



ASSESSMENT OF THE RESPONSE TO MARINE SAFETY RECOMMENDATION M96-10

Great Lakes Legislative Harmonization of Self-Unloader Fire Detection and Extinguishing Requirements

Background

In the early morning hours of 31 December 1994, a fire broke out in the conveyor belt system of the "AMBASSADOR" during the unloading of a cargo of rock phosphate. The fire subsequently spread to the vessel's accommodation, and the combined efforts of the ship's crew and several shore-based fire departments were required to bring the fire under control before it was fully extinguished, some 28 hours later. There was no damage to harbour installations, no serious injury and no reported pollution as a result of the fire. The Board determined that, when the conveyors were stopped, a section of one of the conveyor belts ignited, probably because the belt was in contact with an overheated roller. The roller probably overheated due to a bearing failure or to being jammed with refuse which ignited after contacting the overheated bearing.

Board Recommendation M96-10 (25 November 1996)

On the Great Lakes, self-unloading vessels are the primary means of transporting dry bulk cargoes. At present, some 80 self-unloaders operate primarily on the Great Lakes and connecting waterways; over 30 of these vessels are Canadian, the remainder are registered in the United States. Since these vessels are regulated by Canadian and U.S. requirements only, the Board recommended that:

The Department of Transport, in conjunction with the appropriate authorities in the United States, seek harmonization in the requirements for fire detection and extinguishing systems on Great Lakes self-unloading vessels.

M96-10

Transport Canada's response to Recommendation M96-10 (25 February 1997)

The Minister of Transport agrees with the recommendation. Discussions are being held with the United States Coast Guard (USCG) which will ensure that the Canadian requirements being developed are compatible with United States requirements.

Board assessment of the response to M96-10 (17 January 2013)

TC has been working with the industry to develop new requirements for fixed fire extinguishing systems in the cargo tunnel and associated areas. Once test results of a prototype system are evaluated, TC will formulate draft requirements for the extinguishing systems. TC

indicates that discussions are being held with the United States Coast Guard to ensure that Canadian and US requirements for these systems are compatible. TC also states that it will seek IMO support in addressing the international need for enhanced fire detection and extinguishing systems in the tunnel areas of self-unloaders.

With respect to the issue of readiness of existing fire stations onboard self-unloading vessels, a Ship Safety Bulletin will be issued to bring attention to this concern. All of the above actions could redress the safety deficiencies highlighted by Board recommendations M96-09 to M96-12. However, again no indication has been given with respect to forecast completion date. Therefore, the responses to Recommendations M96-09 to M96-12 can only be assessed at this time as having **Satisfactory Intent**.

TSB action

The file was assigned an **Inactive** status in 1997. On 17 December 2013, the TSB changed the status to **Active** and requested that TC provide an update on the status of this recommendation.

Transport Canada's response to M96-10 (29 January 2014)

Transport Canada undertook a six-phase research study between 2001 and 2003 to evaluate the recommendation. The study reviewed the feasibility of fire protection options for tunnel areas on Canadian self-unloaders. It was concluded that the best option would be the use of fire detection along with manual hose stations for control of fire events in the tunnel space and an emphasis on effective manual fire-fighting capabilities. To address the concerns of stakeholders with regard to further development of standards, it was decided by the R&D Review and Direction Committee of Marine Safety that a feasibility study should be conducted before a decision to proceed further with the development of additional requirements.

The feasibility study completed in March 2004 concluded, after reviewing the previous reports and interviewing stakeholders, that it has not been demonstrated that any fixed fire-fighting or detection system will be effective, as would be necessary to justify its installation costs, and that the improved procedural approaches to fire prevention that have been adopted voluntarily by the operators in recent years appear to be effective approaches to risk mitigation. Transport Canada had considered the conclusion of the study in 2004 and concurred with the findings, and therefore, no further regulatory amendments were pursued.

Board reassessment of the response to M96-10 (31 March 2014)

The Board notes TC's response that the "improved procedural approaches to fire prevention that have been adopted voluntarily by the operators in recent years appear to be effective approaches to risk mitigation." Although this recommendation seeks harmonization between the Canadian requirements for fire suppression on self-unloaders with the American requirements, the risk has been analyzed by both the TSB and by TC as low. (Refer also to Board reassessment of the response to M96-09 [31 March 2014] in Assessment of the response to Marine Safety Recommendation M96-09: Tunnel fire protection on Canadian self-unloaders.)

Therefore, the assessment of the response to recommendation M96-09 has been changed to **Fully Satisfactory**.

Next TSB Action

The deficiency file is now **Closed**.