DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 107, 171, 172, 173, 177, 178, and 180

[Docket No. RSPA–98–3554 (HM–213)]

RIN 2137–AC90

Hazardous Materials: Requirements for Cargo Tanks

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: RSPA is proposing a number of revisions to the Hazardous Materials Regulations to update and clarify the regulations on the construction and maintenance of cargo tank motor vehicles. This proposed rule also addresses three National Transportation Safety Board (NTSB) recommendations and several petitions for rulemaking. By updating and clarifying the regulations, addressing the NTSB recommendations, and responding to petitions for rulemaking, these revisions should increase the safety of cargo tanks transporting hazardous materials, provide greater flexibility in design and construction of cargo tanks, and reduce operating burdens for owners, operators, and manufacturers of cargo tank motor vehicles.

DATES: Comments must be received by February 4, 2002. To the extent possible, we will consider comments received after this date in making our decision on a final rule.

ADDRESSES: Address comments to the Dockets Management System, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, D.C. 20590–0001. Commenters should identify the docket number [RSPA–98–3554 (HM–213)] and submit two copies. If you wish to receive confirmation of receipt of your written comments, include a self-addressed, stamped postcard. You may also submit comments to the docket electronically by accessing the Dockets Management System website at ''*http://dms.dot.gov.*'' Click on ''Help & Information'' to obtain instructions for filing the document electronically.

The Dockets Management System is located on the Plaza level of the Nassif Building at the Department of Transportation at the above address. You may view public dockets between the hours of 9 a.m. and 5 p.m. EST, Monday through Friday, except Federal holidays. Internet users may review all comments received by the U.S. Department of Transportation by accessing the Dockets Management System website at *http://dms.dot.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. Michael Johnsen, Office of Hazardous Materials Standards, RSPA, telephone (202) 366–8553; Mr. Philip Olson, Office of Hazardous Materials Technology, RSPA, telephone (202) 366–4545; or Mr. Danny Shelton, Office of Enforcement and Program Delivery, Hazardous Materials Division, Federal Motor Carrier Safety Administration (FMCSA), telephone (202) 366–6121.

SUPPLEMENTARY INFORMATION: All comments received before the close of business on the comment closing date will be considered and will be available for examination in the docket room indicated in the **ADDRESSES** section. Comments received after the comment closing date will be filed in the docket and will be considered to the extent practicable. In addition to late comments, RSPA will also continue to file, in the docket, relevant information that becomes available after the close of the comment period. Interested persons should periodically examine the docket for new material. Comments should include any relevant data or referenced factual information. In addition, RSPA asks that commenters provide justification for any suggested changes to this NPRM.

List of Topics

I. Background

On June 12, 1989, the Research and Special Programs Administration (RSPA; we) published a final rule in the **Federal Register** (Docket HM–183, 183A; 54 FR 24982) that revised the Hazardous Materials Regulations (HMR; 49 CFR Parts 171 through 180) pertaining to cargo tank motor vehicles. We further revised the regulations each year from 1990 through 1995 under dockets HM–183, HM–183A, and HM–183C. Several of these dockets made significant changes to the cargo tank regulations to improve safety; other revisions corrected mistakes and made minor changes. Dockets HM–183 and 183A established the DOT 400 series cargo tank specifications, as well as certification requirements for cargo tank manufacturers. Docket HM–183C contained a number of miscellaneous items that clarified and relaxed certain requirements for the manufacture, qualification, and maintenance of cargo tank motor vehicles.

Under 49 CFR 1.73(d), the Federal Motor Carrier Safety Administration (FMCSA) is delegated authority to enforce the HMR, with particular emphasis on highway transportation, including regulations for construction and maintenance of cargo tank motor vehicles (CTMVs). FMCSA and RSPA work closely with the regulated industry through educational assistance activities and FMCSA's compliance and enforcement program. During these activities, we identified several areas in the current regulations that need updating or clarification. In addition, we received requests for clarification of the regulations and petitions for rulemaking. The National Transportation Safety Board (NTSB) has also made several safety recommendations concerning cargo tanks. In this NPRM, we are proposing revisions that would apply to all cargo tanks and revisions that would apply to certain specification cargo tanks or cargo tanks used to transport certain ladings.

II. Proposed Revisions Applicable to All Cargo Tanks

A. Definitions

General. Under Docket HM–183, we adopted a number of definitions for DOT 400-series specification CTMVs. The definitions apply to all specification CTMVs used to transport

hazardous materials. Thus, in this NPRM we are proposing to combine the definitions currently in § 178.345–1(c) with the definitions in § 173.320(a) and make them applicable to all specification CTMVs.

Minimum thickness. We propose to add in § 178.320 a definition for ''minimum thickness'' to clarify how the minimum head and shell thickness for specification cargo tanks must be determined. The proposal defines ''minimum thickness'' to mean the least of: (1) The thickness required by the tables in the original specification; (2) the thickness required to satisfy the structural integrity and accident damage requirements; or (3) the thickness required to satisfy the requirements of the American Society of Mechanical Engineers (ASME) Code, if applicable. This proposal should eliminate confusion as to whether the minimum thickness tables in § 180.407(i) are the governing factor in determining minimum thickness. It is possible that the minimum thickness value prescribed by the ASME Code or the structural integrity requirements may be greater than that required by the minimum thickness tables. For example, an MC 307 cargo tank was manufactured using 10-gauge (0.1345 inches) steel. Upon conducting a thickness test, an inspection/testing facility measured the thickness of the tank at 0.12 inches, which is lower than the 0.1345 inches specified in Table I of § 180.407(i)(5) for 10-gauge steel. However, the MC 307 cargo tank was only required to be manufactured using 12-gauge steel (0.1046 inches) as specified in Part 178. Therefore, the thickness of this tank is above the minimum thickness (0.1046 inches) prescribed for this cargo tank and the cargo tank is suitable for continued service.

Maximum allowable working pressure. Currently, the HMR require a cargo tank's maximum allowable work pressure (MAWP) to be determined based on the lading that will be transported in the cargo tank or the maximum pressure in the tank during loading or unloading. The Truck Trailer Manufacturers Association (TTMA) submitted a petition for rulemaking (P–1272) suggesting that a cargo tank's MAWP should be dependent on the physical characteristics of the cargo tank rather than the lading carried in the cargo tank or the method of loading or unloading the cargo tank. In its petition, TTMA notes that a cargo tank manufacturer will not always know the characteristics of the lading that will be transported in the cargo tank and that a manufacturer will not always know the pressure at which the tank will be loaded or unloaded.

In its petition, TTMA also asserts that the current regulations have resulted in confusion in the regulated industry as to whether the static head of lading should be included in the MAWP. TTMA notes that § 178.345–1(k) defines MAWP as the largest of: (1) The pressure prescribed for the lading in part 173; (2) the vapor pressure of the most volatile lading at 115°F plus the maximum static pressure exerted by the lading at the maximum lading density plus any pressure exerted by a gas padding; or (3) the maximum pressure in the cargo tank during loading or unloading. TTMA states that it is not clear if the static head is included in the lading pressure prescribed in Part 173 or the loading/unloading pressure.

We agree with TTMA that there should be no ambiguity in the HMR as to the meaning of MAWP. We also agree that the MAWP should be based on the cargo tank's physical characteristics, but we believe MAWP should also be linked to the requirements of § 173.33 for use by shippers and carriers. The proper matching of the maximum lading pressure conditions defined in § 173.33(c) with the MAWP of a cargo tank by shippers and carriers is critical to providing safety in cargo tank operations. The maximum lading pressure addresses many factors critical to matching a lading to a cargo tank MAWP, including the static head (pressure) generated by a specific lading or the maximum pressure in a tank during loading or unloading. For example, § 173.33(c)(iv) requires the sum of the vapor pressure of the lading at 115°F, plus the tank static head exerted by the lading, plus any pressure exerted by a gas padding, including air, in the tank to be less than or equal to the MAWP of the cargo tank. The pressure defined by this summation is the pressure exerted at the bottom of the tank. When a cargo tank is inverted in a rollover, this pressure is applied to the pressure relief devices installed on the cargo tank. Particularly for large diameter tanks and high-density ladings, this resultant pressure could be sufficient to open the cargo tank's pressure relief devices and drain the contents of the tank, even if the tank were undamaged. Thus, it is critical for shippers and carriers to determine that the MAWP of a cargo tank is greater than or equal to maximum lading pressure derived from the conditions specified in § 173.33. Similarly, cargo tank manufacturers should be familiar with the requirements of § 173.33 in order to provide a cargo tank with an MAWP sufficient to meet the needs of shippers and carriers. To strengthen the linkage between § 173.33 and cargo tank MAWP, we are proposing to revise the definition for MAWP to require the MAWP to be greater than or equal to the maximum lading pressure condition prescribed in § 173.33 for each material.

Corroded/abraded. Although it is used throughout § 180.407, the term ''corroded or abraded'' is not currently defined in the HMR. As a result, there have been many different interpretations concerning the type and extent of corrosion or abrasion that requires thickness testing. Some cargo tank inspection and test facilities perform thickness tests on cargo tanks that do not require such a test; other facilities fail to test cargo tanks that should be thickness tested. External corrosion on cargo tanks is a common occurrence during winter in many geographical areas. Rocks and other debris can chip paint on cargo tanks, causing surface oxidation and rust. Road salt accelerates corrosion. The new definition specifies that ''corroded or abraded'' means a reduction in the material thickness of the cargo tank that is visible to the naked eye.

Corrosive to the tank/valve. We also propose to revise the definition of ''corrosive to the tank/valve'' because of the many requests for clarification that we have received. The regulations require additional and more frequent inspections (internal inspection, thickness testing, upper coupler removal and inspection) for CTMVs transporting a lading that may adversely affect tanks or valves, causing leaks and other safety hazards. The current definition of ''corrosive to the tank/valve'' includes those ladings that meet the corrosivity requirements in § 173.136 for the material of construction of a cargo tank/valve (6.25 mm per year), and other lading where experience shows corrosion exists. The reference to § 173.136 (definition of a Class 8 material) in the current definition has caused confusion. We did not intend that lading designated as ''corrosive to the tank/valve'' would be limited to Class 8 materials or to materials that cause corrosion at a rate of 6.25 mm or more per year. Our intent was to include any lading, not just those classed as Class 8 materials, that corrodes a tank or valve.

The proposed change to the definition of ''corrosive to the tank/valve'' specifies that test data and experience must be used to determine if a specific lading is corrosive to the cargo tank wall or valve. The removal of the reference to § 173.136 is intended to clarify that ''corrosive to the tank/valve'' is not limited to materials with a corrosion

rate of 6.25 mm or more per year. Under this proposal, any test data or experience that indicates any amount of corrosion is sufficient to meet the definition. We welcome comments on any existing sources of corrosion data.

B. Marking of Emergency Shutoff Devices

On May 12, 1993, in Rockville, Maryland, gasoline overflowed from an underground storage tank while it was being filled from an MC 306 CTMV. The gasoline ignited, causing a fire that spread to an adjacent building. The first firefighters on the scene stopped the flow of gasoline by closing the gate valves in a manifold at the rear of the cargo tank. The first responders were unaware of the on-truck remotely actuated means for closing the cargo tank's internal valve. A hazardous materials officer arrived at the scene and activated the on-truck remote shutoff device; however, the inability of the first responders to locate the shutoff device resulted in a risk that could have been avoided. As a result of its investigation of this incident, the NTSB recommended that RSPA require existing and new cargo tank motor vehicles with on-truck remote control mechanisms for internal shutoff valves to be marked for emergency use on all cargo tanks authorized for the transportation of hazardous materials (NTSB # H–93–34).

In response to this recommendation, we are proposing to amend the HMR to require all manually activated on-truck remote shutoff devices for closure of the internal valve to be marked ''Emergency Shutoff.'' The requirement would be effective two years after the publication date of a final rule.

C. Recertification to Original Specification

There appears to be confusion in the regulated industry as to whether cargo tanks that have been modified for specialized or non-hazardous materials service may be re-certified for hazardous materials service. In this NPRM, we propose to allow for the re-certification of a cargo tank to its original specification, provided specific requirements are met. These requirements include documentation to verify that the cargo tank was originally manufactured to a DOT specification, verification by a Registered Inspector that the cargo tank is in compliance with the requirements of the specification, and certification that the cargo tank successfully passed all required tests and inspections. In addition, any repairs performed on MC 306, MC 307, or MC 312 cargo tanks after June 30, 1992, will have to have been performed in accordance with requirements in § 180.413.

An example of a cargo tank that may be recertified to its original specification is an MC 306 cargo tank where its internal self-closing stop valve was removed so that the tank could be used to transport asphalt. As proposed in this NPRM, the cargo tank may be re-certified to its original specification provided an internal shutoff valve is reinstalled, the CTMV meets all other requirements of the specification, and the cargo tank motor vehicle has successfully passed the inspections and tests required in § 180.407(c).

D. Cargo Tank Qualification and Maintenance

We are proposing a number of clarifications to the requirements in Part 180 for cargo tank qualification and maintenance to eliminate confusion. For example, we are proposing to clarify the tests and inspections that must be performed when a cargo tank shows evidence of dents, corroded or abraded areas, or leakage; has sustained damage to an extent that may adversely affect its lading retention capability; or has any other condition that could render it unsafe for the transportation of hazardous materials.

In addition, consistent with an NTSB recommendation (H–95–14), we are proposing to require thickness testing of ring stiffeners and appurtenances on cargo tanks that are constructed of mild steel, high-strength, low-alloy steel, or aluminum, when the ring stiffeners and appurtenances are installed in a manner that precludes an external visual inspection. NTSB investigated two catastrophic cargo tank failures, one that occurred on March 9, 1983, in Beaumont, Texas, and the other on January 6, 1994, in Deltona, Florida. As a result of its investigations, NTSB determined that thickness testing of the cargo tanks' ring stiffeners might have detected the corrosion that caused the failures.

Further, we are proposing to clarify the HMR requirements for repair, modification, stretching, or rebarrelling of cargo tanks. Currently, facilities are allowed to repair, modify, stretch, or rebarrel a non-ASME Code stamped cargo tank provided the facility has an ASME Certificate of Authorization for use of the ''U'' stamp. Full compliance with the National Board Inspection Code (NBIC) is not currently required when working on non-ASME Code stamped cargo tanks if the facility has a ''U'' stamp.

In this NPRM, we are proposing to require facilities to perform repairs, modifications, stretching, or rebarrelling of cargo tanks in conformance with the NBIC. Prior to 1995, the NBIC was only applicable to tanks with an MAWP of 15 psig or greater. However, in 1995 the applicability of the NBIC was extended to all pressure vessels. While the ASME Code is applicable to new construction only, the NBIC sets forth procedures for repairing or modifying pressure vessels. Adopting the NBIC requirements in the HMR for all cargo tank repairs, modifications, stretching, and rebarrelling will provide clarity, consistency, and a greater level of safety. However, we are not proposing to adopt NBIC requirements for certification by an Authorized Inspector, completion of the R–1 form, and stamping tanks with the ''R'' stamp for non-ASME cargo tanks at this time due to cost considerations and concern about the availability of Authorized Inspectors.

Because persons have suffered severe injuries or died while performing repairs to cargo tanks that were not properly cleaned and purged, we are also proposing to clarify and emphasize that the entire CTMV, including void spaces, piping, and vapor recovery systems, be cleaned and purged before doing repairs, modifications, stretchings, rebarrellings, or mountings that involve welding on cargo tanks that transport toxic or flammable lading. We also propose to clarify that modification, stretching, or rebarrelling must be inspected and certified by a Design Certifying Engineer (DCE). The current requirement for a DCE to approve modifications has caused confusion about the level of participation required from the DCE. In addition, we propose to revise specification plate requirements to reflect the modification, stretching, or rebarrelling of a cargo tank. We are proposing to require a supplemental specification plate to be installed adjacent to the original specification plate. Changes to the original specification plate would not be allowed. This proposal addresses TTMA's petition (P–1388) requesting that we require a supplemental plate for changes. However, we are not proposing to adopt TTMA's request to allow the original cargo tank manufacturer to replace the original specification plate if the cargo tank is altered. We believe that the information on the original specification plate should be permanent and not altered, even if the work is done by the original manufacturer.

III. Revisions Applicable to DOT 400-Series Cargo Tanks

We are proposing several revisions to the specifications applicable to the DOT

400-series cargo tanks. These proposals include revisions to: (1) Structural integrity requirements; (2) manhole marking requirements; (3) road clearance allowances; (4) bottom accident protection; (5) specification plate marking; (6) leak testing alternatives; and (7) weld joints. In addition to these changes, which are described below, we are also proposing revisions to the DOT 400-series specifications to make the requirements easier to understand and follow.

A. Structural Integrity Requirements

The HMR currently do not include structural support members in the structural integrity requirements for lightweight attachments welded to DOT 400-series CTMVs. In this NPRM, we are proposing to correct this omission by adding structural support members to the list of attachments to which the structural integrity requirements apply for new construction of DOT–400 series CTMVs.

B. Manhole Marking

Currently, the HMR require manhole covers to be permanently marked with the manufacturer's name, the test pressure, and a certification that the manhole cover meets HMR requirements. This marking enables cargo tank owners, Registered Inspectors, and enforcement personnel to verify that the manhole conforms to applicable regulatory requirements. In this NPRM, we are proposing to specify that manhole assemblies be marked on the outside, where they can be seen without opening the manhole cover or fill opening, thereby enabling persons to see the marking without being exposed to hazardous materials inside the cargo tank. We are proposing that this requirement become effective one year after the effective date of a final rule. The revised marking requirements would apply to newly manufactured cargo tanks and cargo tanks that have their manhole assemblies replaced.

C. Road Clearance

The current HMR requirement for minimum allowable road clearance for DOT 400-series CTMV components or protection devices located between two adjacent axles is at least one-half inch for each foot separating the axles and in no case less than 12 inches. In a petition for rulemaking (P–1325), TTMA requests that we lower the minimum road clearance requirement to permit greater flexibility in the design of landing gear, tire carriers, cabinets, and other components near axles. TTMA suggests that such a revision would permit lowering the center of gravity for some CTMVs, which would improve dynamic stability. TTMA states that it is aware of no situations in which a landing gear failure has punctured a cargo tank.

We agree with TTMA that reducing the center of gravity for CTMVs would be beneficial. Thus, in this NPRM, we are proposing to revise the requirements for minimum road clearance for landing gear within 10 feet of an axle to be no less than 10 inches. We propose to maintain the current clearance requirements for the middle area between axles. The proposed revision would allow landing gear to be lowered by two inches, but would not compromise clearances in the area of a CTMV most vulnerable to contact with the ground—that is, the area midway between a tractor's rear axle and the CTMV rear suspension.

D. MAWP Specification Plate Marking

Current regulations for DOT 406, DOT 407, and DOT 412 cargo tanks require the maximum loading and unloading pressure to be marked on the cargo tank's specification plate. In a petition for rulemaking (P–1212), TTMA asks us to eliminate this marking requirement. TTMA notes that the volume change of liquids transported in DOT 406, DOT 407, and DOT 412 cargo tanks is small and that the maximum loading and unloading rate is calculated in the design of the cargo tank and identified on the specification plate. We agree that the maximum loading and unloading pressure marking is unnecessary because the maximum loading/unloading pressure is reflected in the MAWP. Therefore we are proposing to eliminate it. However, in no situation can the actual pressure in the tank exceed the MAWP.

