

§ 127.705

an escorted visitor displaying an identifying badge.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

§ 127.705 Security systems.

The operator shall ensure that security patrols of the marine transfer area for LNG are conducted once every hour, or that a manned television monitoring system is used, to detect—

- (a) Unauthorized personnel;
- (b) Fires; and
- (c) LNG releases.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

§ 127.707 Security personnel.

The operator shall ensure that no person is assigned security patrol duty unless that person has been instructed on security violation procedures.

§ 127.709 Protective enclosures.

The following must be within a fence or wall that prevents trespassing:

- (a) Impounding spaces.
- (b) Control rooms and stations.
- (c) Electrical power sources.

§ 127.711 Communications.

The marine transfer area for LNG must have a means of direct communications between the security patrol and other operating or security personnel on duty on the waterfront facility handling LNG.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

Subpart C—Waterfront Facilities Handling Liquefied Hazardous Gas

SOURCE: CGD 88-049, 60 FR 39796, Aug. 3, 1995, unless otherwise noted.

DESIGN AND CONSTRUCTION

§ 127.1101 Piping systems.

Each piping system within the marine transfer area for LHG used for the transfer of LHG must meet the following criteria:

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(a) Each system must be designed and constructed in accordance with ASME B31.3.

(b) Each pipeline on a pier or wharf must be located so that it is not exposed to physical damage from vehicular traffic or cargo-handling equipment. Each pipeline under navigable waters must be covered or protected to meet 49 CFR 195.248.

(c) The transfer manifold of each liquid transfer line and of each vapor return line must have an isolation valve with a bleed connection, such that transfer hoses and loading arms can be blocked off, drained or pumped out, and depressurized before disconnecting. Bleeds or vents must discharge to a safe area such as a tank or flare.

(d) In addition to the isolation valve at the transfer manifold, each liquid-transfer line and each vapor return line must have a readily accessible isolation valve located near the edge of the marine transfer area for LHG.

(e) Each power-operated isolation valve must be timed to close so that it will not produce a hydraulic shock capable of causing failure of the line or equipment. Unless the layout of the piping allows the isolation valve at the transfer manifold to close within 30 seconds without creating excessive stresses on the system, the layout must be reconfigured to reduce the stresses to a safe level.

(f) Each waterfront facility handling LHG that transfers to or from a vessel requiring vapor return during transfer must be equipped with a vapor return line designed to attach to the vessel's vapor connection.

(g) Where two or more LHGs are loaded or unloaded at the same facility, each manifold must be identified or marked to indicate each LHG it handles.

(h) Each pipeline used to transfer flammable liquids or vapors must be provided with precautions against static, lightning, and stray current in accordance with API RP 2003.

§ 127.1102 Transfer hoses and loading arms.

(a) Each hose within the marine transfer area for LHG used for the transfer of LHG or its vapors to or from a vessel must—

(1) Be made of materials resistant to each LHG transferred, in both the liquid and vapor state (if wire braid is used for reinforcement, the wire must be of corrosion-resistant material, such as stainless steel);

(2) Be constructed to withstand the temperature and pressure foreseeable during transfer, with a MAWP not less than the maximum pressure to which it may be subjected and at least 1030 kPa gauge (149.4 psig);

(3) Be designed for a minimum bursting pressure of a least five times the MAWP;

(4) Have—

(i) Full-threaded connections;

(ii) Flanges that meet ANSI B16.5; or

(iii) Quick connect couplings that are acceptable to the Commandant;

(5) Be adequately supported against the weight of its constituent parts, the LHG, and any ice formed on it;

(6) Have no kinks, bulges, soft spots, or other defects that will let it leak or burst under normal working pressure; and

(7) Have a permanently attached nameplate that indicates, or otherwise be permanently marked to indicate—

(i) Each LHG for which it is suitable;

(ii) Its MAWP at the corresponding service temperature; and

(iii) If used for service at other than ambient temperature, its minimum service temperature.

(b) Each loading arm used for the transfer of LHG or its vapor must—

(1) Be made of materials resistant to each LHG transferred, in both the liquid and vapor state;

(2) Be constructed to withstand the temperature and pressure foreseeable during transfer;

(3) Be adequately supported against the weight of its constituent parts, the LHG, and any ice formed on it;

(4) Be provided with an alarm to indicate when it is approaching the limits of its extension, unless the examined Operations Manual requires a person to perform the same function; and

(5) Have a permanently attached nameplate that indicates, or otherwise be permanently marked to indicate—

(i) Each LHG it may handle;

(ii) Its MAWP at the corresponding service temperature; and,

(iii) If it is used for service at other than ambient temperature, its minimum service temperature.

§ 127.1103 Piers and wharves.

(a) Each new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, must comply with the standards for seismic design and construction in 49 CFR part 41.

(b) Each substructure on a new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, except moorings and breasting dolphins, that supports or is within 4.5 meters (14.8 feet) of any pipe or equipment containing a flammable LHG, or that is within 15 meters (49.2 feet) of a loading flange used to transfer a flammable LHG, must have a fire-endurance rating of not less than two hours.

§ 127.1105 Layout and spacing of marine transfer area for LHG.

Each new waterfront facility handling LHG, and all new construction in the marine transfer area for LHG of each existing facility, must comply with the following:

(a) Each building, shed, and other structure within each marine transfer area for LHG must be located, constructed, or ventilated to prevent the accumulation of flammable or toxic gases within the structure.

(b) Each impounding space for flammable LHGs located within the area must be designed and located so that the heat flux from a fire over the impounding space does not cause, to a vessel, damage that could prevent the vessel's movement.

(c) Each manifold, loading arm, or independent mating flange must be located at least 60 meters (197 feet) from each of the following structures, if that structure is intended primarily for the use of the general public or of railways:

(1) A bridge crossing a navigable waterway.

(2) The entrance to, or the superstructure of, a tunnel under a navigable waterway.

(d) Each manifold, loading arm, or independent mating flange must be located at least 30 meters (98.5 feet) from each public roadway or railway.