

(3) Longitudinally of 1½; and, (4) Laterally of 1½.

■ 33. Section 178.338–18, is revised to read as follows:

**§ 178.338–18 Marking.**

(a) *General.* Each cargo tank certified after October 1, 2004 must have a corrosion-resistant metal name plate (ASME Plate) and specification 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. If the specification plate is attached directly to the cargo tank wall by welding, it must be welded to the tank before the cargo tank is postweld heat treated.

(1) The plates must be legibly marked by stamping, embossing, or other means of forming letters into the metal of the plate, with the information required in paragraphs (b) and (c) of this section, in addition to that required by the ASME Code (incorporated by reference; see § 171.7 of this subchapter), in characters at least ⅜ inch high (parenthetical abbreviations may be used). All plates must be maintained in a legible condition.

(2) Each insulated cargo tank must have additional plates, as described, attached to the jacket in the location specified unless the specification plate is attached to the chassis and has the information required in paragraphs (b) and (c) of this section.

(3) The information required for both the name and specification plate may be displayed on a single plate. If the information required by this section is displayed on a plate required by the ASME Code, the information need not be repeated on the name and specification plates.

(4) The specification plate may be attached to the cargo tank motor vehicle chassis rail by brazing, welding, or other suitable means on the left side near the front head, in a place accessible for inspection. If the specification plate is attached to the chassis rail, then the cargo tank serial number assigned by the cargo tank manufacturer must be included on the plate.

(b) *Name plate.* The following information must be marked on the name plate in accordance with this section:

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

(2) Original test date (Orig. Test Date).

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

(7) Maximum design density of lading (Max. Lading density), in pounds per gallon.

(8) Material specification number—shell (Shell matl, yyy \* \* \*), where “yyy” is replaced by the alloy designation and “\* \* \*” is replaced by the alloy type.

(9) Material specification number—heads (Head matl. yyy \* \* \*), where “yyy” is replaced by the alloy designation and “\* \* \*” by the alloy type.

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

(10) Weld material (Weld matl.).

(11) 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).

(12) Minimum thickness-heads (Min heads thick.), in inches.

(13) Manufactured thickness-shell (Mfd. Shell thick.), top \_\_\_\_, side \_\_\_\_, bottom \_\_\_\_, in inches. (Required when additional thickness is provided for corrosion allowance.)

(14) Manufactured thickness-heads (Mfd. Heads thick.), in inches. (Required when additional thickness is provided for corrosion allowance.)

(15) Exposed surface area, in square feet.

(c) *Specification plate.* The following information must be marked on the specification plate in accordance with this section:

(1) Cargo tank motor vehicle manufacturer (CTMV mfr.).

(2) Cargo tank motor vehicle certification date (CTMV cert. date).

(3) Cargo tank manufacturer (CT mfr.).

(4) Cargo tank date of manufacture (CT date of mfr.), month and year.

(5) Maximum weight of lading (Max. Payload), in pounds.

(6) Maximum loading rate in gallons per minute (Max. Load rate, GPM).

(7) Maximum unloading rate in gallons per minute (Max Unload rate).

(8) Lining materials (Lining), if applicable.

(9) “Insulated for oxygen service” or “Not insulated for oxygen service” as appropriate.

(10) 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). Marked rated holding marking for additional cryogenic liquids may be displayed on or adjacent to the specification plate.

(11) Cargo tank serial number (CT serial), as assigned by cargo tank manufacturer, if applicable.

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

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

(d) The design weight of lading used in determining the loading in §§ 178.338–3(b), 178.338–10(b) and (c), and 178.338–13(b) and (c) must be shown as the maximum weight of lading marking required by paragraph (c) of this section.

\* \* \* \* \*

■ 34. In § 178.345–1, paragraph (c) is revised and paragraph (k) is 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. In § 178.345–2, paragraph (b) is 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(a).

\* \* \* \* \*

■ 36. In § 178.345–3, paragraph (b)(3) is added and paragraph (f) is revised to read as follows:

**§ 178.345–3 Structural integrity.**

\* \* \* \* \*

(b) \* \* \*

(3) Cargo tank designers and manufacturers 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.