



DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590

16180

[49 CFR Parts 173, 174]

[Docket No. HM-60]

TRANSPORTATION OF HAZARDOUS
MATERIALS

Request for Public Advice on Speed
Restriction on Tank Cars

The Hazardous Materials Regulations Board is considering amending Parts 173 and 174 of the Department's Hazardous Materials Regulations to cope with the increasing number of railroad accidents involving DOT Specifications 112A and 114A tank cars transporting liquefied flammable gas. Although Docket No. HM-38; Amendment No. 179-4 limited the capacity of tank cars built after November 30, 1970, to 34,500 gallons, existing cars carrying liquefied flammable gas with a capacity of over 25,000 gallons appear to have caused a major portion of the more serious difficulties encountered to date.

The sequence of events in accidents such as occurred at Laurel, Miss., and Crescent City, Ill., may be briefly summarized. Following derailment of the train, one or more tank cars became punctured, releasing their contents which, in most cases, then burst into flame. The volume in these cars is such that a fire of considerable magnitude develops which heats and burns other cars in the immediate area. Often liquefied flammable gas moves in groups of more than five tank cars coupled together. When punctured and ignited, the fire impinges on the uninsulated shells of adjacent tank cars, causing them to heat, lose tensile strength and explode. It is usually a very short time between derailment and explosion of these adjacent tank cars. Such explosions occur despite the safety relief devices with which these cars are equipped.

The Board believes that placing certain restrictions on speed of trains in which liquefied flammable gas tank cars are included will significantly reduce the likelihood of derailment and potential impact on the cars. The Board is therefore considering proposing, among other things, that the speed of trains carrying liquefied flammable gas in DOT Specifications 112A and 114A tank cars having a capacity of 25,000 gallons or more, be limited to a maximum of 25 miles per hour when moving through incorporated

communities, unless one of the following provides qualified mechanical or visual surveillance of the train within 35 miles of the limits of such communities:

- a. Hotbox detector;
- b. Initial terminal interchange or 500-mile inspection point;
- c. Roll-by inspection at crew change point; or
- d. Qualified railroad personnel adjacent to the track.

A positive indication of satisfactory surveillance or inspection of the train would have to be received by the train crew in the caboose, and that information would then have to be transmitted to the engineman.

The Board is also considering proposing that shippers, when offering carriers loaded tank cars of 25,000 gallons or greater capacity be required to designate on shipping orders for inclusion in waybills that such tank cars are loaded with liquefied flammable gas and that the carrier should institute the special handling provisions which would be necessary in moving those cars.

Interested persons are invited to give their views on the speed restriction the Board is considering proposing as part of the solution to a problem it considers too complex to be solved by a single change to the regulations. Therefore, public advice is also specifically requested as to additional means for coping with the increasing number of railroad accidents involving these tank cars, including lower filling densities, addition of insulation, etc., to be considered as part of an overall system aimed at significantly reducing the loss of hazardous materials in such accidents. Comments, identifying the docket number, should be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, D.C. 20590, prior to December 16, 1970. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, both before and after the closing date for comments.

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CARL V. LYON,
Acting Administrator,
Federal Railroad Administration.

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