

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: March 23, 1978

Forwarded to:  
Mr. Robert T. Young  
Chairman  
American Bureau of Shipping  
45 Broad Street  
New York, New York 10004

SAFETY RECOMMENDATION(S)  
M-78-14 and -15

About 1915, e.s.t., on November 10, 1975, the Great Lakes bulk cargo vessel SS EDMUND FITZGERALD, with 29 crewmen and fully loaded with taconite pellets, sank in eastern Lake Superior at 46°59.9'N, 85°06.6'W, approximately 17 miles from the entrance to Whitefish Bay, Michigan. The ship was en route from Superior, Wisconsin, to Detroit, Michigan, and was proceeding at a reduced speed in a severe storm. No distress call was heard, and no survivors or bodies were located, although the vessel's two inflatable liferafts, several personal flotation devices, and other debris were found.

U.S. Coast Guard Marine Inspectors, during the winter of 1976 and the spring of 1977, and Safety Board personnel, during the summer of 1977, observed that hatch covers on some Great Lakes bulk cargo vessels were not weathertight as required by the Great Lakes Load Line Regulations. This nonweathertight condition existed even though the hatch covers were in place and their clamps were fastened. In order to be weathertight, the hatch cover clamps must be properly adjusted. It was observed that many of the hatch cover clamps were not properly adjusted.

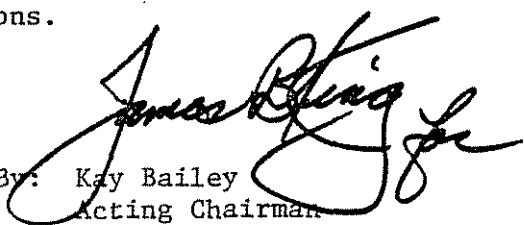
The investigation of this accident uncovered several problems related to the 1973 Great Lakes Load Line Regulations. Because the reduced freeboards under these regulations increased the permitted drafts on Great Lakes vessels, and because of the shallow water at some loading and unloading docks and in restricted-depth waterways, "groundings" of vessels with these deeper drafts have become common. Damage or bottom wear caused by these "groundings" could initiate a massive structural failure in a seaway.

Since the annual inspections of Great Lakes bulk cargo vessels are currently in progress, the National Transportation Safety Board recommends that the American Bureau of Shipping:

Insure that the closures on the freeboard deck of all Great Lakes bulk cargo vessels are capable of being made weathertight in accordance with the annual survey requirements of 46 CFR 42.09-40. (Class II, Priority Action) (M-78-14)

Investigate, together with the U.S. Coast Guard, the effects that the deeper drafts permitted under the 1969, 1971, and 1973 amendments to the Great Lakes Load Line Regulations have had on the structural strength of Great Lakes bulk cargo vessels. Note any damage or bottom plating wear over the next 2 years caused by the "groundings" of these vessels during loading, unloading, or navigation in restricted-depth waterways. Evaluate the effect this damage and wear might have on the structural strength of these vessels in a seaway, and jointly report the findings. (Class II, Priority Action) (M-78-15)

BAILEY, Acting Chairman, McADAMS, HOGUE, and KING, Members, concurred in the above recommendations.

  
By: Kay Bailey  
Acting Chairman