

## PROBABLE CAUSE

The National Transportation Safety Board finds that the cause of this casualty was a combination of the angle of strain on the shortened towing hawser and the sudden increase in strain imposed on the THERESA F. as the relatively large barge FREEPORT I took a sheer to her starboard, tripping the towing vessel, and capsizing her. This sheer resulted from a combination of wind and sea conditions, and the skegs' having been set inboard for pushing the barge. Malfunctioning of the three generators on the barge resulted in the skegs' improper positioning for towing astern. The incorrect analysis by the company official and master, of the importance of maintaining the 10-kw. generator in operating condition, as an integral part of the backup system, were causal factors. Also, the master's failure to position the skegs for towing astern prior to disconnecting the electric power from the THERESA F. was a significant causal factor. Other factors contributing to the casualty included: the deterioration of the weather; the master's lack of offshore experience with tows fitted with movable skegs; failure to keep the barge under constant surveillance; and lack of a constant-tension winch.


## RECOMMENDATIONS

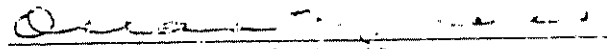
The Safety Board concurs in the recommendations of the Marine Board of Investigation which were approved by the Commandant. In addition, it is recommended that:

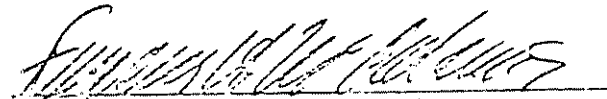
1. The Coast Guard, in its study of towing vessel operations, include the need for a constant-tension winch on offshore towing vessels. This is considered of particular importance on large oceangoing tug-barge units under construction or operation. M-71-3
  2. The Coast Guard require battery-powered, waterproof lights be provided with life preservers, which are required by present regulations. M-71-4
  3. The Coast Guard, in its study, consider requiring inflatable liferafts, on offshore towing vessels, of sufficient capacity to accommodate all persons on board. M-71-5
  4. Operators of offshore towing vessels and seagoing barges utilize operational analysis to develop operating instructions, manual, or checkoff lists which will clearly convey guidelines for safe operating methods, including the proper use of electrical, steering, and towing systems. M-71-6
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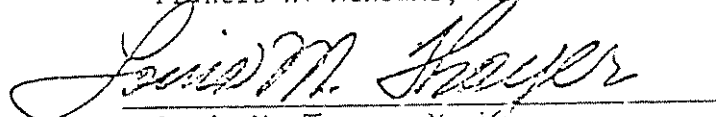
By THE NATIONAL TRANSPORTATION SAFETY BOARD:

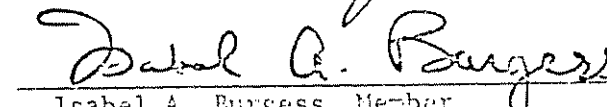
Adopted this 31 day of February, 1971:

  
John H. Reed, Chairman

  
Oscar M. Laurel, Member

  
Francis H. McAdams, Member

  
Louis M. Thayer, Member

  
Isabel A. Burgess, Member