

M-162

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: July 10, 1981

Forwarded to:

Honorable Drew Lewis
Secretary
Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

M-81-46 through -51

At 0140 c.s.t., on November 5, 1980, while towing the disabled tanker SS AMOCO WISCONSIN on Traverse Bay, Michigan, the tug M/V LAUREN CASTLE was tripped by its tow, flooded, and sank. The CASTLE's engineer was lost and is presumed dead. The WISCONSIN sustained minor hull damage. The WILLIAM C. SELVICK, an assisting tug, was unaffected. The total for the tug loss and tanker damage was estimated at \$303,000. 1/

The AMOCO WISCONSIN, an inspected 4,432-gross-ton tanker, carrying 48,787 barrels of gasoline at a draft of 19 feet 5 inches forward and 20 feet 9 inches aft, suffered main engine damage at 2015 on November 3, about 3 statute miles off Cat Head Point, Michigan. Because the engine required repairs which the crew could not readily accomplish at sea and because his vessel was in a dangerous location if a storm developed, the master radiotelephoned the U.S. Coast Guard and requested towing assistance. He similarly notified the vessel's owners by radio.

The Coast Guard station at Charlevoix, Michigan, dispatched the Coast Guard Cutters MESQUITE, MOBILE BAY, and MACKINAW to assist. The MESQUITE took the WISCONSIN in tow at 0125 on November 4, escorted by the MOBILE BAY and the MACKINAW. The MESQUITE delivered the WISCONSIN into Omena Bay, Michigan, where the tanker was anchored at 0935. The MESQUITE and the MACKINAW then departed while the MOBILE BAY remained near the WISCONSIN pending the arrival of commercial towing assistance.

1/ For more detailed information, read Marine Accident Report--"Tripping and Sinking of the Tug LAUREN CASTLE while towing the Tanker SS AMOCO WISCONSIN on Traverse Bay Michigan, November 5, 1980" (NTSB-MAR-81-9).

The commercial tugs, LAUREN CASTLE, 180-gross tons, and the WILLIAM C. SELVICK, 142-gross tons, departed Sturgeon Bay, Wisconsin, at 1210 on November 4. The CASTLE towed the SELVICK across Lake Michigan to reduce the tugs' fuel consumption. Although both of the tugs were equipped with radar, the two sets on the CASTLE and the single set on the SELVICK malfunctioned during the lake crossing. After arriving and securing their tugs alongside the WISCONSIN at 2315, the tugmasters discussed the towing arrangement with the tanker's master and chief mate in the WISCONSIN's pilothouse. The WISCONSIN was destined for the dock of Total Petroleum, Inc., at Traverse City, Michigan. During the discussion, the WISCONSIN's master offered the use of the tanker's rigged 110-foot towing hawser. Although the CASTLE's master said he would have preferred to use a longer towline, he accepted the towline and it was attached to the tanker's stem near the waterline. The CASTLE's master said he preferred to wait until daylight to make the tow because of the tug's inoperative radar and because it would be easier to see the towline, buoys, and obstructions. The WISCONSIN's master wanted to proceed immediately, and he offered to provide the tugmasters with courses to steer and navigational and radar information en route; he also said that his tanker's bowthrusters could be used for maneuvering if necessary. A communication plan was agreed to, and no communication problems were subsequently encountered.

The towing of the WISCONSIN began at 2350 with the CASTLE positioned forward of the WISCONSIN as the towing tug and the SELVICK positioned aft as the steering tug. The towing proceeded initially on course 170°. After 1 to 1 1/2 hours, the WISCONSIN's master recommended by radiotelephone that the CASTLE's master change course to 180°. About 20 minutes later, the WISCONSIN's master recommended a course of 185°. No problems were encountered while making the course changes.

