Article 22 - NFPA 58-2001: Storage And Handling Of Liquefied Petroleum Gases

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675 IAC 22-2.2-14 NFPA 58; standard for the storage and handling of liquefied petroleum gases

Authority: IC 22-13-2-2

Affected: IC 22-11-15; IC 22-12-7; IC 22-13; IC 22-14; IC 36-8-17; IC 36-8-17.5

Sec. 14. (a) That certain document, being titled NFPA 58, Liquefied Petroleum Gas Code, 2001 Edition, published by the National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02269-9101, be and same is hereby adopted by reference, as if fully set out in this section except as revised hereafter.

(b) The following documents referenced in NFPA 58 are not adopted, are not enforceable, and are for information purposes only:

(1) NFPA 30.
(2) NFPA 37.
(3) NFPA 54.
(4) NFPA 61B.
(5) NFPA 82.
(6) NFPA 96.
(7) NFPA 101.
(8) NFPA 251.
(9) NFPA 302.
(10) NFPA 501A.
(11) NFPA 501C.
(12) NFPA 505.
(13) API-ASME Code for Unfired Pressure Vessels for Petroleum Liquids and Gases.
(14) API 620.
(15) ASCE 7.
(16) ASME Boiler and Pressure Vessels Code.
(17) ASME B31.3.
(18) ASME B36.10M.
(19) ASTM A47.
(20) ASTM A48.
(21) ASTM A53.
(22) ASTM A106.
(23) ASTM A395.
(24) ASTM A513.
(25) ASTM A536.
(26) ASTM A539.
(27) ASTM B42.
(28) ASTM B43.
(29) ASTM B86.
(30) ASTM B88.
(31) ASTM B135.
(32) ASTM B280.
(33) ASTM D2513.
(34) ASTM D2683.
(35) ASTM D3261.
(36) ASTM F1055.

(37) AWS Z49.1.
(38) ANSI/CGA C-4.
(39) Title 49, Code of Federal Regulations.
(40) UL 132.
(41) UL 144.
(42) UL 147A.
(43) UL 147B.
(44) UL 567.

(c) The following documents referenced in NFPA 58 are adopted and are enforceable:

(1) NFPA 10 adopted in section 3 of the rule.
(2) NFPA 15 adopted in section 4 of this rule.
(3) NFPA 50B adopted in section 9 of this rule.
(4) NFPA 51 adopted in section 10 of this rule.
(5) NFPA 51B adopted in section 12 of this rule.
(6) NFPA 59 adopted in section 13 of this rule.
(7) NFPA 86 adopted in section 18 of this rule.

(d) "NOTES" that are not a part of a table, figure, or graph are not enforceable as part of this code.

(e) Amend section 1.1.1(1) to read as follows: Containers, piping, and associated equipment for supplying LP gas as a fuel up to the point of delivery into a building as defined in section 1.7.52.2.

(f) Amend section 1.1.1(3) to read as follows: (c) Marine and pipeline terminals, natural gas processing plants, refineries, or tank farms ("tank farm" storage at industrial locations) is covered by this standard.

(g) Amend section 1.1.2(5) to read as follows: (e) LP-gas used with oxygen shall comply with the Indiana Fire Code (675 IAC 22).

(h) Delete section 1.1.2(8).

(i) Delete section 1.1.3 and substitute: See 675 IAC 12-6.

(j) In section 1.1.4, delete everything after the first sentence.

(k) Delete section 1.4.

(l) In section 1.6, add the following to the last sentence: "in accordance with approved methods".

(m) In section 1.7, amend the following definitions:

1.7.6 APPROVED means, as to materials, equipment, and types of construction, acceptance by the authority having jurisdiction by one (1) of the following methods: investigation or tests conducted by recognized authorities; or investigation or tests conducted by technical or scientific organizations; or accepted principles. The investigation, tests, or principles shall establish that the materials, equipment, and types of construction are safe for their intended purpose.

1.7.11 AUTHORITY HAVING JURISDICTION means the state building commissioner, or the state fire marshal, or officer of a local unit of government empowered by law to administer and enforce the rules of the commission.

1.7.19 CYLINDER means a portable container constructed to DOT (formerly ICC) cylinder specifications or, in some cases, constructed in accordance with the ASME Code of a similar size and for similar service. The maximum size permitted under DOT specifications is one thousand (1,000) pounds (four hundred fifty-four (454) kilograms) water capacity, four hundred twenty (420) pounds PROPANE (one hundred (100) gallons).

