

TABLE I.—IN-SERVICE MINIMUM THICKNESS FOR MC 300, MC 303, MC 304, MC 306, MC 307, MC 310, MC 311, AND MC 312 SPECIFICATION CARGO TANKS CONSTRUCTED OF STEEL AND STEEL ALLOYS

| Minimum manufactured thickness (US gauge or inches) | Nominal decimal equivalent for (inches) | In-service minimum thickness reference (inches) |
|---|---|---|
| 19 .....  | 0.0418                                  | 0.038   |
| 18 .....  | 0.0478                                  | 0.043   |
| 17 .....  | 0.0538                                  | 0.048   |
| 16 .....  | 0.0598                                  | 0.054   |
| 15 .....  | 0.0673                                  | 0.061   |
| 14 .....  | 0.0747                                  | 0.067   |
| 13 .....  | 0.0897                                  | 0.081   |
| 12 .....  | 0.1046                                  | 0.094   |
| 11 .....  | 0.1196                                  | 0.108   |
| 10 .....  | 0.1345                                  | 0.121   |
| 9 .....   | 0.1495                                  | 0.135   |
| 8 .....   | 0.1644                                  | 0.148   |
| 7 .....   | 0.1793                                  | 0.161   |
| 3/16 .....  | 0.1875                                  | 0.169   |
| 1/4 .....   | 0.2500                                  | 0.225   |
| 5/16 .....  | 0.3125                                  | 0.281   |
| 3/8 .....   | 0.3750                                  | 0.338   |

TABLE II.—IN-SERVICE MINIMUM THICKNESS FOR MC 301, MC 302, MC 304, MC 305, MC 306, MC 307, MC 311, AND MC 312 SPECIFICATION CARGO TANKS CONSTRUCTED OF ALUMINUM AND ALUMINUM ALLOYS

| Minimum manufactured thickness | In-service minimum thickness (inches) |
|--------------------------------|---------------------------------------|
| 0.078 .....                    | 0.070                                 |
| 0.087 .....                    | 0.078                                 |
| 0.096 .....                    | 0.086                                 |
| 0.109 .....                    | 0.098                                 |
| 0.130 .....                    | 0.117                                 |
| 0.141 .....                    | 0.127                                 |
| 0.151 .....                    | 0.136                                 |
| 0.172 .....                    | 0.155                                 |
| 0.173 .....                    | 0.156                                 |
| 0.194 .....                    | 0.175                                 |
| 0.216 .....                    | 0.194                                 |
| 0.237 .....                    | 0.213                                 |
| 0.270 .....                    | 0.243                                 |
| 0.360 .....                    | 0.324                                 |
| 0.450 .....                    | 0.405                                 |
| 0.540 .....                    | 0.486                                 |

(6) An owner of a cargo tank that no longer conforms to the minimum thickness prescribed for the design as manufactured may use the cargo tank to transport authorized materials at reduced maximum weight of lading or reduced maximum working pressure, or combinations thereof, provided the following conditions are met:

(i) A Design Certifying Engineer must certify that the cargo tank design and thickness are appropriate for the reduced loading conditions by issuance of a revised manufacturer's certificate, and

(ii) The cargo tank motor vehicle's nameplate must reflect the revised service limits.

(7) An owner of a cargo tank that no longer conforms with the minimum thickness prescribed for the specification may not return the cargo tank to hazardous materials service. The tank's specification plate must be removed, obliterated or covered in a secure manner.

(8) The inspector must record the results of the thickness test as specified in §180.417(b).

(9) For MC 331 cargo tanks constructed before October 1, 2003, minimum thickness shall be determined by the thickness indicated on the UIA form minus any corrosion allowance. For MC 331 cargo tanks constructed after October 1, 2003, the minimum thickness will be the value indicated on the specification plate. If no corrosion allowance is indicated on the UIA form then the thickness of the tank shall be the thickness of the material of construction indicated on the UIA form with no corrosion allowance.

(10) For 400-series cargo tanks, minimum thickness is calculated according to tables in each applicable section of this subchapter for that specification: §178.346–2 for DOT 406 cargo tanks, §178.347–2 for DOT 407 cargo tanks, and §178.348–2 for DOT 412 cargo tanks.