E. Leak Testing Using EPA Method 27

Currently, the HMR permit cargo tanks equipped with vapor collection equipment to be leak tested in accordance with the Environmental Protection Agency (EPA) ''Method 27—Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test'' as set forth in Appendix A to 40 CFR part 60. We propose to clarify the parameters for testing cargo tanks that are used to transport petroleum distillate fuels and are equipped with vapor recovery equipment. EPA regulations at 40 CFR 63.425(e) require cargo tanks equipped with vapor collection systems that are used to transport petroleum distillate fuels to pass an annual certification test for vapor tightness. This annual certification test includes both the Method 27 test for vapor tightness of a cargo tank and a pressure test of the tank's internal vapor valve. The revision proposed in this NPRM specifies that cargo tanks equipped with vapor collection equipment that are used to transport petroleum distillate fuels may be tested in accordance with 40 CFR 63.425(e) instead of the annual leakage test required under § 180.407 of the HMR. In addition, we are proposing that, if the EPA annual certification test in 40 CFR 63.425(e) is used to satisfy the annual leak test requirement, the Method 27 test must be conducted using air. Performing the test using liquid, an alternative allowed by EPA, may mask leakage below the liquid level at the pressure level specified for the test. The EPA Method 27 air test should detect even small leaks in a cargo tank. Therefore, we propose to prohibit use of alternative procedures in section 6 of Method 27 that allow the use of water.

We are also proposing a special marking to designate cargo tanks that have been tested in conformance with EPA's annual certification test for cargo tanks equipped with vapor recovery equipment and used to transport petroleum distillate fuels. The proposed marking is ''K–EPA27.'' The marking would replace the ''K'' marking on a cargo tank if the EPA vapor tightness test methods and procedures as set forth in 40 CFR 63.425(e) are used in place of the leak test. If a cargo tank is tested using both the leak test specified in the HMR and the vapor tightness tests specified in the EPA regulations, it would be marked with both ''K'' and ''K–EPA27''. This proposal establishes a national, uniform marking requirement for cargo tanks tested for vapor tightness in accordance with EPA regulations instead of, or in addition to, the leak test procedures specified in the HMR. This new marking would be applied to cargo tanks that are tested for vapor tightness under EPA procedures beginning one year after the effective date of the final rule.

F. Weld Joints on DOT 407 Cargo Tanks

In a petition (P–1333), TTMA requests that we adopt a weld joint efficiency of 0.85 for head seams in bulkheads on DOT 407 cargo tanks. Based on review of the TTMA petition and additional information, we are proposing in this NPRM that the strength of a weld seam in a bulkhead without radiographic examination of the weld must be 0.85 of the strength of the bulkhead. The welded seam must be a full penetration butt weld, no more than one seam may be used per bulkhead, and the welded seam must be completed before forming the dish radius and knuckle radius.

In its petition, TTMA also requested that we permit spot radiographic examination of weld joints every six months as an alternative to the periodic test. We do not agree with TTMA. Instead, we are proposing that two test specimens of the same material and thickness and joined by the same welding procedure as those to be used in manufacturing the bulkhead must be tested to failure in tension. The ratio of the actual tensile stress to the actual tensile strength of the adjacent material of both samples must be greater than 0.85. The test specimens may represent all the tanks that are manufactured in the same facility within six months after the tests are completed.

IV. Revisions Applicable to MC 331 and MC 338 Cargo Tanks

We are proposing several revisions to the HMR specifications applicable to MC 331 and MC 338 cargo tanks. The proposals include: (1) Revisions to make the specifications consistent with the DOT 400-series cargo tank specification requirements; (2) retrofit requirements for cargo tanks not currently equipped with remote shutoff devices; (3) a new requirement for thermal activation devices on MC 338 CTMVs; (4) revisions to the internal inspection requirements; and (5) revisions to leakage test requirements for cargo tanks in anhydrous ammonia service. In addition to these changes, which are described below, we are also proposing revisions to the MC 331 and MC 338 specifications to make the requirements easier to understand and follow.

A. Consistency With DOT 400-Series Specification

We are proposing a number of changes to the MC 331 and MC 338 specifications to make them consistent with specifications applicable to DOT 400-series CTMVs. The DOT 400-series cargo tank specifications are more contemporary regulations that reflect current industry practices. In addition, the DOT 400-series specifications are performance standards, and, thus, provide greater flexibility to cargo tank designers and manufacturers to meet the DOT requirements. As proposed in this NPRM, we are not imposing additional requirements for MC 331 and MC 338 CTMVs; rather we are increasing flexibility in meeting the requirements by proposing performance standards and additional alternatives.

Under Docket HM–183C (60 FR 17398), we modified the structural integrity requirements for MC 331 and MC 338 CTMVs to conform with the DOT 400-series specification requirements. At that time, however, the related requirements for attachments were not changed. Thus, we propose to make requirements for the design, construction, and installation of attachments, appurtenances, structural support members, or accident protection devices on MC 331 and MC 338 CTMVs consistent with the requirements for DOT 400-series CTMVs. Similarly, we are proposing to revise long-standing requirements for rear-end protection devices on MC 331 and MC 338 CTMVs to authorize the DOT 400-series rear-end protection provisions as an alternative to the current requirements for both MC 331 and MC 338 CTMVs.

We are also proposing changes to the MC 331 and MC 338 specifications for cargo tank support and anchoring for consistency with the DOT 400-series requirements. When the structural integrity requirements for the MC 331 and MC 338 CTMVs were modified under HM–183, the closely related requirements for support and anchoring were not changed. This was an inadvertent error that we now propose to correct. This would apply to newly constructed MC 331 and MC 338 CTMVs.

We propose to require essential information marked on MC 331 and MC 338 CTMV metal specification plates to be consistent with requirements for DOT 400-series CTMVs. Thus, in addition to the information already required, the specification plate would be marked with the cargo tank test pressure; the CTMV certification date if different from the cargo tank certification date; the cargo tank certification date; the shell material specification number; the head material specification number; the maximum design density of lading; the weld material; the minimum thickness of the cargo tank shell; tank maximum allowable working pressure; cargo tank design temperature; cargo tank manufacturer; cargo tank manufacture date; maximum weight of lading; minimum thickness—head; and exposed surface area. The requirement for Vehicle manufacturer's serial number would be removed. MC 331 cargo tanks would be required to add the information concerning linings and heating systems while MC 338 cargo tanks would be required to include information specific to this series. This requirement would apply to new construction and changes on these CTMVs.

In addition, for MC 331 CTMVs, we propose to require certificates for a CTMV that is manufactured in two or more stages. Each manufacturer who performs a manufacturing function on the incomplete CTMV must provide the succeeding manufacturer with a certificate that states the function that was performed and must also provide certificates received from previous manufacturers, Registered Inspectors, and Design Certifying Engineers. Further, we propose to clarify the roles of the original manufacturer of a cargo tank and the assembler of a CTMV in documenting on the certificate those areas of the specification that are not met or specification shortages, including valves, piping, fittings, and the like. The person who installs the components that bring the tank into full compliance with the specification would be required to stamp the certification date on the specification plate and issue a Certificate of Compliance.

B. Remote Shutoffs

On December 28, 1988, in Ashland, Virginia, a pipe fitting on an MC 331 cargo tank transporting sulfur dioxide failed during a delivery operation. The driver of the CTMV suffered a fatal injury while attempting to close the cargo tank's internal valve. The CTMV was not equipped with a remote mechanical means to close the internal valve. As a result of its investigation, NTSB recommended that RSPA require MC 330, MC 331, and MC 338 CTMVs to be equipped with on-truck remote mechanical means to close the internal valve (NTSB # H–90–91).

In a final rule published November 3, 1994 (HM–183C; 50 FR 55162), we adopted a requirement for MC 331 and MC 338 CTMVs constructed after January 1, 1995, to be equipped with on-truck remote shutoff devices. For CTMVs constructed prior to January 1, 1995, we required each MC 330 and MC 331 CTMV used to transport flammable gas; flammable liquid; hydrogen chloride, refrigerated liquid; or anhydrous ammonia, and each MC 338 CTMV used to transport flammable ladings to be retrofitted with an on-truck remote shutoff device.

In this NPRM, we are proposing to require all MC 330, MC 331, and MC 338 CTMVs to be retrofitted with an on-truck remote mechanical shutoff device that meets the requirements for the applicable specification. The retrofit must be accomplished within three years from the effective date of a final rule. Under this proposal, CTMVs used to transport only argon, carbon dioxide, helium, krypton, neon, nitrogen, or xenon are excepted from the requirement for on-truck remote shutoffs.

We are also proposing to require MC 338 CTMVs to be equipped with a means of thermal activation for closing the internal self-closing stop valve. On

June 4, 1998 (63 FR 30572), RSPA established a negotiated rulemaking committee under Docket RSPA–97–2718 (HM 225A). During the negotiated rulemaking process, the committee discussed the safety benefits of fusible elements, which provide a heat-activated means for closing a valve. Fusible elements melt when subjected to sufficiently high temperatures, thereby closing the valve to which they are affixed. The HMR currently require installation of on-truck remote closures with a means of thermal activation on MC 331 cargo tanks. Consistent with the committee's recommendation, we are proposing that internal self-closing stop valves be equipped with a means of thermal activation on all MC 338 cargo tanks. This requirement would not apply to tanks transporting only argon, carbon dioxide, helium, krypton, neon, nitrogen, or xenon.

C. Inlet and Outlet Fittings on MC 331 Cargo Tanks

Currently, § 178.337–9 of the HMR requires the use of malleable metals for the construction of valves and fittings on MC 331 cargo tanks. The National Propane Gas Association (NPGA) petitioned for a change to § 178.337–9 to require liquid filling and vapor equalization fittings on MC 331 cargo tanks to be constructed of malleable steel or ductile iron only (P–0935). In its petition, NPGA stated that this change would help to prevent the occurrence of piping failures when fittings made of soft metals, such as brass or copper, are struck by an outside force. We agree. Accordingly, we are proposing to require new or replacement primary valves and fittings used in liquid filling or vapor equalization on MC 331 cargo tanks to be constructed of malleable steel or ductile iron. This proposal is consistent with the National Fire Protection Association (NFPA) Standard 58 and is currently the standard industry practice.

D. Internal Visual Inspections of Insulated Tanks

Currently, the HMR provide an exception for insulated MC 330 and MC 331 cargo tanks from the requirement to undergo an internal visual inspection in conjunction with the annual external visual inspection. The exception was included in the HMR to facilitate inspection of insulated MC 330 and MC 331 cargo tanks that did not have manholes or inspection openings, making it impossible to enter the cargo tank to perform an internal visual inspection. Because insulation precludes a visual inspection of the exterior of the cargo tank, and there is no means to inspect the interior of the tank, it was decided that the only way to verify the structural integrity of the cargo tank was to subject it to a hydrostatic or pneumatic pressure test at one-year intervals.

The exception applies to insulated MC 330 and MC 331 cargo tanks, irrespective of whether the cargo tank is equipped with a manhole or inspection opening. However, many of these cargo tanks are, in fact, equipped with manholes or inspection openings. We believe that operators should be permitted the option of verifying the structural integrity of these cargo tanks with an internal visual inspection rather than a more costly pressure test. Therefore, we are proposing to permit the owner of an insulated cargo tank that is equipped with manholes or inspection openings to perform either an internal visual inspection in conjunction with the external visual inspection or a hydrostatic or pneumatic pressure-test of the cargo tank. As appropriate, these tanks would continue to be required to undergo a complete internal visual inspection and pressure test at the intervals specified in § 180.407(c).

E. Leakage Tests for Cargo Tanks in Anhydrous Ammonia Service

The HMR currently require cargo tanks to be leak tested at no less than 80 percent of the tank design pressure or MAWP. The regulations include an exception for MC 330 and MC 331 cargo tanks in liquefied petroleum gas (LPG) service that permits them to be leakage tested at not less than 414 kPa (60 psig). This exception was adopted (Docket HM–183, 183A; 56 FR 27872; June 17, 1991) because normal operating pressure for cargo tanks in LPG service varies with ambient temperature; thus, a cargo tank in LPG service would have to be leakage tested under conditions simulating the highest ambient temperature to which it will be subjected to assure that it is not operated at pressures exceeding leakage test pressure.

The Fertilizer Institute (TFI) filed a petition (P–1255) requesting that we allow anhydrous ammonia cargo tanks to be included in this exception. TFI states that, because changes in ambient temperatures result in substantial changes in the normal operating pressure for cargo tanks in anhydrous ammonia service, a cargo tank in anhydrous ammonia service would need to be leakage tested on the hottest day of each year to ensure that it is not operated at pressures exceeding the leakage test pressure. TFI stated that this causes ''extreme hardship'' for companies transporting anhydrous ammonia in cargo tanks. TFI further stated that anhydrous ammonia is a compressed gas with properties that are similar to those of LPG.

RSPA recognized the difficulty described by TFI and, on August 23, 1996, granted an exemption, DOT E–11551, to allow cargo tanks in anhydrous ammonia service to be leakage tested at a lower pressure. However, due to differences in the vapor pressures of LPG and anhydrous ammonia, the exemption permits leakage testing of cargo tanks in dedicated anhydrous ammonia service at not less than 483 kPa (70 psig), rather than 414 kPa (60 psig) as is currently permitted for LPG. We are proposing to incorporate the provisions of DOT E–11551 into the HMR.

In its petition for rulemaking, TFI also requests that we amend the HMR to decrease the frequency of leakage testing to every two years, instead of annually, for cargo tanks in dedicated anhydrous ammonia service. TFI correctly observes that cargo tanks in chlorine service are only required to be leakage tested every two years and that one reason given by RSPA for extending this retest period to two years was that chlorine emits an odor that permits easy detection of a leak. TFI notes that anhydrous ammonia also has an easily detectable odor. However, the primary reason for a two-year leak test interval for cargo tanks in chlorine service is that these tanks are subjected to very stringent construction standards. The detectability of leakage due to an odor was a minor consideration. Therefore, RSPA is not proposing to adopt this portion of the TFI petition.

V. Petitions for Rulemaking and Other Recommendations

We have a number of petitions for rulemaking requesting changes to the CTMV requirements. Most of the requested changes are proposed in this NPRM. A brief summary of these petitions follows:

P-Number	Section	Request
0935	178.337–9	Require liquid filling and vapor equalization fittings on MC 331 cargo tanks be made of malleable steel or ductile iron only. Filed by NPGA. RSPA agrees.

P-Number	Section	Request
1199	180.407	Allow an external heating system on a CTMV to be pressure tested at its MAWP. Filed by NTTC. RSPA agrees.
1212	178.345–17	Remove requirement to mark the maximum loading and unloading pressures on a cargo tank's specification plate. Filed by TTMA. RSPA agrees.
1255	180.407	Extend frequency of leakage test for MC 330 and MC 331 CTMVs in anhydrous ammonia service from one to two years. Filed by TFI. RSPA partially agrees.
1262	180.407	Allow testing of heating systems on CTMV at the heating system design pressure instead of 1.5 times the heating systems design pressure. Filed by TTMA. RSPA agrees.
1272	178.320	Revise definition of ''MAWP''. Filed by TTMA. RSPA partially disagrees.
1292	180.407	Allow pressure and leakage test to be performed by a manufacturer or repairer. Filed by TTMA. RSPA agrees.
1300	180.407	Revise minimum thickness requirements for MC 300 series CTMVs. Filed by TTMA. RSPA agrees.
1322	180.413	Clarify requirements for certification of cargo tank mounting by a DCE and supervision of the mounting by a Registered Inspector. Filed by TTMA. RSPA agrees.
1325	178.345–8	Revise minimum road clearance requirements for DOT 400-series CTMVs. Filed by TTMA. RSPA agrees.
1333	178.347–1	Allow weld seam joint efficiency of 0.85 for head seams in bulkheads on DOT 407 CTMVs . Filed by TTMA. RSPA agrees.
1343	180.415	Require the requalification date marking on a CTMV to be the date the test or inspection expires instead of the date the test or inspection was last performed. Filed by NTTC. RSPA agrees.
1388	180.413	Require attachment of a supplemental specification plate that reflects changes during modification, stretching or rebarreling of a CTMV. Filed by TTMA. RSPA partially agrees.
1410	171.1	Incorporate by reference latest editions of certain TTMA industry documents. Filed by TTMA. RSPA agrees.

National Transportation Safety Board (NTSB) Recommendations

H–90–91 Require controls for internal shut-off valves for the discharge system to be installed at remote locations on all newly constructed and currently authorized DOT specification cargo tanks that are used for the transportation of any HM. See § 180.405.

H–93–94 Require remote control mechanisms for internal shutoff valves to be marked for emergency use on all cargo tanks authorized for the transportation of HM. See § 172.328.

H–95–14 Revise inspection/testing requirements for all cargo tanks constructed of mild and high-strength, low-alloy steel that are used to transport HM to require at least once each year or immediately when visual inspections indicate corrosion, measurement of the thickness of appurtenances (including ring stiffeners) that form air cavities adjacent to external cargo tank sheet material when the cargo tank sheet material cannot be visually inspected. If the thickness of the appurtenance material has corroded to a predetermined percentage of its manufactured thickness, require that access to the tank sheet material within the air cavity be made and that the thickness of the tank sheet material to be measured. See § 180.407.

VI. Section-by-Section Review

Part 107

We propose to revise the title of Subpart F to clarify that the registration requirements apply to cargo tank facilities that test, inspect, and repair cargo tanks, and to manufacturers, assemblers, and Design Certifying Engineers.

Section 107.502. We propose to revise the definition of ''assembly'' to include the installation of linings or coatings to the inside wall of a cargo tank wall and the installation of equipment or components during the manufacturing process that are necessary to conform to the specification requirements. This proposal is meant to clarify that the term ''assembler'' is not limited to a person who mounts cargo tanks on motor vehicle suspension parts, but also includes a person who installs equipment or components during the manufacturing process.

Section 107.503. We propose to require information on the registration statement for cargo tank manufacturing, assembling, and repair facilities to indicate whether a facility is conducting tests and inspections at a location other than the address listed in the registration form. The purpose of this proposal is to identify registered facilities that are using mobile inspection/testing equipment.

Part 171

Section 171.7. We propose to revise this section to incorporate the June 1, 1998 edition of Truck Trailer Manufacturers Association (TTMA) RP No. 61–98 ''Performance of Manhole and/or Fill Opening Assemblies on MC 306, DOT 406, Non-ASME MC 312 and Non-ASME DOT 412 Cargo Tanks;'' the July 1, 1997 edition of TTMA RP No. 81–97 ''Performance of Spring Loaded Pressure Relief Valves on MC 306, MC 307, MC 312, DOT 406, DOT 407, and DOT 412 Tanks;'' and the June 1, 1998 edition of TTMA TB No. 107, ''Procedure for Testing In-Service Unmarked, and/or Uncertified MC 306 and Non-ASME MC 312 Type Cargo Tank Manhole Covers.'' This proposal responds to a petition from TTMA (P–1410). In addition, we are proposing to incorporate by reference the American Petroleum Institute Recommended Practice 1604 ''Closure of Underground Petroleum Storage Tanks,'' Third Edition, dated March 1996.

Section 171.8. We propose to revise the definitions of ''Design Certifying Engineer (DCE)'' and ''Registered Inspector (RI)'' to permit an individual who does not meet the educational requirements in the definitions to be recognized as a DCE or RI if the person was performing those functions for three years prior to September 1, 1991, and meets all other qualifications. In addition, we are proposing to eliminate a requirement for an individual to have registered with the DOT before December 31, 1995. The regulations currently permit an individual who does not meet the educational requirements to be recognized as a DCE or RI if the individual had at least three years of experience in performing the function of a DCE or RI, prior to September 1, 1991, and if the individual

registered with the Department before December 31, 1995.

We are also proposing to change the definition of ''Cargo tank'' to include intermediate bulk containers (IBCs) in the list of specifications under which cargo tanks are not manufactured. In addition, we propose to revise the definition of ''Maximum Allowable Working Pressure'' to include a new section reference.

