

L (500 gallons) must be fitted with an elliptical or round manhole at least 279 × 381 mm (11 × 15 inches), or 254 × 405 mm (10 × 16 inches), or with a circular manhole at least 381 mm (15 inches) in diameter. Any inspection opening and closure must be designed and reinforced as required by Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter).

■ 94. In § 178.270–11, paragraph (d)(6) introductory text is revised to read as follows:

§ 178.270–11 Pressure and vacuum relief devices.

* * * * *

(d) * * *

(6) The flow capacity rating of any pressure relief device must be certified by the manufacturer to be in accordance with the applicable provisions in Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter) with the following exceptions:

* * * * *

■ 95. In § 178.270–12, paragraph (f) is revised to read as follows:

§ 178.270–12 Valves, nozzles, piping, and gauging devices.

* * * * *

(f) All nozzles and tank shell penetrations for nozzles shall be designed and constructed in accordance with Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter).

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■ 96. In § 178.271–1, paragraph (c) is revised to read as follows:

§ 178.271–1 General requirements.

* * * * *

(c) Each tank shall be designed and constructed in accordance with the requirements in Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter) except as limited or modified in this section or in § 178.270 of this subpart. ASME certification or stamp is not required.

■ 97. In § 178.272–1, paragraph (c) is revised to read as follows:

§ 178.272–1 General requirements.

* * * * *

(c) Each tank shall be designed and constructed in accordance with the requirements in Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter) except as limited or modified in this section or in § 178.270 of this subpart. ASME certification or stamp is not required.

■ 98. In § 178.273, paragraph (b)(6)(i) is revised to read as follows:

§ 178.273 Approval of Specification IM portable tanks and UN portable tanks.

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(b) * * *

(6) * * *

(i) The portable tank has been designed, constructed, certified, and stamped in accordance with the requirements in Division 1 of Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter). Other design codes may be used if approved by the Associate Administrator (see § 178.274(b)(1));

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■ 99. In § 178.274, the definitions for Fine grain steel and Off-shore portable tank in paragraph (a)(3), the first four sentences in paragraph (b)(1), and paragraphs (c)(5), (c)(11), (d)(1)(ii), (d)(3), (f)(1)(v), (h)(5)(iv), (i)(1) introductory text, and (j)(6) are revised to read as follows:

§ 178.274 Specifications for UN portable tanks.

(a) * * *

(3) * * *

Fine grain steel means steel that has a ferritic grain size of 6 or finer when determined in accordance with ASTM E 112–96 (IBR, see § 171.7 of this subchapter).

* * * * *

Offshore portable tank means a portable tank specially designed for repeated use in the transportation of hazardous materials to, from and between offshore facilities. An offshore portable tank is designed and constructed in accordance with the Guidelines for the Approval of Containers Handled in Open Seas specified in the IMDG Code (IBR, see § 171.7 of this subchapter).

(b) * * *

(1) The design temperature range for the shell must be –40 °C to –50 °C (–40 °F to 122 °F) for hazardous materials transported under normal conditions of transportation, except for portable tanks used for refrigerated liquefied gases where the minimum design temperature must not be higher than the lowest (coldest) temperature (for example, service temperature) of the contents during filling, discharge or transportation. For hazardous materials handled under elevated temperature conditions, the design temperature must not be less than the maximum temperature of the hazardous material during filling, discharge or transportation. More severe design temperatures must be considered for portable tanks subjected to severe climatic conditions (for example, portable tanks transported in arctic

regions). Shells must be designed and constructed in accordance with the requirements in Section VIII of the ASME Code (IBR, see § 171.7 of this subchapter), except as limited or modified in this subchapter. * * *

* * * * *

(c) * * *

(5) For shells of portable tanks used for liquefied compressed gases, the shell must consist of a circular cross section. Shells must be of a design capable of being stress-analyzed mathematically or experimentally by resistance strain gauges as specified in UG–101 of Section VIII of the ASME Code, or other methods approved by the Associate Administrator.

* * * * *

(11) For the purpose of determining actual values for materials for sheet metal, the axis of the tensile test specimen must be at right angles (transversely) to the direction of rolling. The permanent elongation at fracture must be measured on test specimens of rectangular cross sections in accordance with ISO 6892 (IBR, see § 171.7 of this subchapter), using a 50 mm gauge length.

(d) * * *

(1) * * *

(ii) the minimum thickness determined in accordance with Section VIII of the ASME Code or other approved pressure vessel code; or

* * * * *

(3) When additional protection against shell damage is provided in the case of portable tanks used for liquid and solid hazardous materials requiring test pressures less than 2.65 bar (265.0 kPa), subject to certain limitations specified in the UN Recommendations (IBR, see § 171.7 of this subchapter), the Associate Administrator may approve a reduced minimum shell thickness.

* * * * *

(f) * * *

(1) * * *

(v) the rated flow capacity of the device in standard cubic meters of air per second (m³/s) determined according to ISO 4126–1 (IBR, see § 171.7 of this subchapter); and

* * * * *

(h) * * *

(5) * * *

(iv) Protection of the shell against damage from impact or overturning by use of an ISO frame in accordance with ISO 1496–3 (IBR, see § 171.7 of this subchapter); and

* * * * *

(i) * * *

(1) Every portable tank must be fitted with a corrosion resistant metal plate