

or container represented therein conforms to requirements contained in subchapter A or C of this chapter.

[Amdt. 180-2, 54 FR 25032, June 12, 1989, as amended by Amdt. 180-3, 58 FR 33306, June 16, 1993; 70 FR 73166, Dec. 9, 2005]

### Subpart B [Reserved]

### Subpart C—Qualification, Maintenance and Use of Cylinders

SOURCE: 67 FR 51660, Aug. 8, 2002, unless otherwise noted.

#### § 180.201 Applicability.

This subpart prescribes requirements, in addition to those contained in parts 107, 171, 172, 173, and 178 of this chapter, for the continuing qualification, maintenance, or periodic requalification of DOT specification and exemption cylinders and UN pressure receptacles.

[71 FR 33894, June 12, 2006]

#### § 180.203 Definitions.

As used in this section, the word “cylinder” includes UN pressure receptacles. In addition to the definitions contained in §171.8 of this subchapter, the following definitions apply to this subpart:

*Commercially free of corrosive components* means a hazardous material having a dew point at or below minus 46.7 °C (minus 52 °F) at 101kPa (1 atmosphere) and free of components that will adversely react with the cylinder (e.g. chemical stress corrosion).

*Condemn* means a determination that a cylinder is unserviceable for the continued transportation of hazardous materials in commerce and that the cylinder may not be restored by repair, rebuilding, requalification, or any other procedure.

*Defect* means an imperfection requiring removal of a cylinder from service.

*Elastic expansion* means a temporary increase in a cylinder’s volume, due to application of pressure, that is lost when pressure is released (elastic expansion = total expansion minus permanent expansion).

*Filled or charged* means an introduction or presence of a hazardous material in a cylinder.

*Non-corrosive service* means a hazardous material that, in the presence of moisture, is not corrosive to the materials of construction of a cylinder (including valve, pressure relief device, etc.).

*Over-heated* means a condition in which the temperature of any portion of an aluminum cylinder has reached 176 °C (350 °F) or higher, or in which the temperature of any portion of a steel or nickel cylinder has reached 343 °C (650 °F) or higher.

*Permanent expansion* means a permanent increase in a cylinder’s volume after the test pressure is released.

*Proof pressure test* means a pressure test by interior pressurization without the determination of a cylinder’s expansion.

*Rebuild* means the replacement of a pressure part (e.g. a wall, head, or pressure fitting) by welding.

*Rejected cylinder* means a cylinder that cannot be used for the transportation of a hazardous material in commerce without repair, rebuilding, and requalification.

*Repair* means a procedure for correction of a rejected cylinder that may involve welding.

*Requalification* means the completion of a visual inspection and/or the test(s) required to be performed on a cylinder to determine its suitability for continued service.

*Requalification identification number or RIN* means a code assigned by DOT to uniquely identify a cylinder requalification, repair, or rebuilding facility.

*Test pressure* means the pressure used for the requalification of a cylinder.

*Total expansion* means the total increase in a cylinder’s volume due to application of the test pressure.

*Visual inspection* means an internal or external visual examination, or both, performed as part of the cylinder requalification process.

*Volumetric expansion test* means a pressure test to determine the total and permanent expansion of a cylinder at a given pressure. The *volumetric expansion test* is conducted using the water jacket or direct expansion methods:

(1) *Water jacket method* means a volumetric expansion test to determine a

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cylinder's total and permanent expansion by measuring the difference between the volume of water the cylinder externally displaces at test pressure and the volume of water the cylinder externally displaces at ambient pressure.

(2) *Direct expansion method* means a volumetric expansion test to calculate a cylinder's total and permanent expansion by measuring the amount of water forced into a cylinder at test pressure, adjusted for the compressibility of water, as a means of determining the expansion.

[67 FR 51660, Aug. 8, 2002, as amended at 71 FR 33894, June 12, 2006]

### § 180.205 General requirements for requalification of specification cylinders.

(a) *General.* Each cylinder used for the transportation of hazardous materials must be an authorized packaging. To qualify as an authorized packaging, each cylinder must conform to this subpart, the applicable requirements specified in part 173 of this subchapter, and the applicable requirements of subpart C of part 178 of this subchapter.

(b) *Persons performing requalification functions.* No person may represent that a repair or requalification of a cylinder has been performed in accordance with the requirements in this subchapter unless that person holds a current approval issued under the procedural requirements prescribed in subpart I of part 107 of this chapter. No person may mark a cylinder with a RIN and a requalification date or otherwise represent that a DOT specification or special permit cylinder has been requalified unless all applicable requirements of this subpart have been met. A person who requalifies cylinders must maintain the records prescribed in § 180.215 at each location at which it inspects, tests, or marks cylinders.

(c) *Periodic requalification of cylinders.* Each cylinder bearing a DOT specification marking must be requalified and marked as specified in the Requalification Table in this subpart. Each cylinder bearing a DOT special permit number must be requalified and marked in conformance with this section and the terms of the applicable special permit. No cylinder may be

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filled with a hazardous material and offered for transportation in commerce unless that cylinder has been successfully requalified and marked in accordance with this subpart. A cylinder may be requalified at any time during or before the month and year that the requalification is due. However, a cylinder filled before the requalification becomes due may remain in service until it is emptied. A cylinder with a specified service life may not be refilled and offered for transportation after its authorized service life has expired.

(1) Each cylinder that is requalified in accordance with the requirements specified in this section must be marked in accordance with § 180.213.

(2) Each cylinder that fails requalification must be:

(i) Rejected and may be repaired or rebuilt in accordance with § 180.211 or § 180.212, as appropriate; or

(ii) Condemned in accordance with paragraph (i) of this section.

(3) For DOT specification cylinders, the marked service pressure may be changed upon approval of the Associate Administrator and in accordance with written procedures specified in the approval.

(4) For a specification 3, 3A, 3AA, 3AL, 3AX, 3AXX, 3B, 3BN, or 3T cylinder filled with gases in other than Division 2.2, from the first requalification due on or after December 31, 2003, the burst pressure of a CG-1, CG-4, or CG-5 pressure relief device must be at test pressure with a tolerance of plus zero to minus 10%. An additional 5% tolerance is allowed when a combined rupture disc is placed inside a holder. This requirement does not apply if a CG-2, CG-3 or CG-9 thermally activated relief device or a CG-7 reclosing pressure valve is used on the cylinder.

(d) *Conditions requiring test and inspection of cylinders.* Without regard to any other periodic requalification requirements, a cylinder must be tested and inspected in accordance with this section prior to further use if—

(1) The cylinder shows evidence of dents, corrosion, cracked or abraded areas, leakage, thermal damage, or any other condition that might render it unsafe for use in transportation;