Part 172

Section 172.101. We propose to modify the Hazardous Materials Table by adding a new Special Provision 144 in Column (7) for the following proper shipping names: Diesel fuel; Fuel, aviation, turbine engine; Fuel oil (no. 1, 2, 4, 5, or 6); Gas oil or Diesel fuel or Heating oil, light; Gasohol; Gasoline; Hydrocarbons, liquid, n.o.s.; Kerosene; Petroleum crude oil; Petroleum distillates, n.o.s. or Petroleum products, n.o.s; and Petroleum oil. Special Provision 139 clarifies that underground storage tanks (USTs) may be shipped as unregulated materials if they meet the definition of ''empty'' in § 173.29 or if they are cleaned, purged, or made inert in accordance with the American Petroleum Institute Standard 1604 for USTs.

Section 172.102. We propose to revise paragraph (c)(1) to add Special Provision 144 concerning the transportation of empty USTs, as detailed above.

Section 172.328. We are proposing to add a new paragraph (d) to require all manually activated on-vehicle remote shutoff devices for closure of a cargo tank's internal shutoff valve to be marked ''Emergency Shutoff.'' This requirement would become effective two years after the effective date of a final rule published in the **Federal Register**.

Part 173

Section 173.33. We propose to re-designate the minimum design requirements for cargo tanks used to transport Packing Group I and II liquid ladings in current paragraph (g) as new paragraph (c)(6) and to redesignate paragraph (h) as paragraph (g). Paragraph headings would be added for paragraphs (f) and (g).

Section 173.150. We propose to remove the references to §§ 173.21, 173.24, 173.24a, and173.24b in paragraph (f)(3)(viii). Current paragraph (f)(3)(vii) requires compliance with Subpart B of part 173, so these references are redundant.

We also propose to revise paragraph (f)(3) by adding a new paragraph (ix) to clarify that hazardous materials (HM) training requirements apply to persons involved with the transportation of a combustible liquid in a bulk package or a combustible liquid that is also a hazardous substance, a hazardous waste, or a marine pollutant. In 1992, RSPA reviewed the costs and safety benefits of the training requirement (Docket HM–126F; 57 FR 20952) and found HM training to be justified. However, the training requirement was inadvertently omitted from this section.

Part 177

Section 177.834. We propose to revise paragraph (j) of this section to specify that all manhole closures must be closed and secured on cargo tanks containing hazardous materials or residues of hazardous materials. Cargo tanks that are cleaned and purged may have open manhole closures.

Part 178

Section 178.320. We are proposing to revise paragraph (a) to add definitions applicable to cargo tanks that are currently in § 178.345–1(c). In addition, we propose to revise and move the definition of maximum allowable working pressure (MAWP) from § 178.345–1(k) to paragraph (a). Finally, we are proposing to replace the term ''stop-valve'' with ''stop valve'' in paragraph (a) each place it appears.

We propose to revise paragraph (b) to state specifically that accident damage protection devices must be certified by a DCE. FMCSA has found that there is a misunderstanding among assemblers installing cargo tanks onto a motor vehicle chassis as to whether the rear-end protection devices must be certified by a DCE. Because rear-end protection devices are required by the specification to meet specific structural integrity requirements, the design of these devices must be certified by a DCE.

In addition, paragraph (d) would be added to clarify that ''minimum thickness'' is the greatest of: (1) The value specified in the special provisions of the Hazardous Materials Table; (2) the value calculated or specified in the applicable section; or (3) the value specified in the tables in § 180.407.

Section 178.337–3. We propose to revise paragraph (g) to add structural support members to the list of attachments to which this paragraph applies. In addition, the proposed revision: (1) Groups all requirements for mounting pads in § 178.337–3(g)(2); (2) deletes an unnecessary requirement that mounting pads be the same material as the cargo tank and, instead, allows the pad material to be selected by the DCE; (3) achieves conformity with relevant requirements for DOT 400-series cargo tanks in § 178.345–3; and (4) eliminates the exception for a small gap in the continuous weld around mounting pads while permitting continued use of weep holes or telltale holes as currently allowed.

Section 178.337–8. We are proposing to revise paragraph (a)(5)(iii) to remove an expired compliance date.

Section 178.337–9. In paragraph (b)(2), we propose a revision to require the use of malleable steel or ductile iron in the construction of inlet and outlet fittings on MC 331 cargo tanks.

For clarity, we are proposing to move paragraph (b)(5), which addresses requirements for grouping piping and fittings, to § 178.337–10 as new paragraph (e). This would consolidate all of the requirements for accident damage protection.

Section 178.337–10. We are proposing to revise the section heading from ''Protection of fittings'' to ''Accident damage protection.'' In addition, we are proposing to re-designate chlorine tank requirements in current paragraph (c) as paragraph (d) and to re-designate the rear-end protection requirements in current paragraph (d) as paragraph (c). Proposed redesignated paragraph (c) would be revised to incorporate the requirements for MC 338 cargo tanks and authorize the DOT 400 series rear-end protection provisions as an alternative to existing requirements for MC 331 cargo tank motor vehicles.

We also propose to re-designate § 178.337–9(b)(5) as new § 178.337–10(e) and to move requirements concerning shear sections in current § 178.337–12 to new § 178.337–10(f).

Section 178.337–12. This section currently prescribes requirements for shear sections located adjacent to and outboard of internal valves or excess flow valves. This section would be removed and reserved and the current requirements would be designated as new paragraph (f) in § 178.337–10, thereby consolidating all accident damage protection requirements in one section.

Section 178.337–13. We propose to revise this section for consistency with the DOT 400-series requirements for cargo tank support and anchoring. When the structural integrity requirements for MC 331 cargo tank motor vehicles were modified under HM–183 (54 FR 24982), the closely-related requirements for support and anchoring were not changed. Therefore, we are now proposing changes to the requirements for support and anchoring. In addition, we propose to relax a requirement that mounting pads be the same material as the cargo tank material

of construction by allowing the pad material to be selected by the DCE.

Section 178.337–17. We propose to revise paragraph (a) to require essential information marked on MC 331 CTMV metal identification plates to be consistent with the requirements for DOT 400-series CTMVs so that this essential information is readily available to operators and enforcement officials. This requirement would become effective one year from the date of publication of a final rule in the **Federal Register** and would be applicable to new construction only. Metal identification plates for MC 331 CTMVs certified after the effective date of the final rule would be marked with the following information:

(1) DOT-specification number MC 331;

(2) Original test date (Orig. Test Date) month and year;

(3) MAWP in psig;

(4) Cargo tank test pressure (Test P), in psig;

(5) Cargo tank design temperature (Design Temp. Range)__°F to__°F;

(6) Cargo tank motor vehicle manufacturer (CTMV mfr.);

(7) Cargo tank motor vehicle certification date (CTMV cert. date), if different from the cargo tank certification date;

(8) Cargo tank manufacturer (CT Mfr.);

(9) Cargo tank manufacture date (CT date Mfr.);

(10) Cargo tank certification date (CT cert. date);

(11) Material specification number—shell (Shell matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type;

(12) Material specification number—heads (Head matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type.

Note— When the shell and head materials are the same thickness, they may be combined (Shell & head matl, yyy***);

(13) Maximum weight of lading (Max. Payload) in pounds;

(14) Exposed surface area in feet;

(15) Nominal capacity (Water Cap.), in pounds;

(16) Maximum design density of lading (Max. lading density), in pounds per gallon;

(17) Weld material (Weld matl.);

(18) Minimum Thickness—shell (Min. Shell-thick), in inches. When minimum shell thicknesses are not the same for different areas, show (top ____, side ____, bottom ____, in inches). Parenthetical abbreviations noted above would be permitted;

(19) Manufactured Thickness—shell (Mfg. Shell-thick), in inches. When manufactured shell thicknesses are not the same for different areas, show (top ____, side , bottom ____, in inches). Parenthetical abbreviations noted above would be permitted;

(20) Minimum Thickness—head (Min. Head-thick), in inches;

(21) Manufactured Thickness—head (Mfg. Head-thick), in inches;

(22) Lining Material (Lining), if applicable;

(23) Heating system design pressure (Heating sys. press.) in psig, if applicable;

(24) Heating system design temperature (Heating sys. temp.) in °F, if applicable;

Section 178.337–18. We propose to re-designate paragraphs (a)(3) and (a)(4) as (a)(5) and (a)(6), respectively. We propose to add new paragraphs (a)(3) and (a)(4) detailing requirements for certifying cargo tanks manufactured in stages by two or more manufacturers.

Section 178.338–2. We propose to revise paragraph (c) to except certain steel alloys from impact test requirements for consistency with exceptions allowed in the ASME Code. Section 178.338–1(c) states that each tank must be designed and constructed to the ASME Code. Therefore, because the HMR specify that these tanks should be constructed of materials authorized by the ASME Code, exceptions in the ASME Code from impact testing for certain steel alloys should also be recognized in the HMR.

Section 178.338–3. We propose to revise paragraph (g) to add structural support members to the list of attachments to which this paragraph applies. The proposed revision also incorporates more flexible, performance language consistent with structural integrity requirements permitted for DOT 400-series CTMVs.

Section 178.338–10. We are proposing to revise the section heading to read ''Accident damage protection'' instead of ''Collision damage protection.'' In addition, we are proposing to revise paragraph (c) to authorize the DOT 400-series cargo tank rear-end protection provisions as an alternative to existing requirements for MC 338 cargo tank motor vehicles.

Section 178.338–11. We propose to revise paragraph (c) to require internal self-closing stop valves to be equipped with a means of thermal activation. In addition, we are revising paragraph (c) for clarity.

Section 178.338–13. When the structural integrity requirements for MC 338 cargo tank motor vehicles were modified under HM–183 to conform with structural integrity requirements of the DOT 400-series, the closely-related requirements for supports and anchoring were not changed. Therefore, we are proposing changes to the requirements for support and anchoring. In addition, we are proposing to modify an unnecessary requirement that mounting pads be the same material as the cargo tank to allow the pad material to be selected by the Design Certifying Engineer.

We are proposing to delete current paragraph (a) and re-designate current paragraphs (b) and (c) as paragraphs (a) and (b), respectively. References to ''Appendix G'' in each of these paragraphs would be revised to read: ''(* * * Appendix G of Section VIII, Division 1 of the ASME Code).'' In addition, a new paragraph (c) would be added to require the use of mounting pads that conform to the requirements of § 178.338–3(g) when welding a structural support member or accident damage protection device directly to the cargo tank wall.

Section 178.338–18. We propose to revise paragraph (a) to require information on MC 338 CTMV metal identification plates to be consistent with the requirements for DOT 400-series CTMVs. This requirement would become effective one year from the date of publication of a final rule in the **Federal Register** and would be applicable to new construction only. Metal identification plates for new MC 338 CTMVs would be marked with the following information:

(1) DOT-specification number MC 338 (MC 338);

(2) Original test date (Orig. Test Date) month and year;

(3) Tank MAWP in psig;

(4) Cargo tank test pressure (Test P), in psig;

(5) Cargo tank design temperature (Design Temp. Range)__°F to__°F;

(6) Cargo tank motor vehicle manufacturer (CTMV mfr.);

(7) Cargo tank motor vehicle certification date (CTMV cert. date), if different from the cargo tank certification date;

(8) Cargo tank manufacturer (CT Mfr.);

(9) Cargo tank manufacture date (CT date Mfr.);

(10) Cargo tank certification date (CT cert. date);

(11) Material specification number—shell (Shell matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type;

(12) Material specification number—heads (Head matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type.

Note— When the shell and head materials are the same thickness, they

may be combined (Shell & head matl, yyy***);

(13) Maximum weight of lading (Max. Payload) in pounds;

(14) Exposed surface area in feet;

(15) Nominal capacity (Water Cap.), in pounds net at 60 °F., with the tank at its coldest operating temperature, after deduction for the volume above the inlet to the pressure relief device or pressure control valve, structural members, baffles, piping, and other appurtenances inside the tank;

(16) Maximum design density of lading (Max. lading density), in pounds per gallons;

(17) Weld material (Weld matl.);

(18) Minimum Thickness—shell (Min. Shell-thick), in inches. When minimum shell thicknesses are not the same for different areas, show (top __, side __, bottom __, in inches). Parenthetical abbreviations noted above would be permitted;

(19) Manufactured Thickness—shell (Mfg. Shell-thick), in inches. When manufactured shell thicknesses are not the same for different areas, show (top __, side __, bottom __, in inches). Parenthetical abbreviations noted above would be permitted;

(20) Minimum Thickness—head (Min. Head-thick), in inches;

(21) Manufactured Thickness—head (Mfg. Head-thick), in inches;

(22) Lining Material (Lining), if applicable;

(23) ''Insulation for Oxygen Service'' or ''Not Authorized for Oxygen Service,'' as appropriate;

(24) Marked rated holding time for at least one cryogenic liquid, in hours, and the name of that cryogenic liquid (MRHT__ hrs, name of cryogenic liquid). MRHT markings for additional cryogenic liquids may be displayed on or adjacent to the specification plate.

Section 178.345–1. For consistency, we propose to revise paragraph (c) by removing the definitions and placing them in alphabetical order in § 178.320(a). In addition, we propose to remove paragraph (k) and move the definition of ''maximum allowable working pressure'' to § 178.320(a).

Section 178.345–2. We propose to revise paragraph (b) to address the requirements for minimum thickness as specified in 178.320(d).

Section 178.345–3. We are proposing to revise paragraph (b) by adding a new paragraph (b)(3) to require that all cargo tank designers, manufacturers, owners, and users must consider all conditions specified in § 173.33(c) when matching the performance characteristic of the cargo tank to the characteristics of the lading being transported.

We are proposing to revise paragraph (f) to add requirements for structural support members. In addition, in paragraph (f)(3), the references to paragraphs (g)(1) and (g)(2) would be corrected to read (f)(1) and (f)(2). We are also revising paragraph (f) for clarity and consistency.

Section 178.345–5. We propose to revise paragraph (e) to specify that manhole markings must be placed on the outside of the manhole assembly where they can be seen without opening the manhole cover or fill opening.

Section 178.345–8. We propose to revise paragraph (a)(5) to specify minimum road clearance requirements for landing gear within 10 feet of an axle. In response to a 1996 petition (P–1325) from the Truck Trailer Manufacturing Association (TTMA), we are proposing a minimum road clearance requirement of 10 inches. TTMA suggests this height to allow for clearance when a CTMV wheel may drop over a curb or for crossing over rises, such as a railroad crossing. We agree that this clearance is necessary to prevent scraping or damaging the CTMV when encountering these situations.

In paragraph (d), we propose a revision to clarify that manufacturers must comply with applicable requirements in the Federal Motor Carrier Safety Regulations at 49 CFR 393.86 and with paragraph (b) of this section.

Section 178.345–10. In paragraph (a), we propose to add a sentence to clarify that pressure relief vents are not required to conform to the ASME Code. The requirement for a cargo tank to be ''constructed in accordance with the ASME Code'' or ''constructed and certified in conformance with the ASME Code'' applies to the construction of the cargo tank walls and closure devices. Certification to the ASME Code may be done without the installation of pressure relief devices. Sections 178.345–10, 178.346–3, 178.347–4, and 178.348–4 set forth requirements for pressure relief systems for DOT 400-series cargo tanks. These requirements are different from and supersede the ASME Code venting requirements.

Section 178.345–13. In § 178.345–13, we propose to correct references to read §§ 178.346–5, 178.347–5, and 178.348–5 respectively. These section numbers were previously changed, and this NPRM proposes to update appropriate reference citations.

Section 178.345–14. We propose to revise paragraph (b)(1) to require that the words ''See variable specification plate'' be added to the name plate on cargo tanks built to more than one specification. This requirement is consistent with industry practice and the proposed wording in § 180.413(d)(3)(vi).

We also propose to revise paragraphs (c)(6) and (c)(7) to eliminate the maximum loading and unloading pressure marking requirement from the specification plate.

Section 178.346–1. In paragraph (d)(6), the reference ''§ 178.345–10'' would be corrected to read ''§ 178.346–3''; and in paragraph (d)(7) the reference ''§ 178.345–13 would be corrected to read ''§ 178.346–5.''

Section 178.346–2. We propose to revise the text and table titles to be consistent with the minimum thickness requirements in § 178.320(d).

Section 178.346–5. We propose to revise paragraph (c) to clarify the parameters for testing cargo tanks that are used to transport petroleum distillate fuels and are equipped with vapor recovery equipment. These cargo tanks may be tested in accordance with EPA's annual certification test requirements as set forth in 40 CFR 63.425(e). To satisfy the leakage test requirements, however, we are proposing that the Method 27 test must be performed using air and not liquid.

Section 178.347–1. We propose a minor editorial correction in paragraph (c) to change the word ''accordance'' to ''conformance.'' We propose to add paragraph (d)(9) to provide for a weld joint efficiency of 0.85 for head seams in bulkheads on DOT 407 CTMVs.

We propose in paragraph (d)(5) to change the reference to ''§§ 178.345–5 and 178.347–5,'' to read ''§ 178.347–3.'' In addition, in paragraph (d)(6) the reference to ''§ 178.345–10,'' and the reference in paragraph (d)(7) to ''§ 178.345–13,'' would be changed to read ''§ 178.347–4'' and ''§ 178.347–5,'' respectively.

Section 178.347–2. We propose to revise paragraph (a) and the table titles to be consistent with the minimum thickness requirements in § 178.320(d).

Section 178.348–1. We propose to remove the reference to ''§ 178.348–5,'' in paragraph (e)(2)(v). We also propose to change the reference to ''§ 178.348–10,'' in paragraph (e)(2)(vi), to read ''§ 178.348–4.'' In addition, we propose to change the second reference to ''§ 178.348–13,'' in paragraph (e)(2)(vii), to read ''§ 178.348–5.''

Section 178.348–2. We propose to revise paragraph (a) and the table titles for consistency with the minimum thickness requirements in § 178.320(d).

Part 180

Section 180.403. We propose to define the term ''corroded or abraded'' to mean any visible reduction in the material thickness of the cargo tank wall or valve

due to pitting, flaking, gouging, or chemical reaction to the material surface. In addition, we propose to modify the definition for ''corrosive to the tank or valve'' to mean that the lading has been shown through experience or test data to reduce the thickness of the tank wall or valve.

Section 180.405. We propose to modify paragraph (b) to allow a cargo tank motor vehicle that was originally built to a standard authorized by an exemption to be marked and certified to the applicable MC 306, MC 307, MC 312, MC 331, or MC 338 specification after August 31, 1995. Currently, paragraphs (d), (e), and (f) outline steps that must be taken prior to this certification. Although the cargo tanks should have been marked and certified before August 31, 1995, FMCSA and RSPA believe there may be a number of cargo tanks in operation that have not been certified to the appropriate specification. The practice of certifying these cargo tanks to the applicable MC 300-series specification was previously authorized. Continuing to permit these tanks to be marked and certified would not decrease the current level of safety. This proposal would not authorize these tanks to be used in DOT-specification service, after the expiration of the exemption under which they were manufactured, unless the necessary changes have been made and the tank is certified.

Also, we propose to add paragraph (b)(2)(iv) to require any repairs performed on MC 306, MC 307, or MC 312 cargo tanks after June 30, 1992 to have been conducted in accordance with § 180.413.

We propose to remove paragraph (g)(3). The period for retrofitting manholes has expired and the regulation is obsolete.

We propose to revise paragraph (k) to require MC 300-series cargo tanks that have a pressure relief system set at 3 psig and that have no MAWP or design pressure marked on the specification plate, or an MAWP or design pressure of less than 3 psig marked on the specification plate, to be re-marked with an MAWP or design pressure of not greater than 3 psig. This provision is currently allowed, but not required.

