



DEPARTMENT OF TRANSPORTATION
MATERIALS TRANSPORTATION BUREAU
WASHINGTON, D.C. 20590

18093

Office of Hazardous Materials Operations
[49 CFR Part 178]

[Docket No. HM-138; Notice No. 78-4]

LOCATION OF MANHOLE ASSEMBLIES
AND CERTIFICATION PLATES ON
CARGO TANKS

Proposed Rule Making

The Materials Transportation Bureau of the Department of Transportation proposes to amend subsections 178.337-6 and 178.340-10 of the Hazardous Materials Regulations to specify the location of the manhole assembly on MC 331 cargo tanks and to authorize the attachment of certification plates to an integral supporting structure of MC 306, MC 307, and MC 312 cargo tanks.

The Bureau proposes to amend subsection 178.337-6 to require that the manhole assembly on MC 331 cargo tanks manufactured after August 31, 1976, be located in the upper quadrant of the cargo tank's rear hemispherical head for the following reasons:

1. The upper portion of the front head of a MC 331 cargo tank is more likely to be exposed to high impact loadings in an accident than would a similar location at the rear of the tank.

The nature of a manhole assembly is such that frontal impact loadings would dissipate energy over a relatively small manhole cover and manhole reinforcing materials.

3. Impact loadings hitting a manhole assembly could allow the assembly to transmit these loadings to the head and shell materials causing failure.

4. If a tank head rather than a manhole assembly receives an initial impact, the shock would be distributed rather than concentrated in a limited area susceptible to failure.

The proposed amendment to subsection 178.340-10 is in response to a petition for rule making submitted to the Bureau by the Truck Trailer Manufacturers Association (TTMA) to authorize the attachment of certification plates to an integral supporting structure of MC 306, MC 307, and MC 312 cargo tanks as an alternative to attachment of the plates to the cargo tank shell. The petition also requested that riveting be permitted as another method of affixing cargo tank certification plates. TTMA has supported their request for attachment of certification plates to an integral supporting structure of a cargo tank with the following reasons:

1. It exposes the tank shell to less welding which could set up stresses in the tank shell.

2. It permits installation of multipurpose plates per § 178.340-10(b)(2) as physical access and tank shell contours make such installation on the tank shells impractical.

3. It allows the attachment of the certification plate to a permanent integral part of the cargo tank structure which is visible even when the tank shell is covered with insulation and a jacket.

4. It indicates that the supporting structure as provided may be necessary for the handling of the tank without causing structural damage to the tank.

The Bureau feels that TTMA's petition has merit because permitting the certification plate to be attached to an integral part of the tank structure as an alternative to attachment on the tank shell may be practical in some instances. However, the Bureau believes this option should be provided only for MC 306, MC 307, and MC 312 cargo tanks not constructed according to the American Society of Mechanical Engineers' Code (ASME) since cargo tanks built to ASME Code specifications require the certification plate to be on the tank shell itself. The Bureau is also proposing to require that the certification plate be such, or attached in such a way, that removal of the plate would, depending on where it is attached, either destroy the structural integrity of the cargo tank or the plate so as to prevent their future use.

Riveting was proposed in the TTMA petition as a means of attaching the certification plate. The Bureau objects to this method of attachment because plates so attached could be easily removed and used improperly. For the same reason, the Bureau feels that soldering is an unacceptable means of attaching the certification plate and proposes to remove this option from the present regulations.

In consideration of the foregoing, it is proposed to amend Part 178 of Title 49 of the Code of Federal Regulations as follows:

1. In § 178.337, subsection 178.337-6 is amended by adding paragraph (b) to read as follows:

§ 178.337 Specification MC 331; cargo tanks constructed of steel, primarily for transportation of compressed gases as defined in the Compressed Gas Section.

§ 178.337-6 Closure for manhole.

(b) On cargo tanks manufactured after August 31, 1976, the manhole assembly is to be located in the upper quadrant of the rear hemispherical head.

2. In subsection 178.340-10 of § 178.340, the introductory text of paragraph (b) is revised to read as follows:

§ 178.340 General design and construction requirements applicable to specifications MC 306 (§ 178.341), MC 307 (§ 178.342), and MC 312 (§ 178.343) cargo tanks.

§ 178.340-10 Certification.

(b) *Metal certification plate.* There must be on every cargo tank (or tank compartment if constructed to different specification) shell or integral supporting structure a metal plate not subject to corrosion, located on the right side, near the front, in a place readily accessible for inspection. Such plate shall be permanently affixed to the cargo tank shell or integral supporting structure by means of brazing, welding, or other equally suitable means but not by means of riveting or soldering. The plate should be such, or attached in such a way, that the removal of the plate from the tank shell would destroy the structural integrity of the cargo tank or the removal from an integral supporting structure would destroy the plate so as to prevent its future use. The plate must be marked in characters at least 1/16-inch high by stamping, embossing, or other means of forming letters into or on the metal of the plate itself at least the information indicated below. The plate may not be painted so as to obscure the marking thereon. On MC 306, MC 307, and MC 312 cargo tanks constructed according to the ASME Code, the certification plate must be attached to the cargo tank shell as required by the Code.

Interested persons are invited to give their views on these proposals. Communications should identify the docket number and be submitted in duplicate to the Section of Dockets, Office of Hazardous Materials Operations, Department of Transportation, Washington, D.C. 20590. Communications received on or before June 23, 1976, will be considered before final action is taken on the proposals. All comments received will be available for examination by interested persons in the Section of Dockets, Office of Hazardous Materials Operations, Room 6213 Trans Point Building, 2100 Second Street, S.W., Washington, D.C., both before and after the closing date for comments.

AUTHORITY: (18 U.S.C. 834, 49 CFR 1.53(g) and Paragraph (a)(1) of App. A Part 102).

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Materials Operations.

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