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(ii) Have sufficient capacity to limit the pressure within the inner tank to that pressure specified in §179.401–1, when the discharge is equal to twice the normal venting rate during transportation, with normal vacuum and the outer shell at 130 °F; and

(iii) Prevent the discharge of a gas mixture exceeding 50% of the lower flammability limit to the atmosphere under normal conditions of storage or transportation.

(5) Safety interlock. If a safety interlock is provided for the purpose of allowing transfer of lading at a pressure higher than the pressure control valve setting but less than the pressure relief valve setting, the design must be such that the safety interlock will not affect the discharge path of the pressure relief valve or safety vent at any time. The safety interlock must automatically provide an unrestricted discharge path for the pressure control device at all times when the tank car is in transport service.

(d) Outer jacket. The outer jacket must be provided with a suitable system to prevent buildup of annular space pressure in excess of 16 psig or the external pressure for which the inner tank was designed, whichever is less. The total relief area provided by the system must be a minimum of 25 square inches, and means must be provided to prevent clogging of any system opening, as well as to ensure adequate communication to all areas of the insulation space. If a safety vent is a part of the system, it must be designed to prevent distortion of the rupture disc when the annular space is evacuated.

(e) Piping system. Where a piping circuit can be isolated by closing a valve, means for pressure relief must be provided.


§ 179.400–22 Protective housings.

Each valve, gage, closure and pressure relief device, with the exception of secondary relief valves for the protection of isolated piping, must be enclosed within a protective housing. The protective housing must be adequate to protect the enclosed components from direct solar radiation, mud, sand, adverse environmental exposure and mechanical damage incident to normal operation of the tank car. It must be designed to provide reasonable access to the enclosed components for operation, inspection and maintenance and to allow vapor concentrations to build up to a dangerous level inside the housing in the event of valve leakage or pressure relief valve operation. All equipment within the protective housing must be operable by personnel wearing heavy gloves and must incorporate provisions for locks or seals. A protective housing and its cover must be constructed of metal not less than 0.119 inch thick.

§ 179.400–23 Operating instructions.

All valves and gauges must be clearly identified with corrosion-resistant nameplates. A plate of corrosion-resistant material bearing precautionary instructions for the safe operation of the equipment during storage and transfer operations must be securely mounted so as to be readily visible to an operator. The instruction plate must be mounted in each housing containing operating equipment and controls for product handling. These instructions must include a diagram of the tank and its piping system with the various valves, control valves and pressure relief devices clearly identified and located.

§ 179.400–24 Stamping.

(a) A tank that complies with all specification requirements must have the following information plainly and permanently stamped into the metal near the center of the head of the outer jacket at the “B” end of the car, in letters and figures at least 3⁄8-inch high, in the following order:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Example of required stamping</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT-113A60W.</td>
<td></td>
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</tbody>
</table>