We propose to revise paragraph (l)(2)(iii), which prescribes the load that a rear-end tank protection device or rear bumper is required to withstand, to be consistent with the requirements for rear-end protection devices in § 178.345–8(d)(3). Currently, the rear-end protection device or rear bumper is required to withstand a 2 ''g'' load uniformly distributed and applied horizontally (parallel to the ground) from any direction at an angle not exceeding 30 degrees to the longitudinal axis of the vehicle. As proposed, the rear bumper or rear-end protection device would be required to withstand the horizontal load at an angle not exceeding 10 degrees to the longitudinal axis of the vehicle. This proposal would make the angle of load application consistent with the rear-end damage protection devices installed on new DOT 400-series CTMVs, as revised on November 3, 1994 (Docket HM–183C; 59 FR 55167).

We also propose to add a new paragraph (o) to require MC 330, MC 331, and MC 338 cargo tanks that are not equipped with on-truck remote shutoff devices to be retrofitted with on-truck remote shutoff devices that meet the requirements of the applicable specification. In this NPRM, we are proposing a three-year retrofit program for existing cargo tanks not equipped with an on-truck remote shutoff feature.

Section 180.407. We propose to revise paragraph (a)(2) to remove the phrase ''or during loading or unloading'' to limit the maximum pressure in the tank to the MAWP, except when the tank is undergoing a pressure test only.

We propose to revise paragraphs (b)(1) and (b)(2) to clarify the tests and inspections that must be conducted when a cargo tank shows evidence of dents, corroded or abraded areas, leakage, has sustained damage to an extent that may adversely affect its lading retention capabilities, or any other condition that might render it unsafe for transportation in hazardous materials service.

In addition, paragraph (b)(4) would be removed because the inspection and testing requirements for cargo tanks that have been modified from their original design specifications are currently outlined in § 180.413 and are redundant in this section.

We are proposing to revise paragraph (d)(1) to correct references for hydrostatic and pneumatic testing of cargo tanks where the visual inspection is precluded because the cargo tank is lined, coated, or designed so as to prevent access for internal inspection.

In response to NTSB recommendation H–95–14, we are also proposing to revise paragraph (d)(4) to require thickness testing of ring stiffeners and appurtenances on cargo tanks constructed of mild steel or high-strength, low-alloy steel and aluminum that are installed in a manner that precludes an external visual inspection of the cargo tank.

We propose to revise paragraph (g) to replace the term ''re-closing pressure relief valve'' with ''self-closing pressure relief valve.'' This change would clarify that loading and unloading vents that open and close mechanically during loading and unloading operations are not subject to the bench testing requirements. As proposed, the revision would specify that self-closing pressure relief devices, such as normal vents (1 psig vents) installed on MC 306 and DOT 406 cargo tanks, must be removed from the cargo tank for inspection and testing or replaced in conjunction with the pressure test. In addition, paragraph (g)(1)(v) would be removed because the 5-year phase in period has expired.

In paragraph (g)(4), we propose to reduce the test pressure for cargo tank heating systems as requested in petitions (P–1199) and (P–1262) from NTTC and TTMA, respectively. NTTC members who own and operate DOT-specification CTMVs with external heating systems have found that these systems cannot withstand 1.5 times the design pressure as currently specified in paragraph (g)(4). The most vulnerable parts of the typical external heating system are the flexible connectors (rubber or elastomerics) that are used to interconnect heat exchanger panels. Because these heating systems are covered with insulation, a failure can cause expensive, time-consuming repairs. Evidently, before the adoption of Part 180 periodic testing, system designers made no provision for testing at 1.5 times operational conditions, a level that is routinely recognized in the design of conventional piping systems. For these reasons, NTTC and TTMA asked RSPA to reduce the test pressure to the maximum operating pressure of each system.

We propose to revise paragraph (h)(1) to require internal and external self-closing stop valves to be tested during the leak test, adjacent tanks in a multi-compartment CTMV to be separately tested, and cargo tanks in liquefied compressed gas service to be externally inspected for leaks during leakage tests by a means other than using a pressure gauge.

We propose to add paragraph (h)(1)(iv) to require MC 330 or MC 331 cargo tanks in dedicated service for anhydrous ammonia to be leakage tested at not less than 483 kPa (70 psig). In addition, we propose to add paragraph (h)(1)(v) to require non-specification cargo tanks subject to testing under § 173.8(d)(6) to be leak tested at a pressure of 16.5 kPa (2.4 psig). Section 173.8 requires non-specification cargo tanks authorized by that section to be tested and inspected in the same manner as required for an MC 306 CTMV. Many non-specification cargo tanks are not marked with a MAWP or

design pressure. This requirement would ensure that these cargo tanks are leakage tested in the same manner as MC 306 CTMVs.

We propose to revise paragraph (h)(2) to clarify the parameters for testing cargo tanks used to transport petroleum distillate fuels that are equipped with vapor recovery systems. These cargo tanks may be tested in accordance with EPA's annual certification test requirements as set forth in 40 CFR 63.425(e). To satisfy the leakage test requirements, however, we are proposing that the Method 27 test must be performed using air and not liquid. Under this proposal, the hydrostatic test alternative included in Method 27 may not be used to satisfy the leakage test requirements. We believe that the pneumatic test is a better test method for detecting leaks.

We propose to revise paragraph (i) and the titles of the tables in § 180.407(i)(5) by adding wording that is consistent with the proposed minimum thickness requirements in § 178.320(d).

Also, we propose to revise paragraph (i)(6) to change the wording ''maximum lading density'' to ''maximum weight of lading or reduced maximum working pressure, or combinations thereof'', and to make other relevant editorial revisions. Currently, if a cargo tank does not meet the minimum thickness required to satisfy the structural integrity requirements, the existing provisions allow for a downgrade of the maximum lading density, but do not recognize other factors directly related to the stress levels experienced by the cargo tank. This change is consistent with cargo tank design practices that evaluate both the weight of lading carried by the cargo tank and the pressure on the cargo tank wall as determining factors for minimum in-service thickness. The proposed change also responds to a petition (P–1300) from TTMA.

Section 180.409. We propose to revise paragraph (a) to add a reference to the definition of Registered Inspector in § 171.8. to clarify that a person must meet the minimum qualifications set forth in the definition in order to be qualified to perform tests and inspections required by § 180.407(c). This proposed change is based on a petition (P–1292) from TTMA.

Section 180.413. We propose to revise paragraph (a) requirements for performing repairs, modifications, stretching, rebarrelling, or remounting a cargo tank. Specifically, we propose to explicitly state that a facility repairing any specification cargo tanks must adhere to the quality control procedures (e.g. welder qualifications and approved welding procedures) in the National Board Inspection Code (NBIC) except requirements for inspection by an Authorized Inspector, preparation of an R–1 Form, or stamping of the ''R'' stamp on the cargo tank. This was our intent in 1989 when, under Docket HM–183, we changed the regulations to require that repair facilities hold either a valid National Board Certificate of Authorization for use of the National Board ''R'' stamp or a valid ASME Certificate of Authorization for use of the ASME ''U'' stamp. FMCSA has discovered numerous instances where, although a facility holds a valid ''U'' or ''R'' stamp, the quality control procedures used to obtain the stamp were not utilized during the repair. One example is the use of ''lap patches'' which are prohibited under the NBIC. This revision will prohibit this and other un-safe practices being discovered during repairs of non-ASME stamped cargo tanks. In addition, the registration and cleaning and purging requirements would be moved from paragraphs (b)(4) and (d)(8) to paragraph (a)(2). In addition, we propose to revise paragraph (c) for clarity.

In paragraph (d), we propose to revise the requirements for stretching, modifying, or rebarrelling a cargo tank to clarify the intent of the regulation. Specifically, we propose to eliminate the need for testing in accordance with § 180.407, which is currently required by § 180.413(d)(4)(iv). Testing the adequacy of welded modifications, stretchings, or rebarrellings would be accomplished by testing specified in paragraph (d)(3)(iv) of this section (formerly § 180.413(d)(10)). In paragraph (d), RSPA also proposes to clarify that a modification, stretching, or rebarrelling must be certified by a DCE.

In paragraph (d)(4)(v), we propose to require a supplemental specification plate to be installed adjacent to the original specification plate. This proposed change eliminates the provision that currently allows changes to the original specification plate. In addition, paragraph (d)(4), in its entirety, would be re-designated as paragraph (d)(3). The provisions of paragraph (d)(5) would be re-worded and moved to (d)(4).

We are proposing to move the provisions contained in paragraphs (d)(6) and (7) to a new paragraph (e) to eliminate confusion about what is required when a cargo tank is re-mounted onto a new chassis. New paragraph (e) is based on a petition (P–1322) from TTMA and would clarify requirements for certification of mounting by a DCE and supervision of the mounting by a Registered Inspector. Current paragraph (e) would be re-designated as paragraph (f).

Section 180.415. We propose to revise paragraph (b)(3)(vi) to require a special marking, ''K-EPA27,'' on cargo tanks that have been tested in accordance with EPA requirements for testing cargo tank vapor tightness. Under this proposal, this marking would replace the ''K'' marking if EPA's annual certification test, as set forth in 40 CFR 63.425(e), is used instead of the leakage test in § 180.407(h)(1), or would be in addition to the ''K'' marking if the cargo tank undergoes both the leakage test and the EPA annual certification test. This proposal would provide a nationally uniform marking for cargo tanks that pass the annual certification test in accordance with EPA requirements.

In addition, after October 1, 2001, RSPA proposes to change the date that is marked on the tank from the date the test or inspection was last performed to the date the test or inspection expires, preceded by the letter ''N.'' This responds to petition P–1343 submitted by NTTC. RSPA agrees with the request that by indicating when the test or inspection expires, and subsequently when the test or inspection is next due, owners, operators, and inspectors will be able to more easily determine if the cargo tank is meeting the requirements.

Section 180.417. We propose to require additional information to be provided on inspection and test reports to enable owners and operators of cargo tanks to more effectively review the results of the test or inspection. The information required by the revised paragraph (b)(1) would provide important information about the cargo tank and its service that may affect the type and method of test to be performed. This information would be supplied by the cargo tank owner or carrier to the re-qualification or maintenance facility.

The specific information, proposed in paragraph (b)(2), is information that the inspection or testing facility would provide to the cargo tank owner or carrier and concerns the compliance status of the cargo tank. The information is currently available to the inspection or testing facility but is not usually given to the cargo tank owner. Current paragraph (b)(2) would be re-designated as paragraph (b)(3).

We propose to revise paragraph (d) to clarify what documents must accompany the cargo tank when ownership changes. Currently, §§ 180.413(e) and 180.417(d) require the seller to provide copies of certain documents and records to the buyer, upon the sale of a cargo tank. The proposed change would consolidate these requirements into one section.

VI. Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This proposed rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and was not reviewed by the Office of Management and Budget. RSPA has prepared a preliminary Regulatory Evaluation assessing potential costs, benefits and savings of the proposed changes. The Regulatory Evaluation is available for review in the public docket on the DOT Docket Management System website, *http://dms.dot.gov.* RSPA considered three alternatives: (1) Taking no regulatory action; (2) clarifying and updating the regulations, responding to several petitions for rulemaking, and addressing three NTSB recommendations; and (3) responding to NTSB recommendations only. RSPA chose Alternative 2 because it would increase safety, reduce compliance costs, and provide greater flexibility in design and construction of cargo tanks.

We estimate the total annual cost savings to the industry resulting from implementation of the proposals in this NPRM would be $3,521,600. At the same time the industry would incur increased costs of compliance totaling $2,199,167 the first year and $1,449,270 each following year. The overall net benefits would be $1,222,433 the first year and $2,072,330 each subsequent year.

Increasing clarity and thereby understanding of the regulations, facilitates compliance, and reduces risks to the public and environment. While some proposals in this Notice would result in costs and safety benefits, others would result in savings while not sacrificing safety. Overall, the estimated savings of these proposals are greater than the estimated costs. The proposals with the most associated costs are proposals based on safety concerns and NTSB recommendations, which are based on events that occurred in serious accidents. These proposals would increase safety for people and property.

In this Notice, RSPA invites comments on the costs and savings associated with each of the proposed changes.

B. Executive Order 13132

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (''Federalism''). This proposed rule would preempt state, local, and Indian tribe requirements but does not propose any regulation that has substantial direct effects on the states, the relationship between the national government and the states, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

The Federal hazardous materials transportation law, 49 U.S.C. 5101–5127, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts state, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

(1) The designation, description, and classification of hazardous materials;

(2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;

(3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;

(4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or

(5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This proposed rule addresses covered subject item (5) above and would preempt state, local, and Indian tribe requirements not meeting the ''substantively the same'' standard.

Federal hazardous materials transportation law provides at § 5125(b)(2) that, if DOT issues a regulation concerning any of the covered subjects, DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of the final rule and not later than two years after the date of issuance. RSPA proposes that the effective date of federal preemption be 90 days from publication of a final rule in this matter in the **Federal Register**.

C. Executive Order 13175

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 (''Consultation and Coordination with Indian Tribal Governments''). Because this proposed rule does not have tribal implications, does not impose substantial direct compliance costs, and is required by statute, the funding and consultation requirements of Executive Order 13175 do not apply.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601–612) requires each agency to analyze proposed regulations and assess their impact on small businesses and other small entities to determine whether the proposed rule is expected to have a significant impact on a substantial number of small entities. Based on the assessment in this preliminary regulatory evaluation, and information generally available on the number and size of potentially affected entities, we find that:

- All small entities that engage in the manufacture, operation, testing or inspection of certain DOT specification cargo tank motor vehicles would be subject to some or all of the proposed rules;
- In each instance where regulatory proposals would require a new or increased cost to a regulated party, the cost is a modest $100 or less per cargo tank;
- Small entities would also be able to take advantage of the relaxations in the proposed rule, resulting in a net reduction of regulatory costs.

RSPA estimates that most of the approximately 3,700 interstate and 5,500 intrastate motor carriers that would be subject to the requirements of this rule are small businesses. There are also approximately 7,000 cargo tank inspection/testing facilities subject to the requirements that are estimated to be small businesses. We estimate that operators of existing fleets of cargo tank motor vehicles would incur costs of approximately $75 per year for each of the approximately 5,000 affected series 307, 312, 407 and 412 cargo tank motor vehicles in corrosive material service, and $100 every two years for thickness testing of appurtenances on the estimated 15,000 cargo tanks in that same series. In neither case is the additional cost likely to have a significant economic impact on the operator's net income or ability to remain competitive.

In the case of manufacturers/assemblers of series 406, 407 and 412 cargo tank motor vehicles, the proposed changes involve a new requirement for the application of mounting pads that is estimated to increase their cost to manufacture/assemble each cargo tank motor vehicle by $100. We expect that cost will be passed through to the person purchasing the cargo tank. Also, since the cost is modest, we do not anticipate a decreased carrier demand for cargo tanks.

Although there are still other provisions in this rule that would present an added cost to these small

businesses, there are also safety benefits that have the potential to save money and protect the viability of small businesses by lowering the risk of a catastrophic accident. Most of the provisions of the rule are directed toward individual cargo tanks. Since small businesses operate fewer cargo tanks, most of the cost of this proposed rule would affect larger businesses. The proposed rule includes several provisions that would provide savings to small businesses by allowing experienced Registered Inspectors and Design Certifying Engineers to continue to perform functions for which they were previously qualified, allowing recertification of certain cargo tanks to their original specification, and relaxing requirements for leakage testing of cargo tanks in anhydrous ammonia service that are operated almost exclusively by entities that are small businesses (including small farms).

In addition to the above compliance costs, a number of proposed relaxations would allow for a potential net reduction in regulatory costs. For example, owners of cargo tanks would be able to re-certify their cargo tanks to the original specification. Manufacturers of MC 338 cargo tanks would be able to take advantage of the relaxation of mounting requirements, which will save engineering and construction costs. Likewise, the revisions for bottom damage protection devices would create further possible reductions in compliance costs. These and other relaxations offset the additional requirements, while maintaining current safety standards.

In consideration of the above, while the proposed rule would apply to a substantial number of small entities, I certify that the economic impact on those small entities would not be significant.

E. Paperwork Reduction Act

RSPA has a current information collection approval under OMB No. 2137–0014, Cargo Tank Specification Requirements, with 130,861 burden hours and $1,734,350 annual costs. RSPA believes that this proposed rule may result in decreased annual burden hours and costs. If these proposals are finalized, the current approval would be required to be revised and resubmitted to OMB for extension and re-approval.

Section 1320.8(d), Title 5, Code of Federal Regulations requires that RSPA provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests. This notice identifies information collection that RSPA may submit to OMB for extension and re-approval based on the requirements in this proposed rule. RSPA has revised burden estimates, where appropriate, to reflect current reporting levels or adjustments based on changes in this proposed rule since the information collection was last approved. RSPA estimates that the total information collection and recordkeeping burden as proposed in this rule would be revised as follows:

OMB No: 2137–0014.

Number of Respondents: 41,366.

Total Annual Responses: 132,600.

Total Annual Burden Hours: 102,021.

Total Annual Burden Cost: $4,088,350.

One Time Start Up Cost: $1,595,000.

RSPA specifically requests comments on the information collection and recordkeeping burdens associated with developing, implementing, and maintaining these requirements for approval under this proposed rule.

Requests for a copy of the information collection should be directed to Deborah Boothe, Office of Hazardous Materials Standards (DHM–10), Research and Special Programs Administration, Room 8102, 400 Seventh Street, SW., Washington, DC 20590–0001, Telephone (202) 366–8553.

Written comments should be addressed to the Dockets Unit as identified in the **ADDRESSES** section of this rulemaking. Comments should be received prior to the close of comment period identified in the **DATES** section of this rulemaking. Under the Paperwork Reduction Act of 1995, no person is required to respond to an information collection unless it displays a valid OMB control number. If these proposed requirements are adopted in a final rule, RSPA will submit the revised information collection and recordkeeping requirements to the Office of Management and Budget for approval.

F. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN number contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

G. Unfunded Mandates Reform Act

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of $100 million or more to either state, local, or Tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

H. Environmental Assessment

RPSA has performed an Environmental Assessment and has determined this proposed rule does not have any significant negative impacts to the environment and may result in a small net benefit from the proposal to allow the recertification of cargo tanks that allows older cargo tanks to be used rather than discarded. Therefore, we find that there are no significant environmental impacts associated with this proposed rule.

List of Subjects

49 CFR Part 107

Administrative practice and procedure, Hazardous materials transportation, Packaging and containers, Penalties, Reporting and recordkeeping requirements.

49 CFR Part 171

Exports, Hazardous materials transportation, Hazardous waste, Imports, Incorporation by reference, Reporting and recordkeeping requirements.

49 CFR Part 172

Education, Hazardous materials transportation, Hazardous waste, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

49 CFR Part 177

Hazardous materials transportation, Motor carriers, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 178

Hazardous materials transportation, Motor vehicle safety, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 180

Hazardous materials transportation, Motor carriers, Motor vehicle safety, Packaging and containers, Railroad safety, Reporting and recordkeeping requirements.

In consideration of the foregoing, we propose to amend 49 CFR Chapter I as follows:

PART 107—HAZARDOUS MATERIALS PROGRAM PROCEDURES

1. The authority citation for part 107 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; Sec. 212–213, Pub. L. 104–121, 110 Stat. 857; 49 CFR 1.45, 1.53.

2. The title of Subpart F would be revised to read as follows:

Subpart F—Registration of Cargo Tank and Cargo Tank Motor Vehicle Manufacturers, Assemblers, Repairers, Inspectors, Testers, and Design Certifying Engineers

3. In § 107.502, paragraph (a)(1) would be revised to read as follows:

§ 107.502 General registration requirements.

