

Log M-247

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: May 10, 1984

Forwarded to:

Mr. E. K. Edwards  
President  
TECO Marine, Inc.  
Post Office Box 18027  
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SAFETY RECOMMENDATION(S)

M-84-22 and -23

On the morning of October 12, 1983, the USS WILLIAM V. PRATT, a U.S. Navy guided missile destroyer, was inbound in Pensacola Bay en route to the U.S. Naval Air Station, Pensacola, Florida, for fueling. While the destroyer was backing and turning to port, tension on a towline heeled one of the two assisting tugs, the TECO #2, so far to starboard that water entered the tug's hull through open main deck doors, and the tug sank. No loss of life resulted from this accident, but two persons aboard the TECO #2 were injured seriously. The damage to the tug and salvage costs totaled an estimated \$750,000. <sup>1/</sup>

As the PRATT began backing its engines at an accelerating rate, the YTM 544, the second tug, was pulling at full power on the port bow of the PRATT, causing the ship to turn to port. During this process the TECO #2 appeared to move rapidly away from the side of the PRATT, until all of the slack was removed from the quarter line and the tug assumed a 45° angle to the ship. This apparently rapid movement of the TECO #2 away from the PRATT was partly due to the force of the water, which was thrown forward by the PRATT's backing propeller and which struck the starboard side of the underwater portion of the hull of the tug. It was also due partly to the fact that, as the PRATT's bow moved to port under the influence of the backing YTM 544, the stern of the ship moved to starboard, away from the TECO #2, and partly to the motion astern that the PRATT developed while backing.

Since the TECO #2 was held in position relative to the PRATT by the quarter line, the backing and turning of the destroyer generated forces that acted upon the underwater portion of the hull of the tug. These underwater forces were counteracted by opposite forces transmitted through the quarter line. Thus, a listing moment was created, because the point of attachment of the quarter line on the TECO #2 was above the center of the forces acting on the underwater hull. This moment caused a continuous roll to starboard by the TECO #2, so that the starboard deck edge became submerged, water began entering the hull through an open main deck door to the engine room, and the tug flooded and sank.

<sup>1/</sup> For more detailed information, read "Marine Accident Report—Sinking of the U.S. Tug TECO #2 While Assisting in the Docking of the USS WILLIAM V. PRATT, Pensacola, Florida, October 12, 1983," (NTSB-MAR-84-04).

Despite the fact that he received no warning that the PRATT was going to reverse its engine, the operator of the TECO #2 retained primary responsibility for the safety of his tug. He fully recognized that the quarter line represented a potential hazard to the tug while it tethered the TECO #2 to the PRATT. He also knew that the potential hazard could be removed by releasing the quarter line. He should have anticipated that the PRATT would reverse the engines at some time while his tug was alongside, and he should have instructed his deckhands concerning the need to release or cut the line in an emergency. However, he did not anticipate that problems might arise, nor did he order any precautions taken. He did not require his deckhands to tend the quarter line continuously as did the operator of the YTM 544. Furthermore, he allowed his deckhands to secure the line on a cleat without requiring that one deckhand stand by with a fire axe to cut the line in an emergency; thus, it became impossible for the line to be released quickly when it jammed on the cleat. Compounding these omissions, the operator of the TECO #2 allowed the main deck doors to remain open after he secured his tug alongside of the PRATT. The failure of the operator to take these basic precautions to safeguard the TECO #2 ultimately resulted in the sinking of the tug.

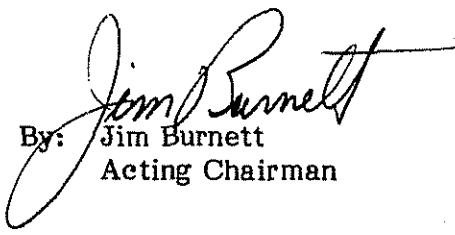
Therefore, the National Transportation Safety Board recommends that TECO Marine, Inc.:

Require company tugboat operators to assign a deckhand to tend continuously each working line that connects the tugboat to a ship engaged in docking maneuvers. (Class II, Priority Action) (M-84-22)

Require company tugboat operators to keep all exterior main deck doors closed while the tug is tied alongside a ship engaged in docking maneuvers. (Class II, Priority Action) (M-84-23)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (P.L. 93-633). The Safety Board is vitally interested in any actions taken as a result of our safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter.

BURNETT, Acting Chairman, GOLDMAN and GROSE, Members, concurred in these recommendations. BURSLEY, Member, did not participate.

  
By: Jim Burnett  
Acting Chairman