Specification marking	Service Pressure psig
3E	1800
8	250

(c) *Cylinder pressure at 21 °C (70 °F).* The pressure in a cylinder at 21 °C (70 °F) may not exceed the service pressure for which the cylinder is marked or designated, except as provided in §173.302a(b). For certain liquefied gases, the pressure at 21 °C (70 °F) must be lower than the marked service pressure to avoid having a pressure at a temperature of 55 °C (131 °F) that is greater than permitted.

(d) *Cylinder pressure at 55 °C (131 °F).* The pressure in a cylinder at 55 °C (131 °F) may not exceed 5/4 times the service pressure, except:

(1) For a cylinder filled with acetylene, liquefied nitrous oxide, or carbon dioxide.

(2) For a cylinder filled in accordance with §173.302a(b), the pressure in the cylinder at 55 °C (131 °F) may not exceed 5/4 times the filling pressure.

(3) After May 30, 2003, for toxic materials the pressure in the cylinder at 55 °C (131 °F) may not exceed the service pressure of the cylinder.

(e) *Grandfather clause.* A cylinder in domestic use prior to the date on which the specification for the cylinder was first made effective may be used if the cylinder has been properly tested and otherwise conforms to the requirements applicable to the gas with which it is charged.

[67 FR 51645, Aug. 8, 2002, as amended at 67 FR 61289, Sept. 30, 2002]

§173.301b [Reserved]

§173.302 Filling of cylinders with nonliquefied (permanent) compressed gases.

(a) *General requirements.* A cylinder filled with a nonliquefied compressed gas (except gas in solution) must be offered for transportation in accordance with the requirements of this section and §§173.301, 173.301a, 173.302a, and 173.305, as applicable. Where more than one section applies to a cylinder, the most restrictive requirements must be followed.

(b) *Aluminum cylinders in oxygen service.* Each aluminum cylinder filled with oxygen must meet all of the following conditions:

(1) Metallic portions of a valve that may come into contact with the oxygen in the cylinder must be constructed of brass or stainless steel.

(2) Each cylinder opening must be configured with straight threads only.

(3) Each cylinder must be cleaned in accordance with the requirements of Federal Specification RR–C–901C, paragraphs 3.3.1 and 3.3.2 (incorporated by reference; see §171.7 of this subchapter). Cleaning agents equivalent to those specified in RR–C–901C may be used provided they do not react with oxygen. One cylinder selected at random from a group of 200 or fewer and cleaned at the same time must be tested for oil contamination in accordance with Specification RR–C–901C, paragraph 4.4.2.2 (incorporated by reference; *see* §171.7 of this subchapter), and meet the specified standard of cleanliness.

(4) The pressure in each cylinder may not exceed 3000 psig at 21 °C (70 °F).

(c) Notwithstanding the provisions of §173.24(b)(1), an authorized cylinder containing oxygen continuously fed to tanks containing live fish may be offered for transportation and transported.

(d) Shipment of Division 2.1 materials in aluminum cylinders is authorized for transportation only by motor vehicle, rail car, or cargo-only aircraft.

[67 FR 51646, Aug. 8, 2002, as amended at 67 FR 61289, Sept. 30, 2002]

§173.302a Additional requirements for shipment of nonliquefied (permanent) compressed gases in specification cylinders.

(a) *Detailed filling requirements.* Nonliquefied compressed gases (except gas in solution) for which filling requirements are not specifically prescribed in §173.304a must be shipped subject to the requirements in this section and §§173.301, 173.301a, 173.302, and 173.305 in specification cylinders, as follows:

(1) DOT 3, 3A, 3AA, 3AL, 3B, 3E, 4B, 4BA and 4BW cylinders.

(2) DOT 3HT cylinders. These cylinders are authorized for aircraft use only and only for nonflammable gases. They have a maximum service life of 24 years from the date of manufacture. The cylinders must be equipped with