[Amdt. 180–2, 54 FR 25032, June 12, 1989]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §180.407, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

**§ 180.409 Minimum qualifications for inspectors and testers.**

(a) Except as otherwise provided in this section, any person performing or witnessing the inspections and tests specified in §180.407(c) must—

(1) Be registered with the Federal Motor Carrier Safety Administration in accordance with part 107, subpart F of this chapter,

(2) Be familiar with DOT-specification cargo tanks and trained and experienced in use of the inspection and testing equipment needed, and

(3) Have the training and experience required to meet the definition of "Registered Inspector" in §171.8 of this chapter.

(b) A person who only performs annual external visual inspections and leakage tests on a cargo tank motor vehicle, owned or operated by that person, with a capacity of less than 13,250 L (3,500 gallons) used exclusively for flammable liquid petroleum fuels, is not required to meet the educational and years of experience requirements set forth in the definition of "Registered Inspector" in §171.8 of this subchapter. Although not required to meet the educational and years of experience requirements, a person who performs visual inspections or leakage tests or signs the inspection reports must have the knowledge and ability to perform such inspections and tests and must perform them as required by this subchapter, and must register with the Department as required by subpart F of part 107 of this chapter.

(c) A person who performs only annual external visual inspections and leakage tests on a permanently mounted non-bulk tank, owned or operated by that person, for petroleum products as authorized by §173.8(c) of this subchapter, is not required to be registered in accordance with subpart F of part 107 of this chapter. In addition the person who signs the inspection report required by §180.417(b) of this subpart for such non-bulk tanks is not required to be registered. Although not required to register, a person who performs visual inspections or leakage tests or signs the inspection reports must have the knowledge and ability to perform such inspections and tests and must perform them as required by this subchapter.

(d) A motor carrier or cargo tank owner who meets the requirements of paragraph (a) of this section may use an employee who is not a Registered Inspector to perform a portion of the pressure retest required by §180.407(g). External and internal visual inspections must be accomplished by a Registered Inspector, but the hydrostatic

or pneumatic pressure test, as set forth in §180.407(g)(1)(viii) and (ix), respectively, may be done by an employee who is not a Registered Inspector provided that—

(1) The employee is familiar with the cargo tank and is trained and experienced in the use of the inspection and testing equipment used;

(2) The employer submits certification that such employee meets the qualification requirements to the Associate Administrator, Attn: (PHH-32), Pipeline and Hazardous Materials Safety Administration, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590; and

(3) The employer retains a copy of the tester's qualifications with the documents required by §180.417(b).

[Amdt. 180-2, 55 FR 37069, Sept. 7, 1990, as amended by Amdt. 180-3, 56 FR 66287, Dec. 20, 1991; 57 FR 45466, Oct. 1, 1992; Amdt. 180-11, 62 FR 1217, Jan. 8, 1997; 66 FR 45391, Aug. 28, 2001; 68 FR 19288, Apr. 18, 2003; 70 FR 56100, Sept. 23, 2005]

#### § 180.411 Acceptable results of tests and inspections.

(a) *Corroded or abraded areas.* The minimum thickness may not be less than that prescribed in the applicable specification.

(b) *Dents, cuts, digs and gouges.* For evaluation procedures, see CGA C-6 (IBR, see §171.7 of this subchapter).

(1) For dents at welds or that include a weld, the maximum allowable depth is ½ inch. For dents away from welds, the maximum allowable depth is ¼ of the greatest dimension of the dent, but in no case may the depth exceed one inch.

(2) The minimum thickness remaining beneath a cut, dig, or gouge may not be less than that prescribed in the applicable specification.

(c) *Weld or structural defects.* Any cargo tank with a weld defect such as a crack, pinhole, or incomplete fusion, or a structural defect must be taken out of hazardous materials service until repaired.

(d) *Leakage.* All sources of leakage must be properly repaired prior to returning a tank to hazardous materials service.

(e) *Relief valves.* Any pressure relief valve that fails to open and reclose at