At 0135, the WISCONSIN's master observed that the CASTLE was about one point (11 1/4 degrees) on his vessel's port bow. About that time, the CASTLE's master said that the WISCONSIN's bow appeared to sheer to its starboard about 38° to 40°, but because the sky was pitch dark, the water was dark, and the WISCONSIN's hull was black, the tugmaster was uncertain of the actual degree of sheer. There was no evidence aboard the WISCONSIN that a sheer had occurred. Because the CASTLE's master observed that the WISCONSIN appeared to be "diving", he had a deckhand have a fireaxe handy at the towing bitt in the event the tug might be "tripped-up." In an effort to correct the WISCONSIN's sheer, the CASTLE's master requested by radiotelephone that the SELVICK's master "straighten out" the tow by backing his tug's engine full speed to slow the WISCONSIN. Meanwhile, the CASTLE was rotating in an arc to the left about the WISCONSIN's stem with the towline serving as a radius. When the WISCONSIN's momentum carried it forward and it overtook the CASTLE, the tug, as a result, heeled to starboard taking water on the starboard deck and aft to the transom. The CASTLE's stern struck the WISCONSIN's port side at the number 1 port cargo tank. After the CASTLE's stern rebounded and struck a second time, a deckhand finally cut the towline at the towing bitt. The CASTLE's hull began to flood and the tug sank, stern first, in 390 feet of water about 1.4 miles from Lee Point, at 0140 on November 5.

When the CASTLE was sinking, the master ordered the deckhands to jump into the water. He then obtained a lifejacket and thought that the engineer had also gotten a lifejacket and was following him. The tugmaster and the two deckhands were rescued by the SELVICK and the WISCONSIN. The engineer was not seen after the tug sank, and his body was not recovered. At the formal hearings into the accident, held jointly by the U.S. Coast Guard and the National Transportation Safety Board (NTSB), it was found that the manning of the commercial tugs was not in accordance with the U.S. Navigation Laws and that the Coast Guard had no record of the CASTLE's engineer having been issued any seaman's document.

This is one of several accidents that the Safety Board has investigated involving tug/towboat tripping and sinking which resulted in the loss of life. As the result of the M/V MARYLAND foundering in Albermarle Sound on December 18, 1971, ^{2/} the Safety Board issued recommendation M-74-6. Subsequently, the Coast Guard in conjunction with the Towing Industry Advisory Committee (TIAC) began preparing "A Guide to Safety in Towing." TIAC, however, was disestablished on March 31, 1977, and the towing guide was not published.

The Safety Board is concerned that uninspected vessels on the Great Lakes, and perhaps other U.S. waterways, are not properly observing the U.S. Navigation Laws and Regulations regarding adequate and properly qualified manning and hours of work when engaged on operations exceeding 12 hours. Because of the difficulty in policing the numerous vessels which may be so engaged, the Safety Board hopes that the Towing Safety Advisory Committee (TSAC) can serve to increase the industry awareness of the safety problems which result. The Board is also concerned about how quickly the LAUREN CASTLE flooded and sank.

The Board believes that TSAC can become the best forum for considering and evaluating vessel designs, operating procedures, and equipment design and use. The early publication of the "Guide to Safety in Towing" would be particularly helpful in providing a tool for the training of persons entering the towing industry, and it is hoped that with the Coast Guard this effort can be given priority.

Therefore, the National Transportation Safety Board recommends that the Department of Transportation, through its Towing Safety Advisory Committee:

Establish policy positions and develop courses of action on the following towing and manning safety problems related to uninspected towing vessels:

Provision for qualified reliefs for masters or operators of towing vessels engaged in Great Lakes operations exceeding 12 hours. (Class II, Priority Action) (M-81-46)

Proper manning in compliance with Great Lakes navigation laws limiting work to no more than 12 hours in any consecutive 24-hour period. (Class II, Priority Action) (M-81-47)

The safe use of short, stem-secured towing hawsers, and consideration of a quick release mechanism on the towed vessel. (Class II, Priority Action) (M-81-48)

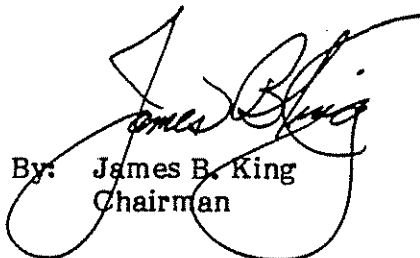
The adequacy of maintenance schedules for radar equipment on towing vessels. (Class II, Priority Action) (M-81-49)

The adequacy of flooding compartmentation on tugs and towing vessels. (Class II, Priority Action) (M-81-50)

^{2/} Report No. USCG/NTSB-MAR-74-3. Released July 11, 1974.

Completion, in conjunction with the Coast Guard, of the "Guide to Safety in Towing" manual, and its early distribution to the maritime industry. (Class II, Priority Action) (M-81-51)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in these recommendations.



By: James B. King
Chairman