(a) * * *

(1) *Assembly* means the performance of any of the following functions when the function does not involve welding on the cargo tank wall:

(i) The mounting of one or more tanks or cargo tanks on a motor vehicle or to a motor vehicle suspension component;

(ii) The installation of equipment or components necessary to meet the specification requirements prior to the certification of the cargo tank motor vehicle; or

(iii) The installation of linings, coatings, or other materials to the inside of a cargo tank wall.

* * * * *

4. In § 107.503, paragraphs (a)(3), (a)(4), (a)(5), (a)(6), and (a)(7) would be redesignated as paragraphs (a)(4), (a)(5), (a)(6), (a)(7), and (a)(8) respectively, and new paragraph (a)(3) would be added to read as follows:

§ 107.503 Registration statement.

(a) * * *

(3) A statement indicating whether the facility uses mobile testing/inspection equipment to perform inspections, tests, or repairs at a location other than the address listed in paragraph (a)(2) of this section;

* * * * *

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

5. The authority citation for part 171 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

6. In § 171.1, in the paragraph (a)(3) table, a new entry for ''American Petroleum Institute'' would be added in appropriate alphabetical order and under ''Truck Trailer Manufacturers Association,'' the entries ''TTMA RP No. 81'' and ''TTMA RP No. 61–94'' would be removed, the entry ''TTMA TB No. 107'' would be revised, and two new entries would be added in appropriate alpha-numeric order, to read as follows:

§ 171.7 Reference material.

(a) Matter incorporated by reference

* * *

* * * * *

(3) Table of material incorporated by reference. * * *

Source and name of material	49 CFR reference
* * * * * * *	
American Petroleum Institute 1220 L Street, NW, Washington, D.C. 20005–4070:	
API Recommended Practice 1604 Closures of Underground Petroleum Storage Tanks, 3rd Edition, March 1996''	171.201
* * * * * * *	
Truck Trailer Manufacturers Association * * *	
TTMA RP No. 61–98, Performance of Manhole and/or Fill Opening Assemblies on MC 306, DOT 406, Non-ASME MC 312 and Non-ASME DOT 412 Cargo Tanks, June 1, 1998	180.405
TTMA RP No. 81–97, Performance of Spring Loaded Pressure Relief Valves on MC 306, MC 307, MC 312, DOT 406, DOT 407, and DOT 412 Tanks, July 1, 1997 Edition	178.345–10
TTMA TB No. 107, Procedure for Testing In-Service, Unmarked, and/or Uncertified MC 306 and Non-ASME MC 312 Type Cargo Tank Manhole Covers, June 1, 1998 Edition	180.405
* * * * * * *	

* * * * *

7. In § 171.8, the definitions for ''Cargo tank,'' ''Design Certifying Engineer,'' ''MAWP,'' and ''Registered Inspector'' would be revised to read as follows:

§ 171.8 Definitions and abbreviations.

* * * * *

Cargo tank means a bulk packaging that:

(1) Is a tank intended primarily for the carriage of liquids or gases and includes appurtenances, reinforcements, fittings, and closures (for the definition of a tank, see § 178.320, § 178.337–1, or § 178.338–1 of this subchapter, as applicable);

(2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but which, by reason of its size, construction or attachment to a motor vehicle is loaded or unloaded without being removed from the motor vehicle; and

(3) Is not fabricated under a specification for cylinders, intermediate bulk containers, multi-unit tank car tanks, portable tanks, or tank cars.

* * * * *

Design Certifying Engineer means a person registered with the Department in accordance with subpart F of part 107 of this chapter who has the knowledge and ability to perform stress analysis of pressure vessels and otherwise determine whether a cargo tank design and construction meets the applicable DOT specification. In addition, Design Certifying Engineer means a person who meets, at a minimum, any one of the following:

(1) Has an engineering degree and one year of work experience in cargo tank structural or mechanical design;

(2) Is currently registered as a professional engineer by appropriate authority of a state of the United States or a province of Canada; or

(3) Has at least three years' experience in performing the duties of a Design Certifying Engineer prior to September 1, 1991.

* * * * *

MAWP means maximum allowable working pressure. For DOT specification cargo tanks used to transport liquid hazardous materials, see § 178.320(c) of this subchapter.

* * * * *

Registered Inspector means a person registered with the Department in accordance with Subpart F of part 107

of this chapter who has the knowledge and ability to determine whether a cargo tank conforms to the applicable DOT specification. In addition, Registered Inspector means a person who meets, at a minimum, any one of the following:

(1) Has an engineering degree and one year of work experience;

(2) Has an associate degree in engineering and two years of work experience;

(3) Has a high school diploma (or General Equivalency Diploma) and three years of work experience; or

(4) Has at least three years' experience performing the duties of a Registered Inspector prior to September 1, 1991.

* * * * *

PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

8. The authority citation for part 172 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

9. In the § 172.101 Hazardous Materials Table, the following entries would be revised to read as follows:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

§ 172.101—HAZARDOUS MATERIALS TABLE

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification	PG	Label codes	Special provisions (§ 172.102)	(8) Packaging (§ 173.***)			(9) Quality limitations		(10) Vessel stowage	
							Exceptions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	* *		*		*	*		*		*			
D	Diesel fuel	3	NA1993	III	None	144, B1, 1B3, T4, TP1, TP29.	150	203	242	60 L	220 L	A	
I	Diesel fuel	3	UN1202	III	3	144, B1, 1B3, T2, TP1.	150	203	242	60 L	220 L	A	
	* *		*		*	*		*		*			
	Fuel, aviation, turbine engine	3	UN1863	I	3	144, T11, TP1, TP8.	150	201	243	1 L	30 L	E	
				II	3	144, IB2, T4, TP1, TP8.	150	202	242	5 L	60 L	B	
				III	3	144, B1, IB3, T2, TP1.	150	203	242	60L	220 L	A	
D	Fuel oil (*No. 1, 2, 4, 5, or 6*)	3	NA 1993	III	3	144, B1, IB3 T4, TP1, TP29.	150	203	242	60 L	220 L	A	
	* *		*		*	*		*		*			
	Gas oil	3	UN1202	III	3	144, B1, IB3, T2, TP1.	150	203	242	60 L	220 L	A	
	* *		*		*	*		*		*			
D	Gasohol *gasoline mixed with ethyl alcohol, with not more than 20 percent alcohol.*	3	NA1203	II	3	144	150	202	242	5L	60 L	E	
	Gasoline	3	UN1203	II	3	144, B33, IB2, T4, TP1.	150	202	242	5 L	60 L	E	
	* *		*		*	*		*		*			
	Hydrocarbons, liquid, n.o.s	3	UN3295	I	3	144, T11, TP1, TP8.	150	201	243	1 L	30 L	E	
		3	UN3295	II	3	144, IB2, T7, TP1, TP8, TP28.	150	202	242	5 L	60 L	B	
		3	UN3295	III	3	144, B1, IB3, T4, TP1, TP29.	150	203	242	60 L	220 L	A	
	* *		*		*	*		*		*			
	Kerosene	3	UN1223	III	3	144, B1, IB3, T2, TP2.	150	203	242	60 L	220 L	A	

*	*	*	*	*	*	*	*	*					
	Petroleum crude oil	3	UN1267	I	3	144, T11, TP1, TP8.	None	201	243	1 L	30 L	E
				II	3	144, IB2 T4, TP1, TP8.	150,	202	242	5 L	60 L	B
				II	3	144, B1, IB3, T2, TP1.	150	203	242	60 L	220 L	A
	Petroleum distillates, n.o.s. *or* Petroleum products, n.o.s.	3	UN1268	I	3	144, T11, TP1, TP8.	150	201	243	1 L	30 L	E
				II	3	144, IB2, T7, TP1, TP8, TP28.	150	202	242	5 L	60 L	B
				III	3	144, B1, IB3, T4, TP1, TP29.	150	203	242	60 L	220 L	A
*	*	*	*	*	*	*	*	*					
D	Petroleum oil	3	NA1270	I	3	144, T11, TP1, TP9.	None	201	243	1 L	30 L	E
				II	3	144, IB2, T7, TP1, TP8, TP28.	150	202	242	5 L	60 L	B
				III	3	144, B1, IB3, T4, TP1, TP29.	150	203	242	60 L	202 L	A
*	*	*	*	*	*	*	*	*					

10. In § 172.102, in paragraph (c)(1), special provision 144 would be added in numerical order to read as follow:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(1) * * *

Code/Special Provisions

* * * * *

144 If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604, then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter.

* * * * *

11. In § 172.328, a new paragraph (d) would be added to read as follows:

§ 172.328 Cargo tanks.

* * * * *

(d) After [Two Years From Effective Date of Final Rule], each on-vehicle manually-activated remote shutoff device for closure of the internal self-closing stop valve must be identified by marking ''Emergency Shutoff'' in letters at least 1.5 inches in height, in a color that contrasts with its background, and located in an area immediately adjacent to the means of closure.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

12. The authority citation for part 173 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; 49 CFR 1.45, 1.53.

13. In § 173.33, current paragraphs (g) and (h) would be redesignated as paragraphs (c)(6) and (g), respectively, and paragraph headings for current paragraph (f) and redesignated paragraph (g) would be added to read as follows:

§ 173.33 Hazardous materials in cargo tanks motor vehicles.

* * * * *

(f) *Substitute packagings.* * * *

(g) *Remote control of self-closing top valves—MC 330, MC 331 and MC 338 cargo tanks.* * * * .

14. In § 173.150, paragraphs (f)(3)(vii) and (f)(3)(viii) would be revised and paragraph (f)(3)(ix) would be added to read as follows:

§ 173.150 Exceptions for Class 3 (flammable) and combustible liquids.

* * * * *

(f) * * *

(3) * * *

(vii) Packaging requirements of subpart B of this part and, in addition, non-bulk packagings must conform to the requirements of § 173.203;

(viii) The requirements of §§ 173.1, 174.1, 177.804, 177.817, and 177.834 of this subchapter, except § 177.834 (i)(3); and

(ix) The training requirements of subpart H of part 172 of this subchapter.

* * * * *

PART 177—CARRIAGE BY PUBLIC HIGHWAY

15. The authority citation for part 177 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

16. In § 177.834, paragraph (j) introductory text would be revised to read as follows:

§ 177.834 General requirements.

* * * * *

(j) *Manholes and valves closed.* Except for a cargo tank conforming to § 173.29(b)(2) of this subchapter, a person may not drive a cargo tank motor vehicle containing a hazardous material regardless of quantity unless:

* * * * *

PART 178—SPECIFICATIONS FOR PACKAGINGS

17. The authority citation for part 178 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

18. In § 178.320, paragraphs (a) and (b)(1) would be revised and paragraph (d) would be added to read as follows:

§ 178.320 General requirements applicable to all DOT specification cargo tank motor vehicles.

(a) *Definitions.* For the purpose of this subchapter:

Appurtenance means any attachment to a cargo tank that has no lading retention or containment function and provides no structural support to the cargo tank.

Baffle means a non-liquid-tight transverse partition device that deflects, checks or regulates fluid motion in a tank.

Bulkhead means a liquid-tight transverse closure at the ends of or between cargo tanks.

Cargo tank means a bulk packaging that:

(1) Is a tank intended primarily for the carriage of liquids or gases and includes appurtenances, reinforcements, fittings and closures (for *tank*, see § 178.345–1(c), § 178.337–1, or § 178.338–1, as applicable);

(2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but that, by reason of its size, construction or attachment to a motor vehicle is loaded or unloaded without being removed from the motor vehicle; and

(3) Is not fabricated under a specification for cylinders, intermediate bulk containers, multi-unit tank car tanks, portable tanks, or tank cars.

Cargo tank motor vehicle means a motor vehicle with one or more cargo tanks permanently attached to or forming an integral part of the motor vehicle.

Cargo tank wall means those parts of the cargo tank that make up the primary lading retention structure, including shell, bulkheads, and fittings and that, when closed as for transportation of lading, yield the minimum volume of the cargo tank assembly.

Charging line means a hose, tube, pipe, or a similar device used to pressurize a tank with material other than the lading.

Companion flange means one of two mating flanges where the flange faces are in contact or separated only by a thin leak-sealing gasket and are secured to one another by bolts or clamps.

Connecting structure means the structure joining two cargo tanks.

Constructed and certified in accordance with the ASME Code means a cargo tank is constructed and stamped in accordance with the ASME Code, and is inspected and certified by an Authorized Inspector.

Constructed in accordance with the ASME Code means a cargo tank is constructed in accordance with the ASME Code with authorized exceptions (see §§ 178.346, 178.347, and 178.348) and is inspected and certified by a Registered Inspector.

Design type means one or more cargo tanks that are made—

(1) To the same specification;

(2) By the same manufacturer;

(3) To the same engineering drawings and calculations, except for minor variations in piping that do not affect the lading retention capability of the cargo tank;

(4) Of the same materials of construction;

(5) To the same cross-sectional dimensions;

(6) To a length varying by no more than 5 percent;

(7) With the volume varying by no more than 5 percent (due to a change in length only); and

(8) For the purposes of § 178.338 only, with the same insulation system.

External self-closing stop valve means a self-closing stop valve designed so that

the self-stored energy source is located outside the cargo tank and the welded flange.

Extreme dynamic loading means the maximum loading a cargo tank motor vehicle may experience during its expected life, excluding accident loadings resulting from an accident, such as overturn or collision.

Flange means the structural ring for guiding or attachment of a pipe or fitting with another flange (companion flange), pipe, fitting, or other attachment.

Inspection pressure means the pressure used to determine leak tightness of the cargo tank when testing with pneumatic pressure.

Internal self-closing stop valve means a self-closing stop valve designed so that the self-stored energy source is located inside the cargo tank or cargo tank sump, or within the welded flange, and the valve seat is located within the cargo tank or within one inch of the external face of the welded flange or sump of the cargo tank.

Lading means the hazardous material contained in a cargo tank.

Loading/unloading connection means the fitting in the loading/unloading line farthest from the loading/unloading outlet to which the loading/unloading hose, pipe, or device is attached.

Loading/unloading outlet means a cargo tank outlet used for normal loading/unloading operations.

Loading/unloading stop valve means the stop valve farthest from the cargo tank loading/unloading outlet to which the loading/unloading connection is attached.

Manufacturer means any person engaged in the manufacture of a DOT specification cargo tank, cargo tank motor vehicle, or cargo tank equipment that forms part of the cargo tank wall. This term includes attaching a cargo tank to a motor vehicle or to a motor vehicle suspension component that involves welding on the cargo tank wall. A *manufacturer* must register in accordance with subpart F of Part 107 of this chapter.

MAWP means the maximum pressure allowed at the top of the tank in its normal operating position. The *MAWP* must be calculated as prescribed in Section VIII (Division 1) of the ASME Code (see § 171.7 of this subchapter). In use, the MAWP must be greater than or equal to the maximum lading pressure conditions prescribed in § 173.33 of this subchapter for each material transported.

Maximum lading pressure. See § 173.33(c) of this subchapter.

Minimum thickness. See paragraph (d) of this section.

Multi-specification cargo tank motor vehicle means a cargo tank motor vehicle equipped with two or more cargo tanks fabricated to more than one cargo tank specification.

Normal operating loading means the loading a cargo tank motor vehicle may be expected to experience routinely in operation.

Nozzle means a subassembly consisting of a pipe or tubular section with or without a welded or forged flange on one end.

Outlet means any opening in the shell or head of a cargo tank, (including the means for attaching a closure), except that the following are not *outlets*: a threaded opening securely closed during transportation with a threaded plug or a threaded cap, a flanged opening securely closed during transportation with a bolted or welded blank flange, a manhole, a gauging device, a thermometer well, or a pressure relief device.

Outlet stop valve means the stop valve at a cargo tank loading or unloading outlet.

Pipe coupling means a fitting with internal threads on both ends.

Rear bumper means the structure designed to prevent a vehicle or object from under-riding the rear of another motor vehicle. See § 393.86 of this title.

Rear-end tank protection device means the structure designed to protect a cargo tank and any lading retention piping or devices in case of a rear end collision.

Sacrificial device means an element, such as a shear section, designed to fail under a load in order to prevent damage to any lading retention part or device. The device must break under strain at no more than 70 percent of the strength of the weakest piping element between the cargo tank and the sacrificial device. Operation of the *sacrificial device* must leave the remaining piping and its attachment to the cargo tank intact and capable of retaining lading.

Self-closing stop valve means a stop valve held in the closed position by means of self-stored energy, that opens only by application of an external force and that closes when the external force is removed.

Shear section means a sacrificial device fabricated in such a manner as to abruptly reduce the wall thickness of the adjacent piping or valve material by at least 30 percent.

Shell means the circumferential portion of a cargo tank defined by the basic design radius or radii excluding the bulkheads.

Stop valve means a valve that stops the flow of lading.

Sump means a protrusion from the bottom of a cargo tank shell designed to facilitate complete loading and unloading of lading.

Tank means a container, consisting of a shell and heads, that forms a pressure tight vessel having openings designed to accept pressure tight fittings or closures, but excludes any appurtenances, reinforcements, fittings, or closures.

Test pressure means the pressure to which a tank is subjected to determine pressure integrity.

Toughness of material means the capability of a material to absorb energy represented by the area under a stress strain curve (indicating the energy absorbed per unit volume of the material) up to the point of rupture.

Vacuum cargo tank means a cargo tank that is loaded by reducing the pressure in the cargo tank to below atmospheric pressure.

Variable specification cargo tank means a cargo tank that is constructed in accordance with one specification, but that may be altered to meet another specification by changing relief device, closures, lading discharge devices, and other lading retention devices.

Void means the space between tank heads or bulkheads and a connecting structure.

Welded flange means a flange attached to the tank by a weld joining the tank shell to the cylindrical outer surface of the flange, or by a fillet weld joining the tank shell to a flange shaped to fit the shell contour.

(b) * * * (1) Each cargo tank or cargo tank motor vehicle design type and each accident damage protection device design must be certified to be in conformance with the specification requirements by a Design Certifying Engineer who is registered in accordance with Subpart F of part 107 of this chapter.

* * * * *

(d) *Shell and head thickness.* The minimum required shell and head thickness for a cargo tank is specific to the hazardous material transported and is the least of the following:

(1) The minimum thickness for a specific hazardous material as required by the special provisions specified in column 7 in the § 172.101 Hazardous Materials Table and the requirements of Part 173 of this subchapter as specified in column 8c in the same table;

(2) The thickness as calculated or specified in the applicable specification; or

(3) For MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, or MC 312 cargo tanks, the in-service minimum thickness

prescribed in Tables I and II of § 180.407(i)(5) of this subchapter, for the minimum thickness specified by Tables I and II of the applicable specification(s).

19–20. In § 178.337–3, paragraph (g) would be revised to read as follows:

§ 178.337–3 Structural integrity.

* * * * *

(g) The design, construction, and installation of an attachment, appurtenance to the cargo tank, structural support member between the cargo tank and the vehicle or suspension component, or accident protection device must conform to the following requirements:

(1) Structural members, the suspension sub-frame, accident protection structures, and external circumferential reinforcement devices must be used as sites for attachment of appurtenances and other accessories to the cargo tank, when practicable.

(2) A lightweight attachment to the cargo tank wall such as a conduit clip, brake line clip, skirting structure, lamp mounting bracket, or placard holder must be of a construction having lesser strength than the cargo tank wall materials and may not be more than 72 percent of the thickness of the material to which it is attached. The lightweight attachment may be secured directly to the cargo tank wall if the device is designed and installed in such a manner that, if damaged, it will not affect the lading retention integrity of the tank. A lightweight attachment must be secured to the cargo tank shell or head by a continuous weld or in such a manner as to preclude formation of pockets which may become sites for corrosion. Attachments meeting the requirements of this paragraph (g)(2) are not authorized for cargo tanks constructed under part UHT, Section VIII (Division 1) of the ASME Code (see § 171.7 of this subchapter).

