

§ 180.511

perform a leak test on the tank or service equipment to detect leakage, if any, between manway covers, cover plates, and service equipment. The test may be conducted with the hazardous material in the tank. When the test pressure exceeds the start-to-discharge or burst pressure of a pressure relief device, the device must be rendered inoperative. The written procedures and test method for leak testing must ensure for the sensitivity and reliability of the test method and for the serviceability of components to prevent premature failure.

(2) Interior heater systems must be tested hydrostatically at 13.87 Bar (200 psig) and must show no signs of leakage.

(k) *Alternative inspection and test procedures.* In lieu of the other requirements of this section, a person may use an alternative inspection and test procedure or interval based on a damage-tolerance fatigue evaluation (that includes a determination of the probable locations and modes of damage due to fatigue, corrosion, or accidental damage), when the evaluation is examined by the Association of American Railroads Tank Car Committee and approved by the Associate Administrator for Safety, FRA.

(1) *Inspection and test compliance date for tank cars.* After July 1, 2000, each tank car with a metal jacket or with a thermal protection system shall have an inspection and test conforming to this section no later than the date the tank car requires a periodic hydrostatic pressure test (i.e., the marked due date on the tank car for the hydrostatic test).

(2) After July 1, 1998, each tank car without a metal jacket shall have an inspection and test conforming to this section no later than the date the tank car requires a periodic hydrostatic pressure test (i.e., the marked due date on the tank car for the hydrostatic test).

(3) For tank cars on a 20-year periodic hydrostatic pressure test interval (i.e., Class DOT 103W, 104W, 111A60W1, 111A100W1, and 111A100W3 tank cars), the next inspection and test date is the midpoint between the compliance date in paragraph (1)(1) or (2) of this section and the remaining years until the tank

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would have had a hydrostatic pressure test.

[Amdt. 180-8, 60 FR 49079, Sept. 21, 1995, as amended by Amdt. 179-50, 61 FR 33256, June 26, 1996; 62 FR 51561, Oct. 1, 1997; 63 FR 52851, Oct. 1, 1998; 66 FR 45391, Aug. 28, 2001; 68 FR 75765, Dec. 31, 2003]

§ 180.511 Acceptable results of inspections and tests.

Provided it conforms with other applicable requirements of this subchapter, a tank car is qualified for use if it successfully passes the following inspections and tests conducted in accordance with this subpart:

(a) *Visual inspection.* A tank car successfully passes the visual inspection when the inspection shows no structural defect that may cause leakage from or failure of the tank before the next inspection and test interval.

(b) *Structural integrity inspection and test.* A tank car successfully passes the structural integrity inspection and test when it shows no structural defect that may initiate cracks or propagate cracks and cause failure of the tank before the next inspection and test interval.

(c) *Service life shell thickness.* A tank car successfully passes the service life shell thickness inspection when the tank shell and heads show no thickness reduction below that allowed in § 180.509(g).

(d) *Safety system inspection.* A tank car successfully passes the safety system inspection when each thermal protection system, tank head puncture resistance system, coupler vertical restraint system, and system used to protect discontinuities (e.g., breakage grooves on bottom outlets and protective housings) on the tank car conform to this subchapter.

(e) *Lining and coating inspection.* A tank car successfully passes the lining and coating inspection and test when the lining or coating conforms to the owner's acceptance criteria.

(f) *Leakage pressure test.* A tank car successfully passes the leakage pressure test when all product piping, fittings and closures show no indication of leakage.

(g) *Hydrostatic test.* A Class 107 tank car or a riveted tank car successfully passes the hydrostatic test when it

shows no leakage, distortion, excessive permanent expansion, or other evidence of weakness that might render the tank car unsafe for transportation service.

[Amdt. 180-8, 60 FR 49079, Sept. 21, 1995, as amended by Amdt. 179-50, 61 FR 33256, June 26, 1996; 66 FR 45187, Aug. 28, 2001]

§ 180.513 Repairs, alterations, conversions, and modifications.

(a) In order to repair tank cars, the tank car facility must comply with the requirements of appendix R of the AAR Specifications for Tank Cars (IBR, see § 171.7 of this subchapter).

(b) Unless the exterior tank car shell or interior tank car jacket has a protective coating, after a repair that requires the complete removal of the tank car jacket, the exterior tank car shell and the interior tank car jacket must have a protective coating applied to prevent the deterioration of the tank shell and tank jacket.

[Amdt. 180-2, 54 FR 25032, June 12, 1989, as amended at 68 FR 75765, Dec. 31, 2003]

§ 180.515 Markings.

(a) When a tank car passes the required inspection and test with acceptable results, the tank car facility shall mark the date of the inspection and test and the due date of the next inspection and test on the tank car in accordance with appendix C of the AAR Specifications for Tank Cars (IBR, see § 171.7 of this subchapter). When a tank car facility performs multiple inspection and test at the same time, one date may be used to satisfy the requirements of this section. One date also may be shown when multiple inspection and test have the same due date.

(b) Pressure converted tank cars must have the new specification and conversion date permanently marked in letters and figures at least 0.95 cm (0.375 inch) high on the outside of the manway nozzle or the edge of the manway nozzle flange on the left side of the car. The marking may have the last numeral of the specification number omitted (e.g., "DOT 111A100W" instead of "DOT 111A100W1").

(c) When pressure tested within six months of installation and protected from deterioration, the test date mark-

ing of a reclosing pressure relief device is the installation date on the tank car.

[Amdt. 180-8, 60 FR 49079, Sept. 21, 1995, as amended by Amdt. 179-50, 61 FR 33256, June 26, 1996; 63 FR 52851, Oct. 1, 1998; 66 FR 45391, Aug. 28, 2001; 68 FR 75765, Dec. 31, 2003]

§ 180.517 Reporting and record retention requirements.

(a) *Certification and representation.* Each owner of a specification tank car shall retain the certificate of construction (AAR Form 4-2) and related papers certifying that the manufacture of the specification tank car identified in the documents is in accordance with the applicable specification. The owner shall retain the documents throughout the period of ownership of the specification tank car and for one year thereafter. Upon a change of ownership, the requirements in Section 1.3.15 of the AAR Specifications for Tank Cars (IBR, see § 171.7 of this subchapter) apply.

(b) *Inspection and test reporting.* Each tank car that is inspected as specified in § 180.509 must have a written report, in English, prepared according to this paragraph. The owner must retain a copy of the inspection and test reports until successfully completing the next inspection and test of the same type. The inspection and test report must include the following:

- (1) Type of inspection and test performed (a checklist is acceptable);
- (2) The results of each inspection and test performed;
- (3) Owner's reporting mark;
- (4) DOT Specification;
- (5) Inspection and test date (month and year);
- (6) Location and description of defects found and method used to repair each defect;
- (7) The name and address of the tank car facility and the signature of inspector.

[Amdt. 180-2, 54 FR 25032, June 12, 1989, as amended at 68 FR 75765, Dec. 31, 2003]

§ 180.519 Periodic retest and inspection of tank cars other than single-unit tank car tanks.

(a) *General.* Unless otherwise provided in this subpart, tanks designed to be removed from cars for filling and