

STANDARD INFORMATION

Standard Number: UL 142

Standard Name: Steel Aboveground Tanks for Flammable and Combustible Liquids

Standard Edition and Issue Date: 10th Edition dated May 17, 2019

Date of Revision: May 17, 2019

Date of Previous Revision of Standard: 9th Edition revised August 26, 2014

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **March 15, 2021**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revise requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revise requirements.

Overview of Changes:

- Revisions to manhole requirements with respect to diameter and tank shape
- Remove requirements for loosebolt manways
- Revise tank leakage test for primary containment tanks
- Revise table A3 to include bottom of tank in vertical tank wetted surface area
- Added requirements for tanks with bottoms other than flat

Specific details of new/revise requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revise paragraphs noted in the attached or explain why these new/revise requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.



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CLAUSE	VERDICT	COMMENT
<p>Additions to existing requirements are <u>underlined</u> and deletions are shown lined out below.</p>		
8	Info	<p>Venting</p>
	Info	<p>Loosebolt manways are not suitable or safe for today's industry and all references are removed from the standard (8.3, 8.8, 8.9, and 8.10).</p> <p>The provision for emergency venting shall be:</p>
8.3		<p>a) An opening that complies with the requirements in 8.4 and is provided for that purpose only or b) A manhole with cover as described in 8.8 – 8.10 and a vent opening for normal venting complying with the requirements in 8.11.</p>
8.8		Clause deleted
8.9		Clause deleted
8.10		Clause deleted
9	Info	<p>Manholes</p> <p>Each <u>liquid containing compartment within a primary tank</u> which is larger than 76 inches (1.93 m) diameter <u>the following dimensions</u> shall incorporate a manhole:</p>
9.2		<p><u>a) Horizontal cylindrical tank with a minimum diameter of 76 inches.</u> <u>b) Vertical cylindrical tank with a minimum height of 76 inches and a minimum diameter of 60 inches.</u> <u>c) Rectangular tanks with a minimum height of 76 inches and minimum width of 60 inches.</u></p>
13		<p><i>New section added;</i></p> <p>Tanks with Bottoms Other Than Flat</p>
13.1		<p>Tanks with bottoms other than flat, such as a cone, dish or wedge shape, shall be constructed with steel at least as thick as the shell, using any of the joints in Section 6.</p> <p>The strength of the assembly of these tanks shall be determined by one of the following methods:</p>
13.2		<p>a) Tank design shall be tested to demonstrate the strength of the assembly per the Hydrostatic Strength Test in Section 43; or b) Tank construction shall be evaluated by a Professional Engineer using calculations or analytical tools for approval. The calculations or analysis shall be based on two times the weight of a full tank.</p>



CLAUSE	VERDICT	COMMENT
13.3		These tanks shall be provided with integral supports that are evaluated to Part IV Tank Supports.
42	Info	Tank Leakage Test
42.2	Info	Primary Containment Tanks
42.2.1		<p>The leakage test is to be conducted before painting the tank by a method described in items (a) – (b). There shall be no evidence of leakage or sign of permanent deformation following the leakage test. If subjected to a leakage test pressure, the tank wall, head, or roof may deflect but shall return to its original position and shape when the test pressure is released.</p> <p>a) Apply internal air pressure and use soap-suds, or equivalent material for the detection of leaks. For a horizontal or rectangular tank, the test gauge pressure is to be not less than 3 psi (21 kPa) or more than 5 psi (35 kPa). For a vertical tank, the test gauge pressure is not to be less than 1-1/2 psi (10 kPa) nor more than 2-1/2 psi (17 kPa) or that gauge pressure above 1-1/2 psi which first causes visible deformation of the tank. <u>For a rectangular tank, the test gauge pressure is not to be less than 1-1/2 psi (10 kPa) nor more than 3 psi (21 kPa) or that gauge pressure above 1-1/2 psi which first causes visible deformation of the tank;</u> or</p> <p>b) Completely fill the tank with water, applying the pressure specified in item (a) hydrostatically, and examine the tank for leakage.</p>
Appendix A	Info	Capacity and Wetted Area Tables
Table A3		<p>Wetted areas for vertical tanks (Area of shell to elevation not more than 30 feet above bottom)</p> <p>Table A3 has been modified to include the bottom surface area of the vertical tank, which is now required (see standard for details).</p>
CUSTOMERS PLEASE NOTE: This Table and column “Verdict” can be used in determining how your current or future production is or will be in compliance with new/revised requirements.		