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

13405

[49 CFR Parts 173, 179]

[Docket No. HM-89; Notice No. 71-23]

TRANSPORTATION OF HAZARDOUS MATERIALS

Specifications for Tank Cars

The Hazardous Materials Regulations Board of the Department of Transportation is considering amending the Hazardous Materials Regulations to authorize a new DOT Specification 115 tank car for shipment of flammable liquids not otherwise specified (n.o.s.).

This proposal is based on more than 5 years of satisfactory experience under special permit authorizations for this type of car in flammable liquid service. The proposed car is basically an inner container supported within an outer tank shell. The construction involves a different design concept from the ordinary tank car, in that the inner container is suspended within the outer tank shell solely by an insulation material such as polyurethane, which is foamed in place, without any metal supports. Without metal supports for the inner tank, heat transfer from an outside source would be reduced significantly, and thus the proposed specification provides a highly efficient thermal insulation of the inner container and the commodity being shipped. The insulating suspension

system is designed to withstand prescribed acceleration loads and has been proved under actual tests. The outer tank shell serves as the structural member and transfers the load forces to the conventional tank car body structure. The specification provides for conventional loading and unloading fittings, and appropriate safety relief devices.

In consideration of the foregoing, the Board proposes to amend Parts 173 and 179 as follows:

PART 173—SHIPPERS

In § 173.119 paragraph (a) (12) would be amended to read as follows:

§ 173.119 Flammable liquids not specifically provided for.

(a) * * *

(12) Specification 103,[1] 103W, 103ALW, 103DW, 104,[1] 104W, 105A100,[1] 105A100 ALW, 105A100W, 106A500,[1] 106A500X, 106A800XNC, 106A800NCI,[1] 110A500W, 111A60ALW, 111A60F1, 111A60W1, 111 A100W3, 111A100W4, 111A100W6, 112A 200W, 112A400F, 114A340W, 115A60W1, 115A60ALW, 115A60W6, ARA–II,[1] ARA–III,[1] ARA–IV,[1] or ARA–IV–A [1] (§§ 179.100, 179.101, 179.200, 179.201, 179.220, 179.300, 179.301 of this chapter). Tank cars. For cars equipped with expansion domes, manway closures must be so designed that pressure will be released automatically by starting the operation of removing the manway cover. Openings in tank heads to facilitate application of lining are authorized and must be closed in an approved manner. (See § 173.432 for shipping instructions.)

* * * * *

PART 179—SPECIFICATIONS FOR TANK CARS

In Part 179 the Table of Contents and Subpart D heading would be amended; Sections 179.220, 179.221 would be added to read as follows:

Subpart D—Specifications for Nonpressure Tank Car Tanks (Classes DOT–103, 104, 111AF, 111AW, and 115AW)

Sec.

179.220 General specifications applicable to nonpressure tank car tanks consisting of an inner container supported within an outer shell (class DOT–115).

179.221 Individual specification requirements applicable to tank car tanks consisting of an inner container supported within an outer shell.

(B) The heading of Subpart D would be amended to read as follows:

Subpart D—Specifications for Nonpressure Tank Car Tanks (Classes DOT–103, 104, 111AF, 111AW, and 115AW)

(C) Section 179.220 would be added to read as follows:

[1] Use of existing tank cars authorized, but new construction not authorized.

§ 179.220 General specifications applicable to nonpressure tank car tanks consisting of an inner container supported within an outer shell (class DOT–115).

§ 179.220–1 Tanks built under these specifications must meet the requirements of §§ 179.220 and 179.221.

§ 179.220–2 Approval.

For procedures in securing approval, see § 179.3.

§ 179.220–3 Type.

(a) Tanks built under these specifications must consist of an inner container, a support system for the inner container, and an outer shell.

(b) The inner container must be a fusion welded tank of circular cross section with formed heads designed convex outward and must have a manway on top of the tank as prescribed herein. When the inner container is divided into compartments, each compartment must be considered a separate container.

(c) The outer shell must be a fusion welded tank with formed heads designed convex outward.

§ 179.220–4 Insulation.

The annular space between the inner container and the outer shell must contain an approved insulation material.

§ 179.220–5 Bursting pressure.

The minimum required bursting pressure of the inner container is listed in § 179.221–1.

§ 179.220–6 Thickness of plates.

