

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

SP-20
Ray M-303

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Forwarded to:

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SAFETY RECOMMENDATION(S)

M-85-107

On January 31, 1985, the U.S. fishing vessel ATLANTIC MIST was en route to Ocean City, Maryland, with a full load of clams. Shortly before 1915, the master discovered flooding in the fish hold. The vessel's crewmembers, unable to control the flooding, donned exposure suits and at 1946 abandoned the sinking vessel. Of the five crewmembers aboard, one died and one is missing and presumed dead. The ATLANTIC MIST was valued at \$300,000. ^{1/}

The exposure suits carried on board the ATLANTIC MIST had been manufactured by the Imperial Manufacturing Company (Imperial) of Bremerton, Washington. The suits were standard adult size and U.S. Coast Guard (USCG) approved.

The USCG began approving exposure suits in 1978. On November 1, 1980, the exposure suit regulations for Great Lakes vessels became effective. On August 6, 1984, additional exposure suit regulations became effective which require exposure suits on most oceangoing and coastwise vessels and mobile offshore drilling units. Before the Great Lakes rules became effective, the USCG notified Imperial of modifications needed on its exposure suits to maintain USCG approval of the suits. Because accidental separation of the inflator tube assembly had occurred, one modification required that clamps be used over the outside of the inflator tube assembly for the auxiliary buoyancy ring where the two parts of the tube are connected. Separation of the inflator tube assembly, where the two pieces are joined, prevents inflation of the auxiliary buoyancy ring and allows an inflated ring to deflate.

In response to the USCG required modification, Imperial began manufacturing exposure suits with a clamp over the inflator tube connection, which solved the separation problem. However, the company did not notify owners of exposure suits not equipped with these clamps that changes had been made to the suit, or of problems that could occur with the unmodified inflator tubes. The master of the ATLANTIC MIST stated that he had never received any notice of a recall of the exposure suits or any notice of defects in the suits.

^{1/} For more detailed information, read Marine Accident/Incident Summary Report--"Sinking of the United States Fishing Vessel ATLANTIC MIST, January 31, 1985, about 15 nmi East of Chincoteague Island, Virginia" (NTSB/MAR-85/03/SUM).

The exposure suits worn by the crewmembers of the ATLANTIC MIST were not equipped with clamps over the connection of the separate parts of the inflator tube. When the inflator tube assembly separates, the auxiliary buoyancy ring cannot be inflated and although the wearer's nose and mouth are kept at least 2 inches above the surface of the water, the suit does not aid the person in keeping his head tilted above the horizontal. In rough seas 8- to 10-feet in height, such as those at the time of the accident, it would be very difficult to prevent waves from submerging the wearer's face even if the face flap is being used. The crewmembers of the ATLANTIC MIST stated that they had to assist other crewmembers, whose inflator tubes had separated, in keeping their heads above the water. If the wearers had been alone, or the other crewmembers had been injured and unable to support them, the separation of the inflator tube would have greatly reduced the wearers' chances of survival. The chances of the mate's survival might have been greater if the owner had been notified of a defect in the inflator tube assembly and it had been modified. The Safety Board believes that the manufacturer should have notified the distributors and purchasers of the exposure suits that were not equipped with clamps on the inflator tubes of the problems that had occurred, and should have provided a means to modify the suits.

Therefore, as a result of its investigation, the National Transportation Safety Board recommends that the Imperial Manufacturing Company:

Notify distributors and purchasers of the Imperial Manufacturing Company exposure suits, which were approved by the U.S. Coast Guard before clamps were required on the inflator tubes, that the inflator tube assembly for the auxiliary buoyancy ring may separate, thereby rendering the auxiliary buoyancy ineffective, and provide the distributors and purchasers with a means to modify the suits. (Class II, Priority Action) (M-85-107)

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" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of our safety recommendations. Therefore, we would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation M-85-107 in your reply.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in this recommendation.


By: Jim Burnett
Chairman