



Proposed Revisions

2012 National Fuel Gas Code

ASGE National Technical Conference

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American Gas Association**

2012 Edition Revision Status



ASC Z223 / NFPA 54 February Meeting

- 156 Public and Committee Proposals



Ballot on First Public Review Document / ROP Completed

- August 31, 2010 Deadline for Comments



Fall Meeting to Consider Comments planned for October 19-20



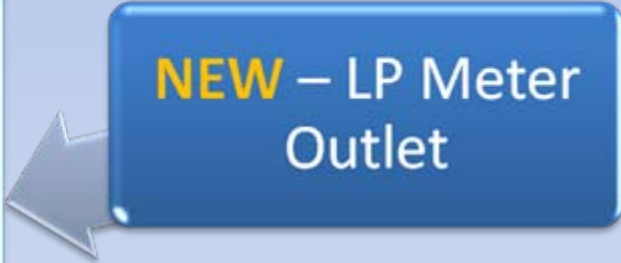
Publication planned for September 2011

Proposed Revisions

Scope – Point of Delivery

1.1.1 Applicability

(A)* Coverage of piping systems shall extend from the point of delivery to the appliance connections. For other than undiluted liquefied petroleum gas systems, the point of delivery shall be considered to be the outlet of the service meter assembly or the outlet of the service regulator or service shutoff valve where no meter is provided. For undiluted liquefied petroleum gas systems, the point of delivery shall be considered to be the outlet of the final pressure regulator, exclusive of line gas regulators, in the system where no meter is installed. Where a meter is installed the point of delivery shall be the outlet of the meter.



NEW – LP Meter
Outlet

Proposed Revisions

Scope – Point of Delivery

A.1.1.1.1(A) The final pressure regulator in an undiluted Liquefied Petroleum Gas system can include any one of the following:

1. The second stage regulator or integral two-stage regulator
2. A 2-psi service regulator or integral 2 psi service regulator
3. A single stage regulator, where single stage systems are permitted by NFPA 58.

NEW – Guidance for LP final pressure regulator description



Proposed Revisions

Piping - Materials

REVISED – Appropriate section numbers replace text


Table A.5.6 Pipe, Tube, Fittings, and Joints for Natural Gas and Liquefied Petroleum Gas Applications

Metallic Pipe				
Pipe		Fitting Types	Joint Types	Other Requirements
Material	Standard			
Black Steel Minimum Schedule 40	ASTM A106 [†]	Steel	Threaded	Threads per ASME B1.20.1[†] Special fittings shall be appropriate for the application and acceptable to AHJ <u>5.6.5, 5.6.6, 5.6.7, 5.6.8, 5.6.8.4, 7.13</u>
Galvanized Steel <i>minimum Schedule 40</i>	ASTM A53 [†]	Malleable Iron	Flanged	
Wrought Iron <i>Minimum Schedule 40</i> <i>Also known as low iron or wrought steel</i>	ASME B36.10M [†]	Steel Cast Iron		
		ASME B16.1 [†]		
Copper	None Specified	Cast Copper Alloy	None Specified	Prohibited where the gas contains more than an average of 0.3 grains of hydrogen sulfide per 100 scf of gas (0.7 mg/100 L). Threads cannot form the joint seal Special fittings shall be appropriate for the application and acceptable to AHJ <u>5.6.2.3, 5.6.2.4, 5.6.5, 5.6.7, 5.6.8, 5.6.8.2, 5.6.8.4, 7.13</u>
		Bronze		
		Brass		
Copper Alloy (Brass)	None Specified	Special		

Proposed Revisions

Piping System Installation

NEW – Guidance
for use of joint
compounds and
Teflon tape



A.5.6.7.4 Joint sealing compounds are used in tapered pipe thread joints to provide lubrication to the joint as it is tightened so that less tightening torque is “used up” to overcome friction and also to provide a seal of the small leak paths which would otherwise remain in a metal-to-metal threaded joint.

Commonly used joint sealing compounds include pipe dope and polytetrafluoroethylene tape, also known as PTFE or Teflon® tape. Some pipe dopes also contain PTFE. Joint sealing compounds should be applied so that no sealing compound finds its way into the interior of a completed joint.

Pipe dope application should be made only to the male pipe thread of the joint and should coat all of the threads commencing one thread back from the end of the threaded pipe.