(3) Except as prescribed in paragraphs (g)(1) and (g)(2) of this section, the welding of any appurtenance, accident protection device, or structural support member to the cargo tank wall must be made by attachment of a mounting pad so that there will be no adverse effect upon the lading retention integrity of the cargo tank if any force less than that prescribed in paragraph (b)(1) of this section is applied from any direction. The thickness of the mounting pad may not be less than that of the shell wall or head wall to which it is attached, and not more than 1.5 times the shell or head thickness. However, a pad with a minimum thickness of 0.25 inch may be used when the shell or head thickness is over 0.25 inch. If weep holes or telltale holes are used, the pad must be drilled or punched at the lowest point before it is welded to the tank. Each pad must—

(i) Be fabricated from material determined to be suitable for welding to both the cargo tank material and the material of the appurtenance or structural support member; a Design Certifying Engineer must make this determination considering chemical and physical properties of the materials and must specify filler material conforming to the requirements of Section VIII (Division 1) of the ASME Code (see § 171.7 of this subchapter).

(ii) Be preformed to an inside radius no greater than the outside radius of the cargo tank at the attachment location.

(iii) Extend at least 2 inches in each direction from any point of attachment of an appurtenance or structural support member. This dimension may be measured from the center of the attached structural member.

(iv) Have rounded corners, or otherwise be shaped in a manner to minimize stress concentrations on the shell or head.

(v) Be attached by continuous fillet welding. Any fillet weld discontinuity may only be for the purpose of preventing an intersection between the fillet weld and a tank or jacket seam weld.

21. In § 178.337–8, paragraph (a)(5)(iii) would be revised to read as follows:

§ 178.337–8 Openings, inlets, and outlets.

(a) * * *

(5) * * *

(iii) A cargo tank motor vehicle used to transport refrigerated liquids such as argon, carbon dioxide, helium, krypton, neon, nitrogen, and xenon, or mixtures thereof.

* * * * *

22. In § 178.337–9, (b)(2) would be revised and paragraph (b)(5) would be removed and reserved, to read as follows:

§ 178.337–9 Pressure relief devices, piping, valves, hoses, and fittings.

* * * * *

(b) * * *

(2) Pipe joints must be threaded, welded, or flanged. If threaded pipe is used, the pipe and fittings must be Schedule 80 weight or heavier. Malleable steel or ductile iron must be used in the construction of primary valves and fittings used in liquid filling or vapor equalization. Where copper tubing is permitted, joints must be brazed or be of equally strong metal union type. The melting point of the brazing material may not be lower than 538°C (1000°F). The method of joining tubing may not reduce the strength of the tubing.

* * * * *

23. In § 178.337–10, the section heading and paragraphs (c) and (d) would be revised, and paragraphs (e) and (f) would be added, to read as follows:

§ 178.337–10 Accident damage protection.

* * * * *

(c) *Rear-end protection.* Rear-end protection devices must:

(1) Consist of at least one rear bumper designed to protect the cargo tank and piping in the event of a rear end collision. The bumper design must transmit the force of the collision directly to the chassis of the vehicle. The rear bumper and its attachments to the chassis must be designed to withstand a load equal to twice the weight of the loaded cargo tank and attachments, using a safety factor of four based on the tensile strength of the materials used, with such load being applied horizontally and parallel to the major axis of the cargo tank, or within 30 horizontal degrees thereof. The rear bumper dimensions must meet the requirements of § 393.86 of this title and extend vertically to a height adequate to protect all valves and fittings located at the rear of the cargo tank from damage that could result in loss of lading; or

(2) Conform to the requirements of § 178.345–8.

(d) *Chlorine tanks.* A chlorine tank must be equipped with a protective housing and a manway cover to permit the use of standard emergency kits for controlling leaks in fittings on the dome cover plate. The housing and manway cover must conform to the Chlorine Institute's Standards for Housing and Manway Covers for Steel Cargo Tanks, Dwg. 137–3 (see § 171.7 of this subchapter).

(e) *Piping and fittings.* Piping and fittings must be grouped in the smallest practicable space and protected from damage as required in this section.

(f) *Shear section.* Shear sections or sacrificial devices are required on the following attachments:

(1) A section that will break under undue strain must be provided adjacent to or outboard of each valve specified in § 178.337–8(a)(3) and (4).

(2) Internal self-closing stop valves, excess flow valves and check valves must be protected by a shear section or other sacrificial device. The sacrificial device must be located in the piping system outboard of the stop valve and within the accident damage protection to prevent any accidental loss of lading. The device must break at no more than

70 percent of the load that would be required to cause the failure of the protected lading retention device, part or cargo tank wall. The failure of the sacrificial device must leave the protected lading retention device and its attachment to the cargo tank wall intact and capable of retaining product.

§ 178.337–12 [Removed and Reserved]

24. Section 178.337–12 would be removed and reserved.

25. Section 178.337–13 would be revised to read as follows:

§ 178.337–13 Supporting and anchoring.

(a) A cargo tank that is not permanently attached to or integral with a vehicle chassis must be secured by the use of restraining devices designed to prevent relative motion between the cargo tank and the vehicle chassis when the vehicle is in operation. Such restraining devices must be readily accessible for inspection and maintenance.

(b) On a cargo tank motor vehicle designed and constructed so that the cargo tank constitutes in whole or in part the structural member used in place of a motor vehicle frame, the cargo tank must be supported by external cradles. A cargo tank mounted on a motor vehicle frame must be supported by external cradles or longitudinal members. Where used, the cradles must subtend at least 120 degrees of the shell circumference.

(c) The design calculations of the support elements must satisfy the requirements of § 178.337–3, (a), (b), (c), and (d).

(d) Where any cargo tank support is attached to any part of a cargo tank head, the stresses imposed upon the head must be provided for as required in paragraph (b) of this section.

(e) After [Effective Date of Final Rule], no cargo tank structural support member or rear-end protection device may be welded directly to the cargo tank wall. Mounting pads must be used and conform to the requirements of § 178.337–3(g).

26. In § 178.337–17, paragraph (a) would be revised to read as follows:

§ 178.337–17 Marking.

(a) *Metal identification plate.* Each cargo tank certified after [Effective Date of Final Rule] must have a corrosion resistant metal plate permanently attached to the cargo tank by brazing, welding, or other suitable means on the left side near the front, in a place accessible for inspection. It must be maintained in a legible condition. Each insulated cargo tank must have an additional plate, as described, attached to the jacket in the location specified. If the plate is attached directly to the cargo tank wall by welding it must be welded thereto before the cargo tank is postweld heat treated. The plate must be legibly marked by stamping, embossing, or other means of forming letters into the metal of the plate, with the following information, in addition to that required by the ASME Code, in characters at least $\frac{3}{16}$ inch high (parenthetical abbreviations may be used):

(1) DOT-specification number MC 331 (DOT MC 331);

(2) Original test date (Orig. Test Date) month and year;

(3) MAWP in psig;

(4) Cargo tank test pressure (Test P), in psig;

(5) Cargo tank design temperature (Design Temp. Range) __°F to __°F;

(6) Cargo tank motor vehicle manufacturer (CTMV mfr.);

(7) Cargo tank motor vehicle certification date (CTMV cert. date), if different from the cargo tank certification date;

(8) Cargo tank manufacturer (CT Mfr.);

(9) Cargo tank manufacture date (CT date Mfr.);

(10) Cargo tank certification date (CT cert. date);

(11) Material specification number—shell (Shell matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type;

(12) Material specification number—heads (Head matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type.

Note—When the shell and head materials are the same thickness, they may be combined (Shell & head matl, yyy***);

(13) Maximum weight of lading (Max. Payload) in pounds;

(14) Exposed surface area in feet;

(15) Nominal capacity (Water Cap.), in pounds;

(16) Maximum design density of lading (Max. lading density), in pounds per gallon;

(17) Weld material (Weld matl.);

(18) Minimum Thickness—shell (Min. Shell-thick), in inches. When minimum shell thicknesses are not the same for different areas, show (top __, side __, bottom __, in inches). Parenthetical abbreviations noted in this paragraph (a) are permitted;

(19) Manufactured Thickness—shell (Mfg. Shell-thick), in inches. When manufactured shell thicknesses are not the same for different areas, show (top __, side __, bottom __, in inches). Parenthetical abbreviations noted in this paragraph (a) are permitted;

(20) Minimum Thickness—head (Min. Head-thick), in inches;

(21) Manufactured Thickness—head (Mfg. Head-thick), in inches;

(22) Lining Material (Lining), if applicable;

(23) Heating system design pressure (Heating sys. press.) in psig, if applicable;

(24) Heating system design temperature (Heating sys. temp.) in °F, if applicable.

Note 1 to Paragraph (a): *See* § 173.315(a) of this chapter regarding water capacity.

Note 2 to Paragraph (a): When the shell and head materials are the same thickness, they may be combined (Shell & head matl, yyy***).

* * * * *

27. In § 178.337–18, paragraphs (a)(3) and (a)(4) would be redesignated as paragraphs (a)(5) and (a)(6) respectively, and new paragraphs (a)(3) and (a)(4) would be added to read as follows:

§ 178.337–18 Certification.

(a) * * *

(3) When a cargo tank motor vehicle is manufactured in two or more stages, each manufacturer who performs a manufacturing function or portion thereof on the incomplete cargo tank motor vehicle must provide to the succeeding manufacturer, at or before the time of delivery, a certificate that states the function performed by the manufacturer, including any certificates received from previous manufacturers, Registered Inspectors, and Design Certifying Engineers.

(4) *Specification shortages.* When a cargo tank motor vehicle is manufactured in two or more stages, the manufacturer of the cargo tank must attach the name plate and specification plate as required by § 178.337–17(a) and (b) without the original date of certification stamped on the specification plate. The manufacturer must list the specification requirements that are not completed on the manufacturer's Certificate of Compliance. When the cargo tank motor vehicle is brought into full compliance with the applicable specification, the Registered Inspector must stamp the date of certification on the specification plate and issue a Certificate of Compliance to the owner of the cargo tank motor vehicle. The Certificate of Compliance must list the actions taken to bring the cargo tank motor vehicle into full compliance. In addition, the certificate must include the date of certification and the person (manufacturer, carrier or repair organization) accomplishing compliance.

* * * * *

28. In § 178.338–2, paragraph (c) would be revised to read as follows:

§ 178.338–2 Material.

* * * * *

(c) Impact tests are required on all tank materials, except materials that are excepted from impact testing by the ASME Code, and must be performed using the procedure prescribed in Section VIII (Division 1) of the ASME Code (see § 171.7 of this subchapter).

* * * * *

29. In § 178.338–3, paragraph (g) would be revised to read as follows:

§ 178.338–3 Structural integrity.

* * * * *

(g) The design, construction and installation of an attachment, appurtenance to the cargo tank or structural support member between the cargo tank and the vehicle or suspension component or accident protection device must conform to the following requirements:

(1) Structural members, the suspension subframe, accident protection structures and external circumferential reinforcement devices must be used as sites for attachment of appurtenances and other accessories to the cargo tank, when practicable.

(2) A lightweight attachment to the cargo tank wall such as a conduit clip, brakeline clip, skirting structure, lamp mounting bracket, or placard holder must be of a construction having lesser strength than the cargo tank wall materials and may not be more than 72 percent of the thickness of the material to which it is attached. The lightweight attachment may be secured directly to the cargo tank wall if the device is designed and installed in such a manner that, if damaged, it will not affect the lading retention integrity of the tank. A lightweight attachment must be secured to the cargo tank shell or head by a continuous weld or in such a manner as to preclude formation of pockets that may become sites for corrosion. Attachments meeting the requirements of this paragraph (g)(2) are not authorized for cargo tanks constructed under part UHT, Section VIII (Division 1) of the ASME Code (*see* § 171.7 of this subchapter).

(3) Except as prescribed in paragraphs (g)(1) and (g)(2) of this section, the welding of any appurtenance or structural support member to the cargo tank wall must be made by attachment of a mounting pad so that there will be no adverse effect upon the lading retention integrity of the cargo tank if any force less than that prescribed in paragraph (b)(1) of this section is applied from any direction. The thickness of the mounting pad may not be less than that of the shell or head to which it is attached, and not more than 1.5 times the shell or head thickness. However, a pad with a minimum thickness of 0.187 inch may be used when the shell or head thickness is over 0.187 inch. If weep holes or tell-tale holes are used, the pad must be drilled or punched at the lowest point before it is welded to the tank. Each pad must:

(i) Be fabricated from material determined to be suitable for welding to both the cargo tank material and the material of the appurtenance or structural support member; a Design Certifying Engineer must make this determination considering chemical and physical properties of the materials and must specify filler material conforming to the requirements of Section VIII (Division 1) of the ASME Code (*see* § 171.7 of this subchapter).

(ii) Be preformed to an inside radius no greater than the outside radius of the cargo tank at the attachment location.

(iii) Extend at least 2 inches in each direction from any point of attachment of an appurtenance or structural support member. This dimension may be measured from the center of the attached structural member.

(iv) Have rounded corners, or otherwise be shaped in a manner to minimize stress concentrations on the shell or head.

(v) Be attached by continuous fillet welding. Any fillet weld discontinuity may only be for the purpose of preventing an intersection between the fillet weld and a tank or jacket seam weld.

30. In § 178.338–10, the section heading and paragraph (c) would be revised to read as follows:

§ 178.338–10 Accident damage protection.

* * * * *

(c) *Rear-end protection.* Rear-end protections devices must:

(1) Consist of at least one rear bumper designed to protect the cargo tank and piping in the event of a rear-end collision. The rear-end tank protection device design must transmit the force of the collision directly to the chassis of the vehicle. The rear-end tank protection device and its attachments to the chassis must be designed to withstand a load equal to twice the weight of the loaded cargo tank and attachments, using a safety factor of four based on the tensile strength of the materials used, with such load being applied horizontally and parallel to the major axis of the cargo tank, or within 30 horizontal degrees thereof. The rear-end tank protection device dimensions must meet the requirements of § 393.86 of this title and extend vertically to a height adequate to protect all valves and fittings located at the rear of the cargo tank from damage that could result in loss of lading; or

(2) Conform to the requirements of § 178.345–8.

* * * * *

31. In § 178.338–11, paragraph (c) would be revised to read as follows:

§ 178.338–11 Discharge control devices.

* * * * *

(c) Except for a cargo tank that is used to transport argon, carbon dioxide, helium, krypton, neon, nitrogen, xenon, or mixtures thereof, each liquid filling and liquid discharge line must be provided with an on-vehicle remotely controlled self-closing shutoff valve.

(1) If pressure from a reservoir or from an engine-driven pump or compressor is used to open this valve, the control must be of fail-safe design and spring-biased to stop the admission of such pressure into the cargo tank. If the jacket is not evacuated, the seat of the valve must be inside the tank, in the opening nozzle or flange, or in a companion flange bolted to the nozzle. If the jacket is evacuated, the remotely controlled valve must be located as close to the tank as practicable.

(2) Each remotely controlled shut off valve must be provided with on-vehicle remote means of automatic closure, both mechanical and thermal. One means may be used to close more than one remotely controlled valve. Cable linkage between closures and remote operators must be corrosion resistant and effective in all types of environment and weather. The thermal means must consist of fusible elements actuated at a temperature not exceeding 121°C (250° F), or equivalent devices. The loading/unloading connection area is where hoses are connected to the permanent metal piping. The number and location of remote operators and thermal devices shall be as follows:

(i) On a cargo tank motor vehicle over 3,500 gallons water capacity, remote means of automatic closure must be installed at the ends of the cargo tank in at least two diagonally opposite locations. If the loading/unloading connection at the cargo tank is not in the general vicinity of one of these locations, at least one additional thermal device must be installed so that heat from a fire in the loading/unloading connection area will activate the emergency control system.

(ii) On a cargo tank motor vehicle of 3,500 gallons water capacity or less, at least one remote means of automatic closure must be installed on the end of the cargo tank farthest away from the

loading/unloading connection area. At least one thermal device must be installed so that heat from a fire in the loading/unloading connection area will activate the emergency control system.

32. Section 178.338–13 would be revised to read as follows:

§ 178.338–13 Supporting and anchoring.

(a) On a cargo tank motor vehicle designed and constructed so that the cargo tank constitutes in whole or in part the structural member used in place of a motor vehicle frame, the cargo tank or the jacket must be supported by external cradles or by load rings. For a cargo tank mounted on a motor vehicle frame, the tank or jacket must be supported by external cradles, load rings, or longitudinal members. If cradles are used, they must subtend at least 120 degrees of the cargo tank circumference. The design calculations for the supports and load-bearing tank or jacket, and the support attachments must include beam stress, shear stress, torsion stress, bending moment, and acceleration stress for the loaded vehicle as a unit, using a safety factor of four, based on the tensile strength of the material, and static loading that uses the weight of the cargo tank and its attachments when filled to the design weight of the lading (see Appendix G of Section VIII, Division 1 of the ASME Code), multiplied by the following specified factors in paragraphs (a)(1) and (2) of this section. The effects of fatigue must also be considered in the calculations. Minimum static loadings must be as follows:

(1) For a vacuum-insulated cargo tank—

(i) Vertically downward of 2;

(ii) Vertically upward of 2;

(iii) Longitudinally of 2; and

(iv) Laterally of 2.

(2) For any other insulated cargo tank—

(i) Vertically downward of 3;

(ii) Vertically upward of 2;

(iii) Longitudinally of 2; and

(iv) Laterally of 2.

(b) When a loaded tank is supported within the vacuum jacket by structural members, the design calculations for the tank and its structural members must be based on a safety factor of four and the tensile strength of the material at ambient temperature. The enhanced tensile strength of the material at actual operating temperature may be substituted for the tensile strength at ambient temperature to the extent recognized in the ASME Code for static loadings. Static loadings must take into consideration the weight of the tank and the structural members when the tank is filled to the design weight of lading (see Appendix G of Section VIII, Division 1 of the ASME Code), multiplied by the factors specified in paragraphs (b)(1) through (4) of this section. When load rings in the jacket are used for supporting the tank, they must be designed to carry the fully loaded tank at the following specified factors in paragraphs (b)(1) through (4) of this section for static loadings, and external pressure. Minimum static loadings must be as follows:

(1) Vertically downward of 2;

(2) Vertically upward of 1½;

(3) Longitudinally of 1½; and

(4) Laterally of 1½.

(c) No cargo tank structural support member or rear-end protection device may be welded directly to the cargo tank wall. Mounting pads must conform to the requirements of § 178.338–3(g).

33. In § 178.338–18, paragraph (a) would be revised to read as follows:

§ 178.338–18 Marking.