(a) The wall thickness, after forming of the inner container shell and 2:1 ellipsoidal heads must be not less than specified in § 179.221–1, or not less than that calculated by the following formula:

$$t=\frac{Pd}{2SE}$$

where:

d=Inside diameter in inches;
E=0.9 welded joint efficiency; except E=1.0 for seamless heads;
P=Minimum required bursting pressure in p.s.i.;
S=Minimum tensile strength of plate material in p.s.i. as prescribed in AAR Specifications for Tank Cars, Appendix M, Table M1;
t=Minimum thickness of plate in inches after forming.

(b) The wall thickness after forming of the inner container heads, if flanged and dished, must be not less than specified in § 179.221–1, or not less than that calculated by the following formula:

$$t=\frac{5PL}{6SE}$$

where:

E=0.9 welded joint efficiency; except E=1.0 for seamless heads;
L=Main inside radius to which head is dished, measured on concave side in inches;
P=Minimum required bursting pressure in p.s.i.;
S=Minimum tensile strength of plate material in p.s.i. as prescribed in AAR Specifications for Tank Cars, Appendix M, Table M1;
t=Minimum thickness of plate in inches after forming.

(c) The wall thickness after forming of the cylindrical section and heads of the outer shell must be not less than seven-sixteenths inch.

(d) See § 179.220–9 for plate thickness requirements for inner container when divided into compartments.

§ 179.220–7 Materials.

(a) The plate material used to fabricate the inner container and nozzles must meet one of the following specifications and with the indicated minimum tensile strength and elongation in the welded condition.

(b) Carbon steel plate: The maximum allowable carbon content must be 0.31 percent when the individual specification allows carbon content greater than this amount. The plates may be clad with other approved materials.

Specifications	Minimum tensile strength (p.s.i.) welded condition [1]	Minimum elongation in 2 inches (percent) welded condition (longitudinal)
ASTM A 515–69, Gr. 55	55,000	28
ASTM A 515–69, Gr. 60	60,000	25
ASTM A 515–69, Gr. 65	65,000	20
ASTM A 515–69, Gr. 70	70,000	20
ASTM A 285–69, Gr. A	45,000	29
ASTM A 285–69, Gr. B	50,000	20
ASTM A 285–69, Gr. C	55,000	20
ASTM A 516–70, Gr. 55	55,000	28
ASTM A 516–70, Gr. 60	60,000	25
ASTM A 516–70, Gr. 65	65,000	20
ASTM A 516–70, Gr. 70	70,000	20
AAR TC128–70, Gr. A&B	81,000	19

[1] Maximum stresses to be used in calculations.

(c) Aluminum alloy plate: Aluminum alloy plate must be suitable for welding and comply with one of the following specifications:

Specifications	Minimum tensile strength (p.s.i.) 0 temper, welded condition [2] [3]	Minimum elongation in 2 inches (percent) welded condition (longitudinal)
ASTM B 209–70, Alloy 5052 [1]	25,000	18
ASTM B 209–70, Alloy 5083 [2]	38,000	16
ASTM B 209–70, Alloy 5086 [1]	35,000	14
ASTM B 209–70, Alloy 5154 [1]	30,000	18
ASTM B 209–67, Alloy 5254 [1]	30,000	18
ASTM B 209–70, Alloy 5454 [1]	31,000	18
ASTM B 209–67, Alloy 5652 [1]	25,000	18
ASTM B 209–70, Alloy 6061 [4]	[5] 24,000	[5] 5

[1] For fabrication, the parent plate material may be 0, H112, or H32 temper, but design calculations must be based on the minimum tensile strength shown.
[2] 0 temper only.
[3] Weld filler metal 5556 must not be used.
[4] Not authorized for tank shells, manways or domes.
[5] T6 temper only.
[6] Maximum stresses to be used in calculations.

(d) High alloy steel plate: High alloy steel plate must comply with one of the following specifications:

Specifications	Minimum tensile strength (p.s.i.) welded condition [1]	Minimum elongation in 2 inches (percent) welded condition (longitudinal)
ASTM A 240-70, Type 304	75,000	30
ASTM A 240-70, Type 304L	70,000	30
ASTM A 240-70, Type 316	75,000	30
ASTM A 240-70, Type 316L	70,000	30
ASTM A 240-70, Type 430A	65,000	22

[1] Maximum stresses to be used in calculations.