1.7.23 Amend the definition of DISPENSING STATION by adding a second sentence to read as follows: The public is not to be permitted access to the dispensing station area.

1.7.37 LABELED means equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization engaged in product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

1.7.39 LISTED means equipment or materials included in a list published by an organization engaged in product evaluation, that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets appropriate standards or has been tested and found suitable for use in a specified manner.

1.7.66 Amend the definition of SPECIAL PROTECTION by adding the following: When required by this standard, special protection is allowed to consist of any of the following: applied insulated coatings,

mounding, burial, water spray fixed systems, or fixed monitor nozzles meeting the criteria specified in this standard (see section 3.10.3), or by other means approved for this purpose.

(n) In section 1.7, add the following definitions to read:

1.7.11.5 BUILDING CODE means the Indiana Building Code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.

1.7.24.4 ELECTRICAL CODE means the Indiana Electrical Code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.

1.7.24.8 FIRE CODE means the Indiana Fire Code (675 IAC 22).

1.7.34.6 INSPECTION AUTHORITY means the state fire marshal, or the fire chief, or the state building commissioner, or the local building official, or their authorized representative.

1.7.47.1 NFPA 70 means the Indiana Electrical Code (675 IAC 17).

1.7.40.5 MECHANICAL CODE means the mechanical code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.

1.7.52.5 PLUMBING CODE means the plumbing code in effect in Indiana at the time of construction, remodeling, alteration, addition, or repair of the structure.

1.7.52.8 POINT OF DELIVERY means the outlet of the first stage pressure regulator that provides untilization *[sic.]* pressure, exclusive of line gas regulators, in the system.

(o) Amend section 2.2.1.3 to read as follows: Containers shall be listed and labeled for their intended use. (See Appendices C and D)

(p) Amend section 2.2.1.4 to read as follows: Containers complying with 2-2.1.3 shall be permitted to be reused, reinstalled, or continued in use as follows:

(i) A container shall not be filled if it is not suitable for continued service.

(ii) Containers that have been involved in a fire and show no distortion shall be retested using the hydrostatic test procedure applicable at the time of original fabrication, and relabeled by the manufacturer or the manufacturer's authorized representative. All appurtenances shall be replaced.

(q) In section 2.2.1.5, delete the second sentence without substitution.

(r) In section 2.2.1.6(1), delete the exception.

(s) In section 2.2.1.6(2), delete "ASME or API ASME".

(t) Amend section 2.2.2.1 to read as follows: The minimum design or service pressure of containers shall be in accordance with their listing.

(u) Amend section 2.2.2.3(c) to read as follows: (c) Wind loading on containers shall be based on wind pressures on the projected area as required by the building code (675 IAC 13).

(v) Amend section 2.2.2.3(d) to read as follows: (d) Seismic loading on containers shall be as required by the building code (675 IAC 13).

(w) In section 2.2.5.3, amend the first sentence to read as follows: Containers to be used as portable storage containers (see definition) for temporary stationary service shall comply with the following (this shall apply to movable fuel storage tenders, including farm carts):.

(x) In section 2.3.1.2, amend the first sentence by deleting "suitable" and substituting "listed".

(y) Delete section 2.3.2.3 and substitute the following: American Society of Mechanical Engineers (ASME) containers for LP-gas shall be equipped with listed direct spring-loaded relief valves installed in accordance with manufacturer's recommendations. The start-to-leak setting of such pressure relief valves with relation to the design pressure of the container shall be in accordance with Table 2.3.2.3.

EXCEPTION: On containers of forty thousand (40,000) gallon (one hundred fifty-one (151) m^3) water capacity or more, a pilot-operated pressure relief valve in which the relief device is combines with and is controlled by a self-actuated, direct, spring-loaded pilot valve shall be permitted to be used provided it complies with Table 2.3.2.3 listed, is inspected and maintained in accordance with manufacturer's recommendations, and is tested for proper operation at intervals not exceeding five (5) years.

(z) Amend section 2.4.1.2 to read as follows: Piping, pipe, and tubing fittings and valves used to supply utilization equipment shall be in accordance with the Mechanical Code (675 IAC 18).

(aa) Amend section 2.4.1.3(2) to read as follows: Pipe and tubing or shall be of material which has been approved for its intended use.