(a) *Metal identification plate.* Each cargo tank certified after [Effective Date of Final Rule] must have a corrosion-resistant metal plate permanently attached to the cargo tank by brazing, welding, or other suitable means on the left side near the front, in a place accessible for inspection. It must be maintained in a legible condition. Each insulated cargo tank must have an additional plate, as described, attached to the jacket in the location specified. If the plate is attached directly to the cargo tank wall by welding, it must be welded thereto before the cargo tank is postweld heat treated. The plate must be legibly marked by stamping, embossing, or other means of forming letters into the metal of the plate, with the following information (all parenthetical abbreviations noted in this paragraph (a) may be used), in addition to that required by Section VIII (Division 1) of the ASME Code (see § 171.7 of this subchapter), in characters at least 3/16 inch high:

(1) DOT-specification number MC 338 (DOT MC 338);

(2) Original test date (Orig. Test Date) month and year;

(3) Tank MAWP in psig;

(4) Cargo tank test pressure (Test P), in psig;

(5) Cargo tank design temperature (Design Temp. Range)__°F to__°F;

(6) Cargo tank motor vehicle manufacturer (CTMV mfr.);

(7) Cargo tank motor vehicle certification date (CTMV cert. date), if different from the cargo tank certification date;

(8) Cargo tank manufacturer (CT Mfr.);

(9) Cargo tank manufacture date (CT date Mfr.);

(10) Cargo tank certification date (CT cert. date);

(11) Material specification number—shell (Shell matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type;

(12) Material specification number—heads (Head matl, yyy***), where ''yyy'' is replaced by the alloy designation and ''***'' is replaced by the alloy type;

(13) Maximum weight of lading (Max. Payload) in pounds;

(14) Exposed surface area in feet;

(15) Nominal capacity (Water Cap.), in pounds net at 60 °F., with the tank at its coldest operating temperature, after deduction for the volume above the inlet to the pressure relief device or pressure control valve, structural members, baffles, piping, and other appurtenances inside the tank;

(16) Maximum design density of lading (Max. lading density), in pounds per gallons;

(17) Weld material (Weld matl.);

(18) Minimum Thickness—shell (Min. Shell-thick), in inches. When minimum shell thicknesses are not the same for different areas, show (top __, side __, bottom __, in inches);

(19) Manufactured Thickness—shell (Mfg. Shell-thick), in inches. When manufactured shell thicknesses are not the same for different areas, show (top __, side __, bottom __, in inches);

(20) Minimum Thickness—head (Min. Head-thick), in inches;

(21) Manufactured Thickness—head (Mfg. Head-thick), in inches;

(22) Lining Material (Lining), if applicable;

(23) ''Insulation for Oxygen Service'' or ''Not Authorized for Oxygen Service,'' as appropriate;

(24) Marked rated holding time for at least one cryogenic liquid, in hours, and the name of that cryogenic liquid (MRHT __ hrs, name of cryogenic liquid). MRHT markings for additional cryogenic liquids may be displayed on or adjacent to the specification plate.

Note 1 to Paragraph (a): When the shell and head materials are the same thickness, they may be combined (Shell & head matl, yyy***).

* * * * *

34. In § 178.345–1, paragraph (c) would be revised and paragraph (k) would be removed to read as follows:

§ 178.345–1 General requirements.

* * * * *

(c) *Definitions.* See § 178.320(a) for the definition of certain terms used in §§ 178.345, 178.346, 178.347 and 178.348.

* * * * *

35–36. In § 178.345–2, paragraph (b) would be revised to read as follows:

§ 178.345–2 Material and material thickness.

* * * * *

(b) *Minimum thickness.* The minimum thickness for the shell and heads (or baffles and bulkheads when used as tank reinforcement) must be no less than that determined under criteria for minimum thickness specified in § 178.320(d).

* * * * *

37. In § 178.345–3, paragraph (b)(3) would be added and paragraph (f) would be revised to read as follows:

§ 178.345–3 Structural integrity.

* * * * *

(b) * * *

(3) Cargo tank designers, manufacturers, owners, and users must consider all of the conditions specified in § 173.33(c) of this subchapter when matching a cargo tank's performance characteristic to the characteristic of each lading transported.

* * * * *

(f) The design, construction, and installation of an attachment, appurtenance to a cargo tank, structural support member between the cargo tank and the vehicle or suspension component must conform to the following requirements:

(1) Structural members, the suspension sub-frame, accident protection structures and external circumferential reinforcement devices must be used as sites for attachment of appurtenances and other accessories to the cargo tank, when practicable.

(2) A lightweight attachment to a cargo tank wall such as a conduit clip, brake line clip, skirting structure, lamp mounting bracket, or placard holder must be of a construction having lesser strength than the cargo tank wall materials and may not be more than 72 percent of the thickness of the material to which it is attached. The lightweight attachment may be secured directly to the cargo tank wall if the device is designed and installed in such a manner that, if damaged, it will not affect the lading retention integrity of the tank. A lightweight attachment must be secured to the cargo tank shell or head by continuous weld or in such a manner as to preclude formation of pockets which may become sites for corrosion.

(3) Except as prescribed in paragraphs (f)(1) and (f)(2) of this section, the welding of any appurtenance or structural support member to the cargo tank wall must be made by attachment of a mounting pad so that there will be no adverse effect upon the lading retention integrity of the cargo tank if any force less than that prescribed in paragraph (b)(1) of this section is applied from any direction. The thickness of the mounting pad may not be less than that of the shell or head to which it is attached, and not more than 1.5 times the shell or head thickness. However, a pad with a minimum thickness of 0.187 inch may be used when the shell or head thickness is over 0.187 inch. If weep holes or tell-tale holes are used, the pad must be drilled or punched at the lowest point before it is welded to the tank. Each pad must:

(i) Be fabricated from material determined to be suitable for welding to both the cargo tank material and the material of the appurtenance or structural support member; a Design Certifying Engineer must make this determination considering chemical and physical properties of the materials and must specify filler material conforming to the requirements of Section VIII (Division 1) of the ASME Code (*see* § 171.7 of this subchapter).

(ii) Be preformed to an inside radius no greater than the outside radius of the cargo tank at the attachment location.

(iii) Extend at least 2 inches in each direction from any point of attachment of an appurtenance or structural support member. This dimension may be measured from the center of the structural member attached.

(iv) Have rounded corners, or otherwise be shaped in a manner to minimize stress concentrations on the shell or head.

(v) Be attached by continuous fillet welding. Any fillet weld discontinuity may only be for the purpose of preventing an intersection between the fillet weld and the tank or jacket seam weld.

38. In § 178.345–5, paragraph (e) introductory text would be revised to read as follows:

§ 178.345–5 Manhole assemblies.

* * * * *

(e) On cargo tank motor vehicles manufactured after [One Year From Effective Date of Final Rule], each manhole assembly must be permanently marked on the outside by stamping or other means in a ready visible location, with:

* * * * *

39. In § 178.345–8, paragraphs (a)(5) and (d) introductory text would be revised to read as follows:

§ 178.345–8 Accident damage protection.

(a) * * *

(5) *Minimum road clearance.* The minimum road clearance of any cargo tank motor vehicle component or protection device located between any two adjacent axles on a vehicle or vehicle combination must be at least one-half inch for each foot separating the component or device from the nearest axle of the adjacent pair, but in no case less than twelve (12) inches, except that the minimum road clearance for landing gear within ten (10) feet of an axle must be no less than ten (10) inches.

* * * * *

(d) *Rear-end protection.* Each cargo tank motor vehicle must be provided with a rear-end tank protection device to protect the cargo tank and piping in the event of a rear-end collision and reduce the likelihood of damage that could result in the loss of lading. Nothing in this paragraph relieves the manufacturer of responsibility for complying with the requirements of § 393.86 of this title and, if applicable, paragraph (b) of this section. The rear-end tank protection device must conform to the following requirements:

* * * * *

40. In § 178.345–10, paragraph (a) and the last sentence in paragraph (b)(3)(i) would be revised to read as follows:

§ 178.345–10 Pressure relief.

(a) Each cargo tank must be equipped to relieve pressure and vacuum conditions in conformance with this section and the applicable individual specification. The pressure and vacuum relief system must be designed to operate and have sufficient capacity to prevent cargo tank rupture or collapse due to over-pressurization or vacuum resulting from loading, unloading, or from heating and cooling of lading. Pressure relief systems are not required to conform to the ASME Code.

(b) * * *

(3) * * *

(i) * * *. An acceptable method is outlined in TTMA RP No. 81–97 ''Performance of Spring Loaded Pressure Relief Valves on MC 306, MC 307, MC 312, DOT 406, DOT 407, and DOT 412 Tanks'' (*see* § 171.7 of this subchapter).

* * * * *

41. In § 178.345–13, paragraph (a) would be revised to read as follows:

§ 178.345–13 Pressure and leakage tests.

(a) Each cargo tank must be pressure and leakage tested in accordance with this section and § 178.346–5, § 178.347–5, or § 178.348–5.

* * * * *

42. In § 178.345–14, paragraphs (b)(1), (c)(6) and (c)(7) would be revised to read as follows:

§ 178.345–14 Marking.

* * * * *

(b) * * *

(1) DOT-specification number DOT XXX (DOT XXX) where ''XXX'' is replaced with the applicable specification number. For cargo tanks having a variable specification plate, the DOT-specification number is replaced with the words ''See variable specification plate.''

* * * * *

(c) * * *

(6) Maximum loading rate in gallons per minute (Max. load rate, G.P.M.).

(7) Maximum unloading rate in gallons per minute (Max. unload rate, GPM).

* * * * *

§ 178.346–1 [Amended]

43. In § 178.346–1, the following changes would be made:

a. In paragraph (d)(6), the reference to ''§ 178.345–10'' would be revised to read ''§ 178.346–3''.

b. In paragraph (d)(7), the reference to ''§ 178.345–13'' would be revised to read ''§ 178.346–5''.

44. In § 178.346–2, the introductory text and the titles to Table I and Table II would be revised to read as follows:

§ 178.346–2 Material and thickness of material.

The type and thickness of material for DOT 406 specification cargo tanks must conform to § 178.345–2, but in no case may the thickness be less than that determined by the minimum thickness requirements in § 178.320(d). The following Tables I and II identify the specified minimum thickness values to be employed in that determination:

Table I.—Specified Minimum Thickness of Heads (or Bulkheads and Baffles When Used as Tank Reinforcement) Using Mild Steel (MS), High Strength Low Alloy Steel (HSLA), Austenitic Stainless Steel (SS), or Aluminum (AL)—Expressed in Decimals of an Inch After Forming

* * * * *

Table II.—Specified Minimum Thickness of Shell Using Mild Steel (MS), High Strength Low Alloy Steel (HSLA), Austenitic Stainless Steel (SS), or Aluminum (AL)—Expressed in Decimals of an Inch After Forming [1]

* * * * *

45. In § 178.346–5, paragraph (c) would be revised to read as follows:

§ 178.346–5 Pressure and leakage tests.

* * * * *

(c) *Leakage test.* A cargo tank used to transport a petroleum distillate fuel that is equipped with vapor recovery equipment may be leakage tested in accordance with 40 CFR 63.425(e). To satisfy the leakage test requirements of this paragraph (c), the test specified in 40 CFR 63.425(e)(1) must be conducted using air. The hydrostatic test alternative permitted under Appendix A to 40 CFR part 60 (''Method 27—Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test'') may not be used to satisfy the leakage test requirements of this paragraph (c). A cargo tank tested in accordance with 40 CFR 63.425(e) must be marked as specified in § 180.415 of this subchapter.

46. In § 178.347–1, the following changes would be made:

a. Paragraph (c) would be revised.

b. In paragraph (d)(5), the reference to ''§§ 178.345–5 and 178.347–5'' would be revised to read ''§ 178.347–3''.

c. In paragraph (d)(6), the reference to ''§ 178.345–10'' would be revised to read ''§ 178.347–4''.

d. In paragraph (d)(7), the reference to ''§ 178.345–13'' would be revised to read ''§ 178.347–5''.

e. Paragraph (d)(9) would be added.

The addition and revision would read as follows:

§ 178.347–1 General requirements.

* * * * *

(c) Any cargo tank built to this specification with a MAWP greater than 35 psig and each tank designed to be loaded by vacuum must be ''constructed and certified in conformance with the ASME Code''. The external design pressure for a cargo tank loaded by vacuum must be at least 15 psig.

(d) * * *

(9) The strength of a weld seam in a bulkhead that has not been radiographically examined shall be 0.85 of the strength of the bulkhead under the following conditions:

(i) The welded seam must be a full penetration butt weld.

(ii) No more than one seam may be used per bulkhead.

(iii) The welded seam must be completed before forming the dish radius and knuckle radius.

(iv) Compliance test: Two test specimens of materials representative of those to be used in the manufacture of a cargo tank bulkhead must be tested to failure in tension. The test specimen must be of the same thickness and joined by the same welding procedure. The test specimens may represent all the tanks that are made in the same facility within 6 months after the tests are completed. Before welding, the fit-up of the joints on the test specimens must represent production conditions that would result in the least joint strength. Evidence of joint fit-up and test results must be retained at the manufacturers' facility for at least 5 years.

(v) Acceptance criteria: The ratio of the actual tensile stress at failure to the actual tensile strength of the adjacent material of all samples of a test lot must be greater than 0.85.

47–48. In § 178.347–2, paragraph (a) introductory text and the titles to Table I and Table II would be revised to read as follows:

§ 178.347–2 Material and thickness of material.

(a) The type and thickness of material for DOT 407 specification cargo tanks must conform to § 178.345–2, but in no case may the thickness be less than that determined by the minimum thickness requirements in § 178.320(d). The following Tables I and II identify the specified minimum thickness values to be employed in that the determination:

Table I.—Specified Minimum Thickness of Heads (or Bulkheads and Baffles When Used as Tank Reinforcement) Using Mild Steel (MS), High Strength Low Alloy Steel (HSLA), Austenitic Stainless Steel (SS), or Aluminum (AL)—Expressed in Decimals of an Inch After Forming

* * * * *

Table II.—Specified Minimum Thickness of Shell Using Mild Steel (MS), High Strength Low Alloy Steel (HSLA), Austenitic Stainless Steel (SS), or Aluminum (AL)—Expressed in Decimals of an Inch After Forming

* * * * *

§ 178.348–1 [Amended]

49. In § 178.348–1, the following changes would be made:

a. In paragraph (e)(2)(v), the reference to ''§§ 178.345–5 and 178.348–5'' would be revised to read ''§ 178.345–5''.

b. In paragraph (e)(2)(vi), the reference to '' 178.345–10'' would be revised to read ''§ 178.348–4''.

c. In paragraph (e)(2)(vii), the reference to ''§ 178.345–13'' would be revised to read ''§ 178.348–5''.

50. In § 178.348–2, paragraph (a) introductory text and the titles to Table I and Table II would be revised to read as follows:

§ 178.348–2 Material and thickness of material.

(a) The type and thickness of material for DOT 412 specification cargo tanks must conform to § 178.345–2, but in no case may the thickness be less than that determined by the minimum thickness requirements in § 178.320(d). The following Tables I and II identify the

[1] Maximum distance between bulkheads, baffles, or ring stiffeners shall not exceed 60 inches.

''Specified Minimum Thickness'' values to be employed in that determination:

Table I.—Specified Minimum Thickness of Heads (or Bulkheads and Baffles When Used as Tank Reinforcement) Using Mild Steel (MS), High Strength Low Alloy Steel (HSLA), Austenitic Stainless Steel (SS), or Aluminum (AL)—Expressed in Decimals of an Inch After Forming

* * * * *

Table II.—Specified Minimum Thickness of Shell Using Mild Steel (MS), High Strength Low Alloy Steel (HSLA), Austenitic Stainless Steel (SS), or Aluminum (AL)—Expressed in Decimals of an Inch After Forming

* * * * *

PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS.

51. The authority citation for part 180 would continue to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

52. In § 180.403, the definition for ''Corrosive to the tank/valve'' would be removed and new definitions for ''Corroded or abraded'' and ''Corrosive to the tank or valve'' would be added in the appropriate alphabetical order to read as follows:

§ 180.403 Definitions.

* * * * *

Corroded or *abraded* means any visible reduction in the material thickness of the cargo tank wall or valve due to pitting, flaking, gouging, or chemical reaction to the material surface.

Corrosive to the tank or valve means that the lading has been shown through experience or test data to reduce the thickness of the material of construction of the tank wall or valve.

* * * * *

53. In § 180.405 paragraph (g)(3) would be removed and reserved, paragraphs (b), (k), and (l)(2)(iii) would be revised, and a new paragraph (o) would be added, to read as follows:

§ 180.405 Qualification of cargo tanks.

* * * * *

(b) *Cargo tank specifications.* (1) To qualify as an authorized packaging, each cargo tank must conform to this subpart, the applicable requirements specified in part 173 of this subchapter for the specific lading, and where a DOT specification cargo tank is required, an applicable specification in effect on the date initial construction began: MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, MC 312, MC 330, MC 331, MC 338, DOT 406, DOT 407, or DOT 412 (§§ 178.337, 178.338, 178.345, 178.346, 178.347 and 178.348 of this subchapter). However, except as provided in paragraphs (b)(2), (d), (e), (f)(5), and (f)(6) of this section, no cargo tank may be marked or certified after August 31, 1995, to the applicable MC 306, MC 307, MC 312, MC 331, or MC 338 specification in effect on December 30, 1990.

(2) *Exception.* A cargo tank originally manufactured to the MC 306, MC 307, or MC 312 specification that has not been stretched, rebarrelled, or modified may be re-certified to the original specification provided:

(i) Sufficient records are available verifying the cargo tank was originally manufactured to the specification;

(ii) A Registered Inspector verifies the cargo tank conforms to all applicable requirements of the specification;

(iii) The cargo tank meets all applicable tests and inspections required by § 180.407(c);

(iv) Any repairs performed on the cargo tank after June 30, 1992, were conducted in accordance with § 180.413; and

(v) The cargo tank is re-certified to the original specification in accordance with the reporting and record retention provisions of § 180.417. The certification documents required by § 180.417(a)(3) must include both the date the cargo tank was originally certified to the specification, and the date it was re-certified. The specification plate on the cargo tank or cargo tank motor vehicle must display the date the cargo tank was originally certified to the specification.

* * * * *

(k) *DOT specification cargo tank with no marked design pressure or a marked design pressure of less than 3 psig.* The owner of an MC 300, MC 301, MC 302, MC 303, MC 305, MC 306, or MC 312 cargo tank with a pressure relief system set at 3 psig, must mark or remark the cargo tank with an MAWP or design pressure of not greater than 3 psig.

(l) * * *

(2) * * *

(iii) The structure of the bumper must be designed in accordance with § 178.345–8(d)(3) of this subchapter.

* * * * *

(o) *On-truck remote control of self-closing stop valves—MC 330, MC 331, and MC 338.* On or before [Three years From Effective Date of Final Rule]—

(1) Each owner of an MC 330 or MC 331 cargo tank motor vehicle marked or certified before January 1, 1995, must equip the cargo tank with an on-vehicle remote means of closure of the internal self-closing stop valve in conformance with § 178.337–11(a)(2) of this subchapter. This requirement does not apply to cargo tanks used only for carbon dioxide and marked ''For carbon dioxide only'' or intended for use in chlorine service only.

(2) Each owner of an MC 338 cargo tank motor vehicle marked or certified before January 1, 1995, must equip each remotely controlled shutoff valve with an on-vehicle remote means of automatic closure in conformance with § 178.338–11(c) of this subchapter. This requirement does not apply to cargo tanks used for the transportation of argon, carbon dioxide, helium, krypton, neon, nitrogen, or xenon, or mixtures thereof.

54–55. In § 180.407, the following changes would be made:

a. Paragraphs (b)(4) and (g)(1)(v) would be removed and reserved;

b. Paragraphs (d)(4), (d)(5), and (d)(6) would be redesignated as paragraphs (d)(5), (d)(6), and (d)(7), respectively;

c. Paragraphs (a)(2), (b)(1), (b)(2), (d)(1), (g)(1)(ii) introductory text, (g)(1)(ii)(A), (g)(4), (h)(1) introductory text, (i)(5) introductory text and titles and column headings to Tables I and II, and (i)(6) would be revised;

d. Paragraph (h)(1)(i) would be amended by removing ''; or'' and adding a period in their place; and

e. New paragraphs (d) introductory text, (d)(4), (h) introductory text, (h)(1)(iv), and (h)(1)(v) would be added.

The additions and revisions would read as follows:

§ 180.407 Requirements for test and inspection of specification cargo tanks.