(e) Manganese-molybdenum steel plate: Manganese-molybdenum steel plate must be suitable for fusion welding and must comply with the following specification:

Specifications	Minimum tensile strength (p.s.i.) welded condition [1]	Minimum elongation in 2 inches (percent) welded condition (longitudinal)
ASTM A 302-69a, Gr. B	80,000	20

[1] Maximum stresses to be used in calculations.

(f) Plated material used to fabricate the outer shell and heads must be of carbon steel meeting one of the following specifications with the indicated tensile strength and elongation in the welded condition. The maximum allowable carbon content must be 0.31 percent when the individual specification allows carbon content greater than this amount. The plates may be clad with other approved materials:

Specifications	Minimum tensile strength (p.s.i.) welded condition [1]	Minimum elongation in 2 inches (percent) welded condition (longitudinal)
ASTM A 515-69, Gr. 55	55,000	28
ASTM A 515-69, Gr. 60	60,000	25
ASTM A 515-69, Gr. 65	65,000	20
ASTM A 515-69, Gr. 70	70,000	20
ASTM A 285-69, Gr. A	45,000	29
ASTM A 285-69, Gr. B	50,000	20
ASTM A 285-69, Gr. C	55,000	20
ASTM A 516-70, Gr. 55	55,000	28
ASTM A 516-70, Gr. 60	60,000	25
ASTM A 516-70, Gr. 65	65,000	20
ASTM A 516-70, Gr. 70	70,000	20
AAR TC 128-70, Gr. A&B	81,000	19

[1] Maximum stresses to be used in calculations.

(g) All appurtenances on the inner container in contact with the lading must be made of approved material compatible with the plate material of the inner container. These appurtenances must not be subject to rapid deterioration by the lading, or must be coated or lined with suitable corrosion resistant material. See AAR Specifications for Tank Cars, Appendix M, M4.05 for approved material specifications for casting for fittings.

§ 179.220–8 Tank heads.

(a) Tank heads of the inner container, inner container compartments and outer shell must be of approved contour, and may be flanged and dished or ellipsoidal for pressure on concave side.

(b) Flanged and dished heads must have main inside radius not exceeding 10 feet and inside knuckle radius must be not less than 3¾ inches for steel and alloy steel tanks nor less than 5 inches for aluminum alloy tanks.

(c) Ellipsoidal heads must be an ellipsoid of revolution in which the major axis must equal the diameter of the shell and the minor axis must be one-half the major axis.

§ 179.220–9 Compartment tanks.

(a) The inner container may be divided into compartments by inserting interior heads, or by fabricating each compartment as a separate container and joining with a cylinder, or by fabricating each compartment as a separate tank without a joining cylinder. Each compartment must be capable of withstanding, without evidence of yielding or leakage, the required test pressure applied in each compartment separately, or in any combination of compartments.

(b) When the inner container is divided into compartments by fabricating each compartment as a separate container and joining with a cylinder, the cylinder must have a plate thickness not less than that required for the inner container shell and must be applied to the outside surface of the straight flange portion of the container head. The cylinder must fit the straight flange tightly for a distance of at least two times the plate thickness, or 1 inch, whichever is greater and must be joined to the straight flange by a full fillet weld. Distance from fillet weld seam to container head seam must be not less than 1½ inches or three times the plate thickness whichever is greater.

§ 179.220–10 Welding.

(a) All joints must be fusion-welded in compliance with AAR Specifications for Tank Cars, Appendix W. Welding procedures, welders, and fabricators shall be approved.

(b) Radioscopy of the outer shell is not a specification requirement.

(c) Welding is not permitted on or to ductile iron or malleable iron fittings.

§ 179.220–11 Postweld heat treatment.

(a) Postweld heat treatment of the inner container is not a specification requirement.

(b) Postweld heat treatment of the cylindrical portions of the outer shell to which the anchorage or draft sills are attached must comply with AAR Specifications for Tank Cars, Appendix W.

(c) When cold formed heads are used on the outer shell they must be heat treated before welding to shell if postweld heat treatment is not practicable due to assembly procedures.

§ 179.220–12 Tank mounting.

See § 179.10.

§ 179.220–13 Inner container manway nozzle and cover.

(a) Inner container manway nozzle must be of approved design with access opening at least 18 inches inside diameter, or at least 14 inches by 18 inches obround or oval.

(b) Manway covers must be of approved type. Design must provide a secure closure of the manway and must make it impossible to remove the cover while the tank interior is under pressure.

(c) All joints between manway covers and their seats must be made tight against leakage of vapor and liquid by use of suitable gaskets.

