Chairman