PTFE tape application should be made by wrapping the tape tightly around the male thread in a clockwise direction when viewed from the end of the pipe to which the tape is being applied. Tape application should wrap all of the threads commencing one thread back from the end of the threaded pipe.

Proposed Revisions

Piping System Installation

NEW – Overpressure protection for regulators

Systems exceeding 2 psi

Match requirements in Z21.80

5.8.2.1 Where the gas supply pressure in piping systems located indoors exceeds 2 psi and line pressure regulators are installed to reduce the supply pressure to 14 inches w.c. or less, the following shall apply:

(1) Regulators shall be provided with factory installed overpressure protection devices.

(2) Overpressure protection devices shall limit the pressure downstream of the line pressure regulator to 2 psi in the event of failure of the line pressure regulator.

Proposed Revisions

Piping System Design

REVISED – Delete
non-mandatory
text



5.14.1 Design. Piping systems shall be designed ~~to have sufficient flexibility to prevent failure from thermal expansion or contraction from causing excessive stresses in the piping material, excessive bending or loads at joints, or undesirable forces or moments at points of connections to appliances and equipment and at anchorage or guide points. Formal calculations or model tests shall be required only where reasonable doubt exists as to the adequate flexibility of the system.~~

Proposed Revisions

Pipe Sizing Tables

Two **NEW** Natural Gas Tables

Table 6.2(c)

Less than 2 psi

3.0 inch pressure drop

INTENDED USE: Initial supply
pressure of 8.0 in. w.c. or greater

Table 6.2(d)

Less than 2 psi

6.0 inch pressure drop

INTENDED USE: Initial supply
pressure of 11.0 in. w.c. or greater

Proposed Revisions

Pipe Sizing Tables

REVISED Intended Use Note Added

Table 6.2(n)

INTENDED USE: Initial supply pressure of 8.0 in. w.c. or greater

Table 6.2(o)

INTENDED USE: Initial supply pressure of 11.0 in. w.c. or greater

Proposed Revisions

Pipe Sizing Tables

Expand Polyethylene Plastic Pipe Tables

Adds 3" and 4" Sizes

Table
6.2(r)

Table
6.2(s)

Table
6.2(t)


Table
6.3(k)

Table
6.3(l)

Proposed Revisions

Piping System Design

REVISED – Seal
both pipe &
sleeve



7.1.5 Piping through Foundation Wall. Underground piping, where installed through the outer foundation or basement wall of a building, shall be encased in a protective sleeve or protected by an approved device or method. The space between the gas piping and ~~the building or~~ sleeve and between the sleeve and the wall shall be sealed to prevent entry of gas and water.

Proposed Revisions

Piping Installation

REVISED – Restructured
as a list

Listed systems added

7.1.6 Piping Underground Beneath Buildings. ~~Where the installation of gas piping underground beneath buildings is unavoidable, the piping shall be encased in an approved conduit designed to withstand the superimposed loads and installed in accordance with 7.1.6.1 or 7.1.6.2.~~ Where gas piping is installed underground beneath buildings, the piping shall be either:

- (1) Encased in an approved conduit designed to withstand the imposed loads and installed in accordance with 7.1.6.1 or 7.1.6.2, or
- (2) A piping/encasement system listed for installation beneath buildings.

Proposed Revisions

Piping System Design

~~7.2.3 Other than Dry Gas.~~
~~Drips, sloping, protection~~
~~from freezing, and branch~~
~~pipe connections, as~~
~~provided for in 7.1.4, 7.6.1,~~
~~and Section 7.8, shall be~~
~~provided when other than~~
~~dry gas is distributed and~~
~~climatic conditions make~~
~~such provisions necessary.~~

DELETED –

Requirements
are covered
elsewhere in
code

Proposed Revisions

Piping Installation

REVISED – List is
restructured & simplified

NEW – LC-1 & LC-4
replaces old “(3)”

~~7.3.2 Connections. Where gas piping is to be concealed, unions, tubing fittings, right and left couplings, bushings, swing joints, and compression couplings made by combinations of fittings shall not be used. Connections shall be of the following type:~~