(d) Manway covers must be cast, forged, or fabricated metal complying with § 179.220–7(d).

(e) A seal must be provided between the inner container manway nozzle and the opening in the outer shell.

§ 179.220–14 Openings in the tanks.

Openings in the inner container and the outer shell must be reinforced in compliance with AAR Specifications for Tank Cars, Appendix E. In determining the required reinforcement area for openings in the outer shell, t shall be one-fourth inch.

§ 179.220–15 Support system for inner container.

The inner container must be supported within the outer shell by a support system of adequate strength and ductility at its operating temperature to support the inner container when filled with liquid lading to any level. The support system must be designed to support, without yielding, impact loads producing accelerations of the following magnitudes and directions when the inner container is loaded so that the car is at its rail load limit, and the car is equipped with a conventional AAR Specification M–901 draft gear:

Longitudinal	7G
Transverse	3G
Vertical	3G

The longitudinal acceleration may be reduced to 3G where a cushioning device of approved design, which has been tested to demonstrate its ability to limit body forces to 400,000 pounds maximum at a 10 miles per hour impact, is used between the coupler and the tank structure. The support system must be of approved design and the inner container must be thermally isolated from the outer shell to the best practical extent.

§ 179.220–16 Expansion capacity.

Expansion capacity must be provided in the shell of the inner container as prescribed in § 179.221–1.

§ 179.220–17 Gaging devices, top loading and unloading devices, venting and air inlet devices.

(a) When installed, each device must be of approved design which will prevent interchange with any other fixture and must be tightly closed. Each unloading pipe must be securely anchored within the inner container. Each inner contain-

er or compartment thereof may be equipped with one separate air connection.

(b) When the characteristics of the commodity for which the car is authorized require these devices to be equipped with valves or fittings to permit the loading and unloading of the contents, these devices including valves, shall be provided with a protective housing except when plug or ball-type valves with operating handles removed are used. Provision must be made for closing pipe connections of valves.

(c) Inner container may be equipped with a vacuum relief valve of approved design. Protective housing is not required.

(d) When a gaging device is required in § 179.221–1, an outage scale visible through the manway opening must be provided. If loading devices are applied to permit tank loading with cover closed, a telltale pipe may be provided. The telltale pipe must be capable of determining that required outage is provided. The pipe must be equipped with ¼-inch maximum, NPT control valve mounted outside tank and enclosed within a protective housing. Other approved devices may be used in place of an outage scale or a telltale pipe.

(e) The bottom of the tank shell may be equipped with a sump or siphon bowl welded or pressed into the shell. These sumps or siphon bowls, if applied, are not limited in size and must be made of cast, forged, or fabricated metal. Each sump or siphon bowl must be of good welding quality in conjunction with the metal of the tank shell. When the sump or siphon bowl is pressed in the bottom of the tank shell, the wall thickness of the pressed section must not be less than that specified for the shell. The section of a circular cross section tank to which a sump or siphon bowl is attached need not comply with the out-of-roundness requirement specified in Appendix W, W14.06 of the AAR Specifications for Tank Cars. Any portion of a sump or siphon bowl not forming a part of a cylinder of revolution must have walls of such thickness and must be so reinforced that the stresses in the walls caused by a given internal pressure are not greater than the circumferential stress which would exist under the same internal pressure in the wall of a tank of circular cross section designed in accordance with § 179.220–6 (a) and (d). In no case shall the wall thickness be less than that specified in § 179.221–1(a).

(f) Protective housing, when required, must be of approved material and must have cover and sidewalls not less than 0.119 inch in thickness.

§ 179.220–18 Bottom outlets.

(a) The inner container may be equipped with a bottom outlet of approved design and an opening provided in the outer shell for its access. If applied, the bottom outlet must comply with the following requirements:

(1) On newly built empty cars with truck centers through 60 feet, 6 inches, the extreme projection of the bottom outlet equipment must be at least 12 inches above the top of the rail on level track. On cars with truck centers greater than 60 feet, 6 inches, the minimum rail clearance must be in accordance with the graph in Appendix E of the AAR Specifications for Tank Cars. Each bottom outlet reducer and closure and their attachments must be secured to the car by at least a ⅜-inch chain or its equivalent. However, outlet closure plugs may be attached by ¼-inch chain. When the bottom outlet closure is of the combination cap and valve type, the pipe connection to the valve must be closed by a plug or cap.

