performed, and the repaired areas must be retested.

(e) Verification must be made of the interior cleanliness of a tank constructed for oxygen service by means that assure that all contaminants that are likely to react with the lading have been removed as required by §178.338–15.

[Amdt. 178–77, 48 FR 27706, June 16, 1983, as amended at 49 FR 24317, June 12, 1984; 49 FR 42736, Oct. 24, 1984; 68 FR 75755, Dec. 31, 2003]

§178.338–17 Pumps and compressors.

(a) *Liquid pumps and gas compressors,* if used, must be of suitable design, adequately protected against breakage by collision, and kept in good condition. They may be driven by motor vehicle power take-off or other mechanical, electrical, or hydraulic means. Unless they are of the centrifugal type, they shall be equipped with suitable pressure actuated by-pass valves permitting flow from discharge to suction to the tank.

(b) A valve or fitting made of aluminum with internal rubbing or abrading aluminum parts that may come in contact with oxygen (cryogenic liquid) may not be installed on any cargo tank used to transport oxygen (cryogenic liquid) unless the parts are anodized in accordance with ASTM B 580 (IBR, see §171.7 of this subchapter).

[Amdt. 178–89, 54 FR 25020, June 12, 1989, as amended at 55 FR 37058, Sept. 7, 1990; 67 FR 61016, Sept. 27, 2002; 68 FR 75755, Dec. 31, 2003]

§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 Section VIII of the ASME Code (IBR, see §171.7 of this subchapter), in characters at least 3/16 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 Section VIII of 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.