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Title 49 - Transportation

Subtitle B - Other Regulations Relating to Transportation

Chapter I - Pipeline and Hazardous Materials Safety Administration, Department of Transportation

Subchapter C - Hazardous Materials Regulations

Part 180 - Continuing Qualification and Maintenance of Packagings

Subpart E - Qualification and Maintenance of Cargo Tanks

Authority: 49 U.S.C. 5101-5128; 49 CFR 1.81 and 1.97.

Source: Amdt. 180-2, 54 FR 25032, June 12, 1989, unless otherwise noted.

§ 180.416 Discharge system inspection and maintenance program for cargo tanks transporting liquefied compressed gases.

- (a) **Applicability.** This section is applicable to an operator using specification MC 330, MC 331, and nonspecification cargo tanks authorized under § 173.315(k) of this subchapter for transportation of liquefied compressed gases other than carbon dioxide. Paragraphs (b), (c), (d)(1), (d)(5), (e), (f), and (g)(1) of this section, applicable to delivery hose assemblies, apply only to hose assemblies installed or carried on the cargo tank.
- (b) **Hose identification.** By July 1, 2000, the operator must assure that each delivery hose assembly is permanently marked with a unique identification number and maximum working pressure.
- (c) **Post-delivery hose check.** After each unloading, the operator must visually check that portion of the delivery hose assembly deployed during the unloading.
- (d) **Monthly inspections and tests.**
 - (1) The operator must visually inspect each delivery hose assembly at least once each calendar month the delivery hose assembly is in service.
 - (2) The operator must visually inspect the piping system at least once each calendar month the cargo tank is in service. The inspection must include fusible elements and all components of the piping system, including bolts, connections, and seals.
 - (3) At least once each calendar month a cargo tank is in service, the operator must actuate all emergency discharge control devices designed to close the internal self-closing stop valve to assure that all linkages operate as designed. appendix A to this part outlines acceptable procedures that may be used for this test.
 - (4) The operator of a cargo tank must check the internal self-closing stop valve in the liquid discharge opening for leakage through the valve at least once each calendar month the cargo tank is in service. On cargo tanks equipped with a meter, the meter creep test as outlined in appendix B to this part or a test providing equivalent accuracy is acceptable. For cargo tanks that are not equipped with a meter, appendix B to this part outlines one acceptable method that may be used to check internal self-closing stop valves for closure.

- (5) The operator must note each inspection in a record. That record must include the inspection date, the name of the person performing the inspection, the hose assembly identification number, the manufacturer of the hose assembly, the date the hose was assembled and tested, and an indication that the delivery hose assembly and piping system passed or failed the tests and inspections. The operator must retain a copy of each test and inspection record at its principal place of business or where the vehicle is housed or maintained until the next test of the same type is successfully completed.
- (e) **Annual hose leakage test.** The owner of a delivery hose assembly that is not permanently attached to a cargo tank motor vehicle must ensure that the hose assembly is annually tested in accordance with § 180.407(h)(4).
- (f) **New or repaired delivery hose assemblies.** Each operator of a cargo tank must ensure each new and repaired delivery hose assembly is tested at a minimum of 120 percent of the hose maximum working pressure.
 - (1) The operator must visually examine the delivery hose assembly while it is under pressure.
 - (2) Upon successful completion of the pressure test and inspection, the operator must assure that the delivery hose assembly is permanently marked with the month and year of the test.
 - (3) After July 1, 2000, the operator must complete a record documenting the test and inspection, including the date, the signature of the inspector, the hose owner, the hose identification number, the date of original delivery hose assembly and test, notes of any defects observed and repairs made, and an indication that the delivery hose assembly passed or failed the tests and inspections. A copy of each test and inspection record must be retained by the operator at its principal place of business or where the vehicle is housed or maintained until the next test of the same type is successfully completed.
- (g) **Rejection criteria.**
 - (1) No operator may use a delivery hose assembly determined to have any condition identified below for unloading liquefied compressed gases. An operator may remove and replace damaged sections or correct defects discovered. Repaired hose assemblies may be placed back in service if retested successfully in accordance with paragraph (f) of this section.
 - (i) Damage to the hose cover that exposes the reinforcement.
 - (ii) Wire braid reinforcement that has been kinked or flattened so as to permanently deform the wire braid.
 - (iii) Soft spots when not under pressure, bulging under pressure, or loose outer covering.
 - (iv) Damaged, slipping, or excessively worn hose couplings.
 - (v) Loose or missing bolts or fastenings on bolted hose coupling assemblies.
 - (2) No operator may use a cargo tank with a piping system found to have any condition identified in this paragraph (g)(2) for unloading liquefied compressed gases.
 - (i) Any external leak identifiable without the use of instruments.
 - (ii) Bolts that are loose, missing, or severely corroded.
 - (iii) Manual stop valves that will not actuate.

- (iv) Rubber hose flexible connectors with any condition outlined in paragraph (g)(1) of this section.
- (v) Stainless steel flexible connectors with damaged reinforcement braid.
- (vi) Internal self-closing stop valves that fail to close or that permit leakage through the valve detectable without the use of instruments.
- (vii) Pipes or joints that are severely corroded.

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