(2) Each bottom outlet must be provided with a liquid tight closure at its lower end.

(3) The valve and its operating mechanism must be applied to the outside bottom of the inner container. The valve operating mechanism must be provided with a suitable locking arrangement to insure positive closure during transportation.

(4) Valve outlet nozzle and valve body must be of cast, fabricated or forged metal. If welded to inner container, they must be of good weldable quality in conjunction with metal of tank.

(5) To provide for the attachment of unloading connections, the bottom of the main portion of the outlet nozzle or valve body, or some fixed attachment thereto, must be provided with threaded cap closure arrangement or bolted flange closure arrangement having minimum 1 inch threaded pipe plug.

(6) If the outlet nozzle and its closure extend below the bottom of the outer shell, a breakage groove or its equivalent must be applied. If a breakage groove is applied, a "V" must be cut (not cast) in the upper part of outlet nozzle at a point immediately below lowest part of valve to a depth that will leave thickness of nozzle wall at the root of the "V" not over one-quarter inch. The outlet nozzle or the valve body must be steam jacketed in which case the breakage groove or its equivalent must be below the steam chamber but above the bottom of the center sill construction. If the outlet nozzle is not a single piece or if exterior valves are applied, provision must be made for the equivalent of the breakage groove. On cars without continuous center sills, the breakage groove or its equivalent must not be more than 15 inches below the outer shell.

(7) The valve body must be of a thickness which will prevent distortion of the valve seat or valve by any change in contour of the shell resulting from expansion of lading, or other causes, and which will insure that accidental breakage of the outlet nozzle will occur at or below the "V" groove, or its equivalent.

(8) The valve must have no wings or stem projecting below the "V" groove or its equivalent. The valve and seat must be readily accessible or removable for repairs, including grinding.

(b) Inner container may be equipped with bottom washout of approved design. If applied, bottom washout must comply with the following requirements:

(1) On newly built empty cars with truck centers through 60 feet, 6 inches, the extreme projection of the bottom washout equipment must be at least 12 inches above the top of rail on level track. On cars with truck centers greater than 60 feet, 6 inches, the minimum rail clearance must be in accordance with the graph in Appendix E of the AAR Specifications for Tank Cars.

(2) Bottom washout must be of cast, forged or fabricated metals. If it is welded to the inner container, it must be of good weldable quality in conjunction with metal of tank.

(3) If the washout nozzle extends below the bottom of the outer shell, a "V" groove must be cut (not cast) in the upper part of the nozzle at a point immediately below the lowest part of the inside closure seat or plug to a depth that will leave the wall thickness of nozzle at the root of the "V" not over one-fourth inch. Where the nozzle is not a single piece, provision must be made for the equivalent of the breakage groove. The nozzle must be of a thickness to insure that accidental breakage will occur at or below the "V" groove or its equivalent. On cars without continuous center sills, the breakage groove or its equivalent must not be more than 15 inches below the outer shell. On cars with continuous center sills, the breakage groove or its equivalent must be above the bottom of center sill construction.

(4) The closure plug and seat must be readily accessible or removable for repairs.

(5) The closure of the washout nozzle must be equipped with a ¾-inch solid screw plug. Plug must be attached by at least a ¾-inch chain.

(6) Joints between closures and their seats may be gasketed with suitable material.

§ 179.220–19 Safety relief devices.

(a) Each inner container or compartment must be equipped with safety relief devices of approved design as prescribed in § 179.221–1.

(b) When used, each safety relief valve must be made of metal not subject to rapid deterioration by the lading, and mounted on the top of the inner container. Total valve discharge capacity must be sufficient to prevent building up of pressure in the inner container to more than 10 p.s.i. above the start-to-discharge pressure. See AAR Specifications for Tank Cars, Appendix A, for formula for calculating discharge capacity. The start-to-discharge pressures and vapor tight pressures must comply with § 179.221–1.

(c) Each inner container or compartment used for the transportation of a corrosive liquid, a flammable solid, an oxidizing material, or a poisonous liquid or solid Class B, need not be equipped with a safety relief valve, but if not so equipped, it must have one safety vent at least 1¾ inches inside diameter made of material not subject to rapid deterioration by the lading. Each safety vent must be mounted on the top of the inner container. This vent must be of an approved design which will prevent interchange with fixtures prescribed in § 179.220–17.

It must be closed with a frangible disc of lead or other approved material. Vent bursting pressure must comply with § 179.221–1. Tanks equipped with vents must be stenciled "Not for Flammable Liquids".