(a) * * *

(2) Except during a pressure test, a cargo tank may not be subjected to a pressure greater than its design pressure or MAWP.

* * * * *

(b) * * *

(1) The cargo tank shows evidence of dents, cuts, gouges, corroded or abraded areas, leakage, or any other condition that might render it unsafe for hazardous materials service. At a minimum, any area of a cargo tank showing evidence of dents, cuts, digs, gouges, or corroded or abraded areas must be thickness tested in accordance with the procedures set forth in paragraphs (i)(2), (i)(3), (i)(5), and (i)(6) of this section and evaluated in accordance with the criteria prescribed in § 180.411. Any signs of leakage must be repaired in accordance with § 180.413.

(2) The cargo tank has sustained damage to an extent that may adversely

affect its lading retention capability. A damaged cargo tank must be pressure tested in accordance with the procedures set forth in paragraph (g) of this section.

* * * * *

(d) *External visual inspection and testing.* The following applies to the external visual inspection and testing of cargo tanks:

(1) Where insulation precludes a complete external visual inspection as required by paragraphs (d)(2) through (d)(6) of this section, the cargo tank also must be given an internal visual inspection in accordance with paragraph (e) of this section. If internal visual inspection is precluded because the cargo tank is lined, coated, or designed so as to prevent access for internal inspection, the tank must be hydrostatically or pneumatically tested in accordance with paragraph (g)(1)(iv) of this section.

* * * * *

(4) Ring stiffeners or other appurtenances, installed on cargo tanks constructed of mild steel or high-strength, low-alloy steel, that create air cavities adjacent to the tank shell that do not allow for external visual inspection must be thickness tested in accordance with paragraphs (i)(2) and (i)(3) of this section, at least once every 2 years. At least four symmetrically distributed readings must be taken to establish an average thickness for the ring stiffener or appurtenance. If any thickness reading is less than the average thickness by more than 10%, thickness testing in accordance with paragraphs (i)(2) and (i)(3) of this section must be conducted from the inside of the cargo tank on the area of the tank wall covered by the appurtenance or ring stiffener.

* * * * *

(g) * * *

(1) * * *

(ii) All self-closing pressure relief valves (normal vents and emergency relief vents) must be:

(A) Removed from the cargo tank for inspection and testing. Each self-closing pressure relief valve must open at the required set pressure and seat to a leak-tight condition at 90 percent of the set-to-discharge pressure or the pressure prescribed for the applicable cargo tank specification; or

* * * * *

(4) All pressure bearing portions of a cargo tank heating system employing a medium such as, but not limited to, steam or hot water for heating the lading must be hydrostatically pressure tested at least once every 5 years. The test pressure must be at least the maximum system design operating pressure and must be maintained for five minutes. A heating system employing flues for heating the lading must be tested to ensure against lading leakage into the flues or into the atmosphere.

* * * * *

(h) *Leakage test.* The following requirements apply to cargo tanks requiring a leakage test:

(1) Each cargo tank must be tested for leaks in accordance with paragraph (c) of this section. The leakage test must include testing product piping with all valves and accessories in place and operative, except that any venting devices set to discharge at less than the leakage test pressure must be removed or rendered inoperative during the test. All internal or external self-closing stop valves must be tested for leak tightness. Each cargo tank of a multi-cargo tank motor vehicle must be tested with adjacent cargo tanks empty and at atmospheric pressure. Test pressure must be maintained for at least 5 minutes. Cargo tanks in liquefied compressed gas service must be externally inspected for leaks during the leakage test. Suitable safeguards must be provided to protect personnel should a failure occur. Cargo tanks may be leakage tested with hazardous materials contained in the cargo tank during the test. Leakage test pressure must be no less than 80% of the tank design pressure or MAWP, whichever is marked on the certification or specification plate except as follows:

* * * * *

(iv) An MC 330 or MC 331 cargo tank in dedicated service for anhydrous ammonia may be leakage tested at not less than 483 kPa (70 psig).

(v) A non-specification cargo tank required by § 173.8(d) of this subchapter to be leakage tested, must be leakage tested at not less than 16.6 kPa (2.4 psig), or as specified in paragraph (h)(2) of this section.

(2) Cargo tanks used to transport petroleum distillate fuels that are equipped with vapor collection equipment may be leak tested in accordance with the Environmental Protection Agency's ''Method 27—Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test,'' as set forth in Appendix A to 40 CFR Part 60. Test methods and procedures and maximum allowable pressure and vacuum changes are in 40 CFR 63.425(e)(1). The hydrostatic test alternative, using liquid in Environmental Protection Agency's ''Method 27—Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test,'' may not be used to satisfy the leak testing requirements of this paragraph (h). The test must be conducted using air. Cargo tanks tested using the Environmental Protection Agency's ''Method 27—Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test,'' test must be marked in accordance with § 180.415.

* * * * *

(i) * * *

(5) Minimum thicknesses for MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, and MC 312 cargo tanks are determined based on the definition of minimum thickness found in § 178.320(a) of this subchapter. The following Tables I and II identify the ''In-Service Minimum Thickness'' values to be employed in this determination. The column headed ''Minimum Manufactured Thickness'' tabulates the minimum values required for new construction as set forth in §§ 178.346–2, 178.347–2, and 178.348–2 of this subchapter. In-Service Minimum Thicknesses are based on 90 percent of the minimum value required for new construction, rounded to three places. Tables I and II follow:

TABLE I.—IN-SERVICE MINIMUM THICKNESS FOR MC 300, MC 303, MC 304, MC 306, MC 307, MC 310, MC 311, AND MC 312 SPECIFICATION CARGO TANK CONSTRUCTED OF STEEL AND STEEL ALLOYS

Minimum manufactured thickness (US gauge or inches)	Nominal decimal equivalent for reference (inches)	In-service minimum thickness (inches)

* * * * *

TABLE II.—IN-SERVICE MINIMUM THICKNESS FOR MC 301, MC 302, MC 304, MC 305, MC 306, MC 307, MC 311, AND MC 312 SPECIFICATION CARGO TANKS CONSTRUCTED OF ALUMINUM AND ALUMINUM ALLOYS

Minimum manufactured thickness (inches)	In-service minimum thickness (inches)

* * * * *

(6) An owner of a cargo tank that no longer conforms to the minimum thickness prescribed for the design as manufactured may use the cargo tank to transport authorized materials at reduced maximum weight of lading or reduced maximum working pressure, or combinations thereof, provided the following conditions are met:

(i) A Design Certifying Engineer must certify that the cargo tank design and thickness are appropriate for the reduced loading conditions by issuance of a revised manufacturer's certificate, and

(ii) The cargo tank motor vehicle's nameplate must reflect the revised service limits.

* * * * *

56. In § 180.409, paragraphs (a)(1) and (a)(2) would be revised and paragraph (a)(3) would be added to read as follows:

§ 180.409 Minimum qualifications for inspectors and testers.

(a) * * *

(1) Be registered with the Associate Administrator for Hazard Materials Safety in accordance with part 107, subpart F of this chapter;

(2) Be familiar with DOT-specification cargo tanks and trained and experienced in use of the inspection and testing equipment needed; and

(3) Have the training and experience required to meet the definition of ''Registered Inspector'' in § 171.8 of this subchapter.

* * * * *

57. Section 180.413 would be revised to read as follows:

§ 180.413 Repair, modification, stretching, rebarrelling, or mounting of specification cargo tanks.

(a) *General.* Any repair, modification, stretching, rebarrelling, or mounting of a cargo tank must be performed in conformance with the requirements of this section.

(1) Except as otherwise provided in this section, each repair, modification, stretching, or rebarrelling of a specification cargo tank must be performed by a repair facility holding a valid National Board Certificate of Authorization for use of the National Board ''R'' stamp and must be made in accordance with the edition of the National Board Inspection Code in effect at the time the work is performed.

(i) Repairs, modifications, stretchings, and rebarrellings performed on non-ASME stamped specification cargo tanks may be performed by:

(A) A cargo tank manufacturer holding a valid ASME Certificate of Authorization for the use of the ASME ''U'' stamp using the quality control procedures used to obtain the Certificate of Authorization; or

(B) A repair facility holding a valid National Board Certificate of Authorization for use of the National Board ''R'' stamp using the quality control procedures used to obtain the Certificate of Authorization.

(ii) A repair, modification, stretching, or rebarrelling of a non-ASME stamped cargo tank may be done without certification by an Authorized Inspector, completion of the R–1 form, or being stamped with the ''R'' stamp.

(2) Prior to each repair, modification, stretching, rebarrelling, or mounting, the cargo tank motor vehicle must be emptied of any hazardous material lading. In addition, cargo tank motor vehicles used to transport flammable or toxic lading must be cleaned and purged, including void spaces between double bulkheads, piping and vapor recovery systems.

(3) Each person performing a repair, modification, stretching, rebarrelling or mounting of a DOT specification cargo tank must be registered in accordance with Subpart F of part 107 of this chapter.

(b) *Repair.* The suitability of each repair affecting the structural integrity or lading retention capability of the cargo tank must be determined by the testing required either in the applicable manufacturing specification or in § 180.407(g)(1)(iv). Each repair of a cargo tank involving welding on the shell or head must be certified by a Registered Inspector. The following provisions apply to specific cargo tank repairs:

(1) DOT 406, DOT 407, and DOT 412 cargo tanks must be repaired in accordance with the specification requirements in effect at the time of repair;

(2) MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 cargo tanks must be repaired in accordance with either the most recent revision of the original specification or with the DOT 406 specification in effect at the time of repair;

(3) MC 304 and MC 307 cargo tanks must be repaired in accordance with either the most recent revision of the original specification or with the DOT 407 specification in effect at the time of repair;

(4) MC 310, MC 311, and MC 312 cargo tanks must be repaired in accordance with either the most recent revision of the original specification or with the DOT 412 specification in effect at the time of repair;

(5) MC 338 cargo tanks must be repaired in accordance with the specification requirements in effect at the time of repair; and

(6) MC 330 and MC 331 cargo tanks must be repaired in accordance with the repair procedures described in CGA Technical Bulletin TB–2 and the National Board Inspection Code (see § 171.1 of this subchapter). Each cargo tank having cracks or other defects requiring welded repairs must meet all inspection, test, and heat treatment requirements in § 178.337–16 of this subchapter in effect at the time of the repair, except that postweld heat treatment after minor weld repairs is not required. When a repair is made of defects revealed by the wet fluorescent magnetic particle inspection, including those repaired by grinding, the affected area of the cargo tank must again be examined by the wet fluorescent magnetic particle method after hydrostatic testing to assure that all defects have been removed.

(c) *Maintenance or replacement of piping, valves, hoses, or fittings.* After each repair, maintenance or replacement of a pipe, valve, hose, or fitting on a cargo tank, that component must be installed in accordance with the provisions of the applicable specification before the cargo tank is returned to service.

(1) After maintenance or replacement that does not involve welding on the cargo tank wall, the repaired or replaced piping, valve, or fitting must be tested for leaks. This requirement is met when the piping, valve, hose or fitting is tested after installation at not less than 80 percent of the design pressure marked on the cargo tank. A hose may

be tested before or after installation on the cargo tank.

(2) After repair or replacement of piping, valves, or fittings that involves welding on the cargo tank wall, the cargo tank must be pressure tested in accordance with the applicable manufacturing specification or § 180.407(g)(1)(iv). In addition, the affected piping, valve, or fitting must be tested in accordance with paragraph (c)(1) of this section.

(d) *Modification, stretching, or rebarrelling.* Modification, stretching or rebarrelling of a cargo tank motor vehicle must conform to the following provisions:

(1) The design of the modified, stretched, or rebarrelled cargo tank motor vehicle must be certified in writing by a Design Certifying Engineer as meeting the structural integrity and accident damage protection requirements of the applicable specification.

(2) Except as provided in paragraph (d)(2)(v) of this section, all new material and equipment affected by modification, stretching, or rebarrelling must meet the requirements of the specification in effect at the time such work is performed, and all applicable structural integrity requirements (§ 178.337–3, 178.338–3, or § 178.345–3 of this subchapter). The work must conform to the requirements of the applicable specification as follows:

(i) For specification MC 300, MC 301, MC 302, MC 303, MC 305 and MC 306 cargo tanks, the provisions of either specification MC 306 or DOT 406 until August 31, 1995 and, thereafter to specification DOT 406 only;

(ii) For specification MC 304 and MC 307 cargo tanks, the provisions of either specification MC 307 or DOT 407 until August 31, 1995 and, thereafter to specification DOT 407 only;

(iii) For specification MC 310, MC 311, and MC 312 cargo tanks, the provisions of either specification MC 312 or DOT 412 until August 31, 1995 and, thereafter to specification DOT 412 only;

(iv) For specification MC 330 cargo tanks, the provisions of specification MC 331; and

(v) For specification MC 338 cargo tanks, the provisions of specification MC 338. However, structural modifications to MC 338 cargo tanks authorized under § 180.405(d) may conform to applicable provisions of the ASME Code instead of specification MC 338, provided the structural integrity of the modified cargo tank is at least equivalent to that of the original cargo tank.

(3) The person performing the modification, stretching, or rebarrelling must:

(i) Have knowledge of the original design concept, particularly with respect to structural design analysis, material and welding procedures.

(ii) Assure compliance of the rebuilt cargo tank's structural integrity, venting, and accident damage protection with the applicable specification requirements.

(iii) Assure compliance with all applicable Federal Motor Carrier Safety Regulations for all newly installed safety equipment.

(iv) Assure the suitability of each modification, stretching and rebarrelling that affects the lading retention capability of the cargo tank by performing the tests required in the applicable specification or § 180.407(g)(1)(iv).

(v) Any modification that changes information displayed on the specification plate requires the installation of a supplemental specification plate, nameplate, or both containing the information that reflects the cargo tank as modified, stretched or rebarrelled. The plate must include the name of the person or facility doing the work, DOT registration number, date work is completed, retest information, and any other information that differs from the original plate. The supplemental plates must be installed immediately adjacent to the existing plate or plates.

(vi) On a variable specification cargo tank, install a supplemental or new variable specification plate, and replace the specification listed on the original specification plate with the words ''see variable specification plate.''

(4) A Registered Inspector must certify that the modified, stretched, or rebarrelled cargo tank conforms to the requirements of this section and the applicable specification by issuing a supplemental certificate of compliance. The registration number of the Registered Inspector must be entered on the certificate.

(e) *Mounting of cargo tanks.* Mounting a cargo tank on a cargo tank motor vehicle must be:

(1) Performed as required by paragraph (d)(2) of this section and certified by a Design Certifying Engineer if the mounting of a cargo tank on a cargo tank motor vehicle involves welding on the cargo tank head or shell or any change or modification of the methods of attachment; or

(2) In accordance with the original specification or the specification in effect at the time of the mounting, and performed under the supervision of a Registered Inspector if the mounting of a cargo tank on a cargo tank motor vehicle does not involve welding on the cargo tank head or shell or a change or modification of the methods of attachment.

(f) *Records.* Each owner of a cargo tank motor vehicle must retain at the owner's principal place of business all records of repair, modification, stretching, or rebarrelling, including notation of any tests conducted to verify the suitability of the repair, modification, stretching, or rebarrelling made to each cargo tank during the time the cargo tank motor vehicle is in service and for one year thereafter. Copies of these records must be retained by a motor carrier, if not the owner of the cargo tank motor vehicle, at its principal place of business during the period the cargo tank motor vehicle is in the carrier's service.

58. In § 180.415, paragraphs (b) would be revised to read as follows:

§ 180.415 Test and inspection markings.

* * * * *

(b) Each cargo tank must be durably and legibly marked, in English, with the date (month and year) and the type of test or inspection performed, subject to the following provisions:

(1) The date must be readily identifiable with the applicable test or inspection.

(2) The markings must be in letters and numbers at least 32 mm (1.25 inches) high, near the specification plate or anywhere on the front head.

(3) The type of test or inspection may be abbreviated as follows:

(i) V for external visual inspection and test;

(ii) I for internal visual inspection;

(iii) P for pressure test;

(iv) L for lining inspection;

(v) T for thickness test;

(vi) K for leakage test for a cargo tank tested under § 180.407, except § 180.407(h)(2); and

(vii) K–EPA27 for a cargo tank tested under § 180.407(h)(2) after [One Year From Publication Date of Final Rule].

(4) For cargo tanks marked after October 1, 2001, the date marked must be the date the required test or inspection expires, preceded by the letter ''N.'' Cargo tanks marked in accordance with this section before October 1, 2001, are not required to be remarked to show the date of the next test.

Examples to Paragraph (b): The markings ''10–99 P, V, L'' represent that in October 1999, a cargo tank passed the prescribed pressure test, external visual inspection and test, and the lining inspection. The markings ''2–00 K–EPA'' represent that in February

2000, a cargo tank passed the leakage test under § 180.407(h)(2). The markings ''2–00 K, K–EPA'' represent that in February 2000, a cargo tank passed the leakage test under both § 180.407(h)(1) and under EPA Method 27 under § 180.407(h)(2). For a cargo tank marked after October 1, 2000, the markings ''N11–02 V, L'' represent that an external visual inspection and test, and a lining test expire November 2002.

* * * * *

59. In § 180.417, paragraphs (b) and (d) would be revised to read as follows:

§ 180.417 Reporting and record retention requirements.

* * * * *

(b) *Test or inspection reporting.* Each person performing a test or inspection as specified in § 180.407 must prepare a written report, in English, in accordance with this paragraph (b).

(1) Each test or inspection report must include the following information:

(i) Owner's and manufacturer's unique serial number for the cargo tank;

(ii) Name of cargo tank manufacturer;

(iii) Cargo tank DOT or MC specification number;

(iv) MAWP of the cargo tank;

(v) Minimum thickness of the cargo tank shell and heads;

(vi) Indication of whether the cargo tank is lined, insulated, or both; and

(vii) Indication of special service of the cargo tank (e.g., transports material corrosive to the tank, dedicated service, etc.).

(2) Each test or inspection report must include the following specific information as appropriate for each individual type of test or inspection:

(i) Type of test or inspection performed;

(ii) Date of test or inspection (month and year);

(iii) Listing of all items tested or inspected, including information about pressure relief devices that are removed, inspected and tested or replaced, when applicable (type of device, set to discharge pressure, pressure at which device opened, pressure at which device re-seated, and a statement of disposition of the device (e.g., reinstalled, repaired, or replaced)); information regarding the inspection of upper coupler assemblies, when applicable (visually examined in place, or removed for examination); and, information regarding leakage and pressure testing, when applicable (pneumatic or hydrostatic testing method, identification of the fluid used for the test, test pressure, and holding time of test);

(iv) Location of defects found and method of repair;

(v) ASME or National Board number of person performing repairs, if applicable;

(vi) Name and address of person performing test;

(vii) Registration number of the facility or person performing the test;

(viii) Continued qualification statement, such as ''cargo tank meets the requirements of the DOT-specification identified on this report'' or ''cargo tank fails to meet the requirements of the DOT-specification identified on this report'';

(ix) DOT registration number of the registered inspector; and

(x) Dated signature of the registered inspector and the cargo tank owner.

(3) The owner and the motor carrier, if not the owner, must each retain a copy of the test and inspection reports until the next test or inspection of the same type is successfully completed. This requirement does not apply to a motor carrier leasing a cargo tank for fewer than 30 days.

* * * * *

(d) *Supplying certificates and reports.* Each person offering a DOT-specification cargo tank for sale or lease must provide the purchaser or lessee a copy of the cargo tank certificate of compliance, records of repair, modification, stretching, or rebarrelling; and the most recent inspection and test reports made under this section. Copies of such reports must be provided to the lessee if the cargo tank is leased for more than 30 days.

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Robert A. McGuire,

Associate Administrator for Hazardous Materials Safety.

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