

the longitudinal seam of the cylinder or 300 mm (11.8 inches) in length on a circumferential weld joint of the cylinder; or

(iii) Replacing the outer jacket.

(2) Reheat treatment of cylinders is prohibited.

(3) After rebuilding, each inner containment vessel must be proof pressure tested at 2 times its service pressure. Each completed assembly must be leak-tested using a mass spectrometer detection system.

(f) *Reheat treatment.* (1) Prior to reheat treatment, each cylinder must be given a visual inspection, internally and externally, in accordance with § 180.205(f).

(2) Cylinders must be segregated in lots for reheat treatment. The reheat treatment and visual inspection must be performed in accordance with the specification for the cylinders except as provided in paragraph (f)(4) of this section.

(3) After reheat treatment, each cylinder in the lot must be subjected to a volumetric expansion test and meet the acceptance criteria in the applicable specification or be scrapped.

(4) After all welding and heat treatment, a test of the new weld must be performed as required by the original specification. The test results must be recorded in accordance with § 180.215.

[67 FR 51660, Aug. 8, 2002, as amended at 68 FR 24664, May 8, 2003; 68 FR 75764, Dec. 31, 2003]

§ 180.213 **Requalification markings.**

(a) *General.* Each cylinder requalified in accordance with this subpart with acceptable results must be marked as specified in this section. Required specification markings may not be altered or removed.

(b) *Placement of markings.* Each cylinder must be plainly and permanently marked on the metal of the cylinder as permitted by the applicable specification. Unless authorized by the cylinder specification, marking on the cylinder sidewall is prohibited.

(1) Requalification and required specification markings must be legible so as to be readily visible at all times. Illegible specification markings may be remarked on the cylinder as provided by the original specification. Requali-

fication markings may be placed on any portion of the upper end of the cylinder excluding the sidewall, as provided in this section. Requalification and required specification markings that are illegible may be reproduced on a metal plate and attached as provided by the original specification.

(2) Previous requalification markings may not be obliterated, except that, when the space originally provided for requalification dates becomes filled, additional dates may be added as follows:

(i) All preceding requalification dates may be removed by peening provided that—

(A) Permission is obtained from the cylinder owner;

(B) The minimum wall thickness is maintained in accordance with manufacturing specifications for the cylinder; and

(C) The original manufacturing test date is not removed.

(ii) When the cylinder is fitted with a footing, additional dates may be marked on the external surface of the footing.

(c) *Requalification marking method.* The depth of requalification markings may not be greater than specified in the applicable specification. The markings must be made by stamping, engraving, scribing or other method that produces a legible, durable mark.

(1) A cylinder used as a fire extinguisher (§ 180.209(j)) may be marked by using a pressure sensitive label.

(2) For a DOT 3HT cylinder, the test date and RIN must be applied by low-stress steel stamps to a depth no greater than that prescribed at the time of manufacture. Stamping on the sidewall is not authorized.

(d) *Requalification markings.* Each cylinder that has successfully passed requalification must be marked with the RIN set in a square pattern, between the month and year of the requalification date. The first character of the RIN must appear in the upper left corner of the square pattern; the second in the upper right; the third in the lower right, and the fourth in the lower left. Example: A cylinder requalified in September 1998, and approved by a person who has been issued RIN "A123", would be marked plainly and permanently

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into the metal of the cylinder in accordance with location requirements of the cylinder specification or on a metal plate permanently secured to the cylinder in accordance with paragraph (b) of this section. An example of the markings prescribed in this paragraph (d) is as follows:

9 A1 98 X
32

Where:

“9” is the month of requalification,

“A123” is the RIN,

“98” is the year of requalification, and

“X” represents the symbols described in paragraphs (f)(2) through (f)(7) of this section.

(1) Upon a written request, variation from the marking requirement may be approved by the Associate Administrator.

(2) *Exception.* A cylinder subject to the requirements of §173.301(l) of this subchapter may not be marked with a RIN.

(e) *Size of markings.* The size of the markings must be at least 6.35 mm (¼ in.) high, except RIN characters must be at least 3.18 mm (⅛ in.) high.

(f) *Marking illustrations.* Examples of required requalification markings for DOT specification and exemption cylinders are illustrated as follows:

(1) For designation of the 5-year volumetric expansion test, 10-year volumetric expansion test for cylinders conforming to §180.209(f) and (h), or 12-year volumetric expansion test for fire extinguishers conforming to §173.309(b) of this subchapter and cylinders conforming to §180.209(e) and §180.209(g), the marking is as illustrated in paragraph (d) of this section.

(2) For designation of the 10-year volumetric expansion test for cylinders conforming to §180.209(b), the marking is as illustrated in paragraph (d) of this section, except that the “X” is replaced with a five-point star.

(3) For designation of special filling limits up to 10% in excess of the marked service pressure for cylinders conforming to §173.302a(b) of this subchapter, the marking is as illustrated in paragraph (d) of this section, except that the “X” is replaced with a plus sign “+”.

(4) For designation of the proof pressure test, the marking is as illustrated in paragraph (d) of this section, except that the “X” is replaced with the letter “S”.

(5) For designation of the 5-year external visual inspection for cylinders conforming to §180.209(g), the marking is as illustrated in paragraph (d) of this section, except that the “X” is replaced with the letter “E”.

(6) For designation of DOT 8 series cylinder shell requalification only, the marking is as illustrated in paragraph (d) of this section, except that the “X” is replaced with the letter “S”.

(7) For designation of DOT 8 series cylinder shell and porous filler requalification, the marking is as illustrated in paragraph (d) of this section, except that the “X” is replaced with the letters “FS”.

§ 180.215 Reporting and record retention requirements.

(a) *Facility records.* A person who requalifies, repairs or rebuilds cylinders must maintain the following records where the requalification is performed:

(1) Current RIN issuance letter;

(2) If the RIN has expired and renewal is pending, a copy of the renewal request;

(3) Copies of notifications to Associate Administrator required under §107.805 of this chapter;

(4) Current copies of those portions of this subchapter applicable to its cylinder requalification and marking activities at that location;

(5) Current copies of all exemptions governing exemption cylinders requalified or marked by the requalifier at that location; and

(6) The information contained in each applicable CGA or ASTM standard incorporated by reference in §171.7 of this subchapter applicable to the requalifier's activities. This information must be the same as contained in the edition incorporated by reference in §171.7 of this subchapter.

(b) *Requalification records.* Daily records of visual inspection, pressure test, and ultrasonic examination if permitted under an exemption, as applicable, must be maintained by the person who performs the requalification until