- ~~(1) Pipe fittings such as elbows, tees, and couplings~~
- ~~(2) Joining tubing by brazing [see 5.6.8.2]~~
- ~~(3) Fittings listed for use in concealed spaces that have been demonstrated to sustain, without leakage, any forces due to temperature expansion or contraction, vibration, or fatigue based on their geographic location, application, or operation.~~
- ~~(4) Where necessary to insert fittings in gas pipe that has been installed in a concealed location, the pipe shall be reconnected by welding, flanges, or the use of a ground joint union with the nut center punched to prevent loosening by vibration.~~

Fittings installed in concealed locations shall be limited to the following types:

- (1) Threaded elbows, tees and couplings
- (2) Brazed fittings
- (3) Welded fittings
- (4) Fittings listed to ANSI LC-1 or ANSI LC-4

Proposed Revisions

Piping Installation

7.13.2 CSST. CSST gas piping systems shall be bonded to the electrical service grounding electrode system. ~~at the point where the gas service enters the building~~ The bonding jumper shall connect to a metallic pipe or fitting between the point of delivery and the first downstream CSST fitting. The bonding jumper shall not be smaller than 6 AWG copper wire or equivalent. Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.

REVISED –
Jumper allowed
to be installed at
other locations

CSST additions
to existing
piping must be
bonded

Proposed Revisions

Piping System Design

REVISED – Guidance
relocated to Annex A




7.13.3* Prohibited Use. Gas piping shall not be used as a grounding conductor or electrode. ~~This does not preclude the bonding of metallic piping to a grounding system.~~

A.7.13.3 This does not preclude the bonding of metallic piping to a grounding system.

Proposed Revisions

Piping System Design

REVISED – List of test
“Types” are dropped



8.1.1.2 Inspection shall consist of visual examination, during or after manufacture, fabrication, assembly, or pressure tests ~~as appropriate.~~ ~~Supplementary types of nondestructive inspection techniques, such as magnetic particle, radiographic, and ultrasonic, shall not be required unless specifically listed herein or in the engineering design.~~

Proposed Revisions

Piping System Testing

RELOCATED – Requires
cleaning prior to testing



8.1.1.7 Prior to testing, the interior of the pipe
shall be cleared of all foreign material.

Proposed Revisions

Piping System Testing

REVISED – Dropped methods to help ensure testing is preformed safely



8.1.3.6 All testing of piping systems shall be performed in a manner that protects ~~done with due regard for~~ the safety of employees and the public during the test. ~~Bulkheads, anchorage, and bracing suitably designed to resist test pressures shall be installed if necessary. Prior to testing, the interior of the pipe shall be cleared of all foreign material.~~

Proposed Revisions

Piping Installation

8.2.4 Placing Appliances and Equipment in Operation. Appliances and equipment shall not be placed in operation until after the piping system has been ~~tested~~ checked for leakage in accordance with 8.2.3, connections to the appliance are checked for leakage, and purged in accordance with 8.3.2.

NEW –
Appliance
connection
must be
checked



Proposed Revisions

Piping Purging

REVISED – Complete replacement for 2009 requirements

Splits requirements depending on piping size and operating pressure

8.3* Purging requirements. The purging of piping shall be in accordance with Sections 8.3.1 through 8.3.3

8.3.1* Piping systems required to be purged outdoors. The purging of piping systems shall be in accordance with the provisions of Sections 8.3.1.1 through 8.3.1.4 where the piping system meets either of the following:

1. The design operating gas pressure is greater than 2 psig.
2. The piping being purged contains one or more sections of pipe or tubing greater than 2 inch nominal size or greater than 62 Equivalent Hydraulic Diameter for CSST.

Larger Systems are greater than 2" and greater than 2 psig

Proposed Revisions

Piping Purging

8.3.1.1 Removal from Service. Where existing gas piping is opened, the section that is opened shall be isolated from the gas supply and the line pressure vented in accordance with Section 8.3.1.3. Where gas piping meeting the criteria of Table 8.3.1.1 is removed from service, the residual fuel gas in the piping shall be displaced with an inert gas.

Purging with inert gas required for larger systems – No change from 2009

8.3.1.2* Placing in operation. Where gas piping containing air and meeting the criteria of Table 8.3.1.1 is placed in operation, the air in the piping shall first be displaced with an inert gas. The inert gas shall then be displaced with fuel gas in accordance with Section 8.3.1.3.