§ 179.220–20 Reinforcements, when used, and appurtenances not otherwise specified.

All attachments to inner container and outer shell must be applied by approved means.

§ 179.220–21 Interior heating system.

For heater system inside of inner container see § 179.12.

§ 179.220–22 Closure for openings.

All plugs must be solid, with NPT threads, and must be of a length which will screw at least six threads inside the face of fitting or tank. Plugs, when inserted from the outside of the outer shell tank heads, must have the letter "S" at least three-eighth inch in size stamped with steel stamp or cast on the outside surface to indicate the plug is solid.

§ 179.220–23 Test of tanks.

(a) Each inner container or compartment must be tested hydrostatically to the pressure specified in § 179.221–1. The temperature of the pressurizing medium must not exceed 100° F. during the test. The container must hold the prescribed pressure for at least 10 minutes without leakage or evidence of distress. Safety relief devices must not be in place when the test is made.

(b) The inner container must be pressure tested before installation within the outer shell. Items which, because of assembly sequence, must be welded to inner container after its installation within outer shell must have their attachment welds thoroughly inspected by a nondestructive dye penetrant method or its equivalent.

(c) Pressure testing of outer shell is not a specification requirement.

§ 179.220–24 Tests of safety relief valves.

Each safety relief valve must be tested by air or gas for compliance with § 179.221–1 before being put into service.

§ 179.220–25 Stamping.

To certify that the tank complies with all specification requirements, each outer shell must be plainly and permanently stamped in letters and figures at least ⅜-inch high into the metal near the center of both outside heads as follows:

	Examples of required stamping
Specifications	DOT–115A60W6.
Inner Container:	Inner container:
Material	ASTM A240–316L.
Shell thickness	Shell 0.167 inch.
Head thickness	Head 0.150 inch.
Tank builders initials	ABC.
Date of original test	00–0000.
Outer shell:	Outer shell:
Material	ASTM A285–C.
Tank builders initials	WYZ.
Car assembler (if other than inner container or outer shell builder).	DEF.

§ 179.220–26 Stenciling.

(a) The outer shell, or the jacket if the outer shell is insulated, must be stenciled in compliance with AAR Specifications for Tank Cars, Appendix C.

(b) Stenciling must be applied on both sides of the outer shell or jacket near the center in letters and figures at least 1½ inches high to indicate the safe upper temperature limit, if applicable, for the inner tank, insulation, and the support system.

§ 179.220–27 Certificate of construction.

See § 179.5.

(D) Section 179.221 would be added to read as follows:

§ 179.221 Individual specification requirements applicable to tank car tanks consisting of an inner container supported within an outer shell.

In addition to § 179.220, the individual specification requirements for the inner container are as follows:

Specification	115A60W1	115A60ALW	115A60W6
Inner container material (see § 179.220–7)	Steel	Al alloy	Alloy steel.
Bursting pressure, p.s.i. (see § 179.220–5)	240	240	240.
Minimum plate thickness, shell and heads, inches (see § 179.220–6).	⅛	3/16	⅛.
Minimum expansion capacity (see § 179.220–16).	2 percent in tank	2 percent in tank	2 percent in tank.
Test pressure, p.s.i. (see § 179.220–23)	60	60	60.
Safety relief device (see § 179.220–19)	Valve or vent	Valve or vent	Valve or vent.
Valve start-to-discharge pressure, p.s.i. (±3 p.s.i.).	35	35	35.
Valve vapor tight pressure (minimum, p.s.i.).	28	28	28.
Valve flow rating pressure (maximum, p.s.i.).	45	45	45.
Vent rupture pressure (maximum, p.s.i.)	45	45	45.
Gaging devices (see § 179.220–17)	Required	Required	Required.
Top loading and unloading devices (see § 179.220–17).	Optional	Optional	Optional.

Interested persons are invited to give their views on this proposal. Communications should identify the docket number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, DC 20590. Communications received on or before September 28, 1971, will be considered before final action is taken on the proposal. 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.

This proposal is made under the authority of sections 831–835 of title 18, United States Code, and section 9 of the Department of Transportation Act (49 U.S.C. 1657).

Issued in Washington, D.C., on July 14, 1971.

W. F. REA, III,
Rear Admiral, Board Member, for the U.S. Coast Guard.

MAC E. ROGERS,
Board Member, for the Federal Railroad Administration.

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