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DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D. C. 20591

February 8, 1968

OFFICE OF
THE CHAIRMAN

Admiral Willard J. Smith,
Commandant, U. S. Coast Guard,
Washington, D. C. 20591.

Dear Admiral Smith:

In reviewing the Marine Board of Investigation on the sinking of the SS DANIEL J. MORRELL, and your action on that report, the National Transportation Safety Board is concerned that a similar tragedy may occur to other bulk carriers under similar circumstances. The fractures sustained by the sister ship SS EDWARD Y. TOWNSEND in the same vicinity and under like conditions substantiate this concern. Another example is the breaking and sinking of the SS CARL D. BRADLEY in Lake Michigan on November 18, 1958, which was attributed to an undetected structural weakness or defect.

In the MORRELL case, the recommendations of the Marine Board should adequately cope with emergencies resulting from fractures and other accidents in these vessels. We are also concerned with measures to prevent the failure of the hull girder in vessels of that general type.

We share your interest and responsibility for the prevention of accidents. Accordingly, we request a summary of the results of your special inspections of the older Great Lakes vessels, and of joint studies now in process, at an early date. In addition, information is requested concerning current plans for construction of replacement vessels, which seems to be the ultimate solution to this problem. A list of the current U. S. Great Lakes bulk carrier fleet, giving date of construction, size, owner, and other significant data would also be helpful to the Board.

While we fully appreciate the economic aspects involved in methods that would help prevent failure of hull girders, from a safety standpoint, we recommend that you consider further action as follows:

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A. Strengthen the deck and/or sheer strake structure in the midships area in vessels over 400 feet long constructed prior to 1948, or curtail the operation of these vessels during specific days and period of the fall season when adverse weather and wave conditions approach or exceed those encountered by the SS DANIEL J. MORRELL.

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B. Based on the special inspection program, implement a progressive structural renewal program on an individual ship basis.

The Safety Board recognizes the efforts of all those involved in the research and study of the forces and effects of sea and weather on the safety of vessels, and urges the continuation and intensification of such studies to develop objective technical criteria relating hull structural integrity to weather, sea, and other conditions of operation.*

* The Chairman and Members McAdams and Laurel concur in the observations made with respect to the desirability of the continuation and intensification of efforts to develop better objective criteria relating to hull structural integrity, but wish still further to stress and amplify on the importance of such a program.

Specifically, they have this to say:

"Completely adequate information was not available to the master of the SS MORRELL as to the hull strength of his vessel under temperature and sea conditions forecast and observable at the time he determined to leave port. As you know, the master of another vessel of nearly identical design also left port and proceeded in the vicinity of the SS MORRELL under identical temperature and sea conditions and was fractured in the same manner, but to a lesser degree. Both ships, however, had exceeded the margins of fracture resistance and it seems clear that the master of neither ship had reason to expect what happened. We recognize that efforts are constantly being made by the Coast Guard and private organizations to learn more of the forces and effects of sea and weather on the safety of vessels, and it is apparent that this tragedy has resulted in a continuation and intensification of them.