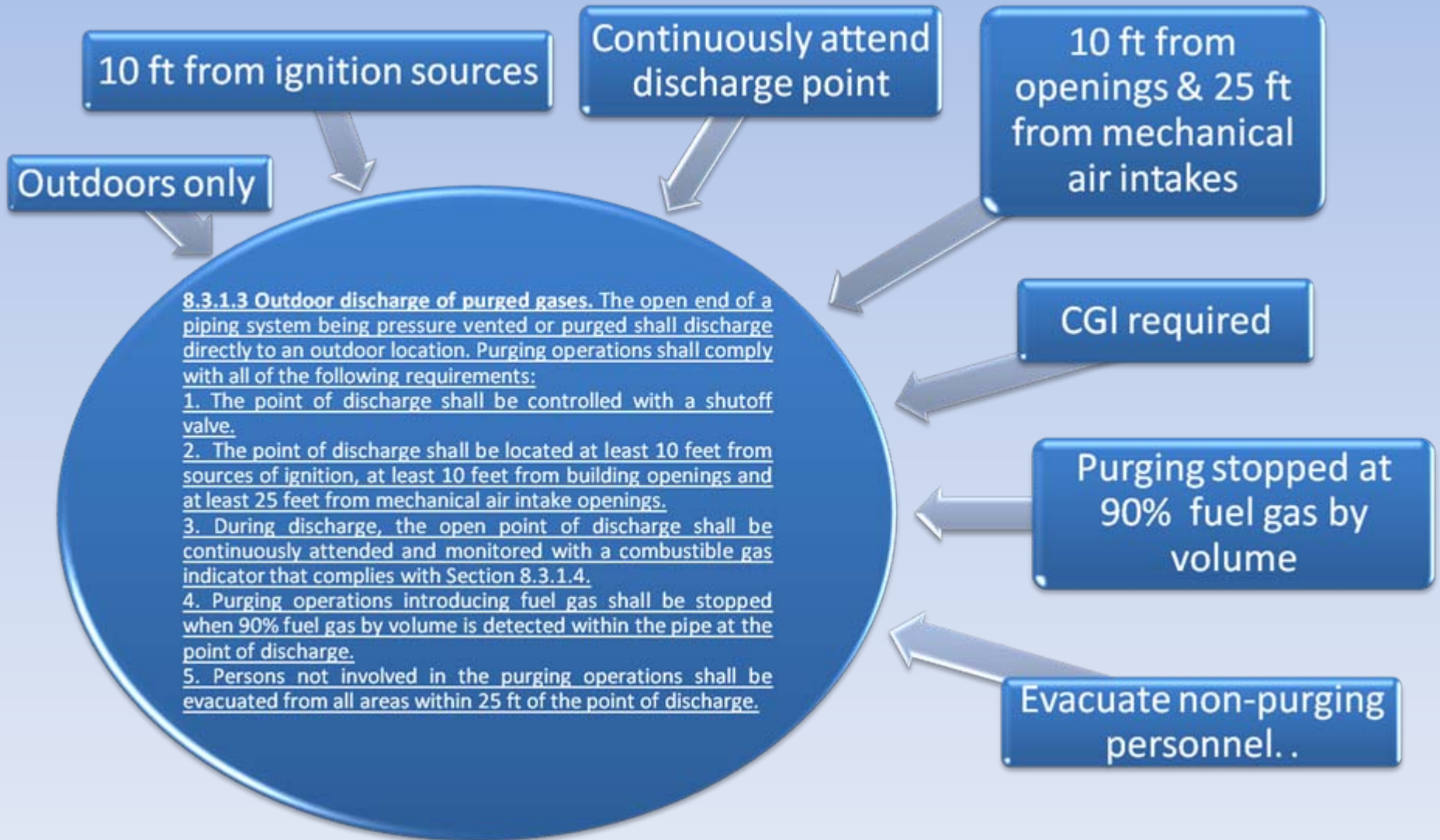
Table 8.3.2 Length of Piping Requiring Purging with Inert Gas for Servicing or Modification

<u>Nominal Pipe Size (in.)</u>	<u>Length of Piping Requiring Purging (ft)</u>
2 ½	> 50
3	> 30
4	> 15
6	> 10
8 or larger	Any length

For SI units: 1 ft = 0.305 m.