(bb) Amend section 2.4.6.1 to read as follows: Hose, hose connections, and flexible connectors (*see definition) shall be listed for use with LP-gas both as liquid and vapor. If wire braid is used for reinforcement, it shall be of corrosion-resistant material.

(cc) Amend the title of section 2.6 to read "APPLIANCES IN BUILDINGS.".

(dd) Amend section 2.6.1 to read as follows: Approved appliances: See the Mechanical Code (675 IAC 18).

(ee) Amend section 3.2.2.2 by deleting the word "important" and the phrase "that can be built upon".

(ff) Amend section 3.2.2.6 by deleting the last sentence and substituting the following: Horizontal separation is not required between aboveground LP-gas containers and underground tanks containing flammable or combustible liquids installed in accordance with the Indiana Fire Code (675 IAC 22).

(gg) Amend section 3.2.2.6(f) to read as follows: (f) The minimum separation between LP-gas containers and oxygen or gaseous hydrogen containers shall be in accordance with Table 3.2.2.6(f) except that lesser distances are allowed where protective structures interrupt the line of sight between uninsulated portions of the oxygen or hydrogen containers and the LP-gas containers. The minimum separation between LP-gas containers and liquefied hydrogen containers shall be in accordance with the Indiana fire code (675 IAC 22).

(hh) Amend section 3.2.2.6(h) by adding a second sentence to read as follows: See Appendix II-B of the fire code.

(ii) Delete section 3.2.10 in its entirety.

(jj) Delete section 3.2.16.4 in its entirety.

(kk) Amend section 3.2.18.4 to read as follows: Emergency remote shutdown stations shall be clearly identified by a sign printed in block letters of not less than two (2) inches (fifty-one (51) millimeters) in height on a background of contrasting colors to the letters. The sign shall be visible from the point of transfer.

(ll) Amend section 3.3.3.7 to read as follows: Liquid inlet piping to the bulk plant storage facility shall be designed to prevent debris from entering the system.

(mm) Delete section 3.4.3.8 in its entirety.

(nn) Amend section 3.4.9.1 to read as follows: Containers are allowed to be installed on noncombustible roofs of buildings constructed as required for an occupancy separation having a fire-resistive rating of not less than the following:

Groups B, F, M, and S Occupancies, Two Hours

All other occupancies, Four Hours

EXCEPTION: When the quantity of gas does not exceed sixty (60) gallons (two hundred twenty-seven and one-tenth (227.1) L), a noncombustible roof without a fire-resistive rating is allowed.

(oo) Amend section 3.6.2.6 by deleting subsection (a) and substituting subsection (b) as (a).

(pp) Amend section 3.10.2.2 to read as follows: Fire protection shall be provided for installations of ASME containers with an aggregate water capacity of more than four thousand (4,000) gallons (fifteen and one-tenth (15.1) m^3). The mode of such protection shall be determined through a written fire safety analysis for new installations. A written fire safety analysis may be prepared by company risk management personnel, insurance company loss control representatives, LP gas industry consultants, or other competent persons. Nothing in this section shall preclude the use of an industry-accepted checklist or the written results of a preplanning inspection conducted by the local fire department under IC 36-8-17.5 to satisfy the requirements that a written analysis be prepared. Nothing in this section shall require that such written plans must be stamped or certified by a professional engineer or submitted to any governmental agency.

(qq) Add a section 4.2.2.1.1 to read as follows: 4.2.2.1.1 Containers to be Filled. Containers shall be filled only by the owner or upon the owners' authorizations in accordance with IC 22-11-15.

(rr) Delete the text of Chapter 7 and substitute as follows: 7.1 See the Building Code (675 IAC 13).

(ss) In the first sentence of section 9.1.3.2, delete "ICBO Uniform" and add "(675 IAC 13)" after ":building code".

(tt) In section 9.1.3.2, delete the second sentence without substitution.

(uu) Chapter 13 and the appendices are not adopted as part of this code and are intended for use as a guide, and the standards referenced therein are not enforceable as part of this code. *(Fire Prevention and Building Safety Commission; 675 IAC 22-2.2-14; filed Aug 28, 1998, 5:02 p.m.: 22 IR 109; errata filed Jun 21, 1999, 3:33 p.m.: 22 IR 3420; filed Dec 13, 2002, 3:45 p.m.: 26 IR 1553)*