Proposed Revisions

Piping Purging



Proposed Revisions

Piping Purging

Listed CGI

Claibrated


Volume Scale 0%-
100% /1% Increments

8.3.1.4 Combustible Gas Indicator. The combustible gas indicator used during purging operations shall be listed and shall be calibrated in accordance with the manufacturer's instructions and recommended schedule. The combustible gas indicator used for pipe discharge monitoring shall be capable of numerically displaying a volume scale from 0% to 100% with a resolution of not greater than 1% increments.

Proposed Revisions

Piping Purging

Smaller
systems – 2”
or less and 2
psi or less



8.3.2 Piping systems allowed to be purged indoors or outdoors. The purging of piping systems shall be in accordance with the provisions of Section 8.3.2.1 where the piping system meets both of the following:

1. The design operating pressure is 2 psig or less.
2. The piping system is constructed entirely from pipe or tubing of 2 inch nominal size or smaller or CSST of 62 Equivalent Hydraulic Diameter or smaller.

Proposed Revisions

Piping Purging

Four Methods Provided

Outdoors with no other requirements

8.3.2.1* Purging procedure. The piping system shall be purged in accordance with one or more of the following:

1. The piping shall be purged with fuel gas and shall discharge to the outdoors.
2. The piping shall be purged with fuel gas and shall discharge to the indoors or outdoors through an appliance burner not located in a combustion chamber. Such burner shall be provided with a continuous source of ignition.
3. The piping shall be purged with fuel gas and shall discharge to the indoors or outdoors through a burner that has a continuous source of ignition and that is designed for such purpose.
4. The piping shall be purged with fuel gas that is discharged to the indoors or outdoors, and the point of discharge shall be monitored with a listed combustible gas detector. Purging shall be stopped when fuel gas is detected at the point of discharge.

Indoors or Outdoors
through appliance burner

Indoors or Outdoors
through a stand alone
burner

Indoor or Outdoors where
monitored by a CGD

Proposed Revisions

Piping Installation

8.3.3 Purging appliances and equipment. After the piping system has been placed in operation, appliances and equipment shall be purged before being placed into operation.

Appliances to
be purged –
No change
from 2009

Proposed Revisions

Piping Purging

~~A.8.3 The process of purging a gas pipeline of fuel gas and replacing the fuel gas with air or charging a gas pipeline that is full of air with fuel gas require that a significant amount of combustible mixture not be developed within the pipeline or released within a confined space. The process of purging a gas pipe of fuel gas and replacing the fuel gas with air or charging a gas pipe that is full of air with fuel gas must be performed in a manner that will minimize the potential for a flammable mixture to be developed within the piping. Also, a significant amount of flammable gas should not be released within a confined space. Natural gas and propane suppliers add a distinctive odor to their gas to aid in its detection. When a new or existing gas piping system is purged and brought into service, the sense of smell should not be relied upon to detect the presence of gas in the piping. However, when a new system is brought into service and unodorized gas is detected, the company supplying the gas should be contacted to inform it of the situation and to determine what action should be taken.~~

REVISED – Complete replacement of guidance

Brief mention of odorant usage

Sense of smell should not be relied upon

Contact gas supplier where unodorized gas is detected

Proposed Revisions

Piping Purging

For inert gas purging...

A.8.3.1.2 It is recommended that the oxygen levels in the piping be monitored during the purging process to determine when sufficient inert gas has been introduced. The manufacturer's instructions for monitoring instruments must be followed when performing purge operations.

Oxygen level should be monitored to determine when enough inert gas is introduced.

Proposed Revisions

Piping Purging

For smaller systems ...

Purging with fuel gas
should be continuous and
moderately rapid


GGI or source of
ignition should be
used

A.8.3.2.1 Where small piping systems contain air and are purged to either the indoors or outdoors with fuel gas, a rapid and uninterrupted flow of fuel gas must be introduced into one end of the piping system and vented out of the other end so as to prevent the development of a combustible fuel/air mixture. Purging these systems can be done either using a source of ignition to ignite the fuel gas or by using a listed combustible gas indicator that can detect the presence of fuel gas.

Proposed Revisions

Appliance Connection

REVISED – Outdoor portable appliances connected by a Z21.54 gas hose



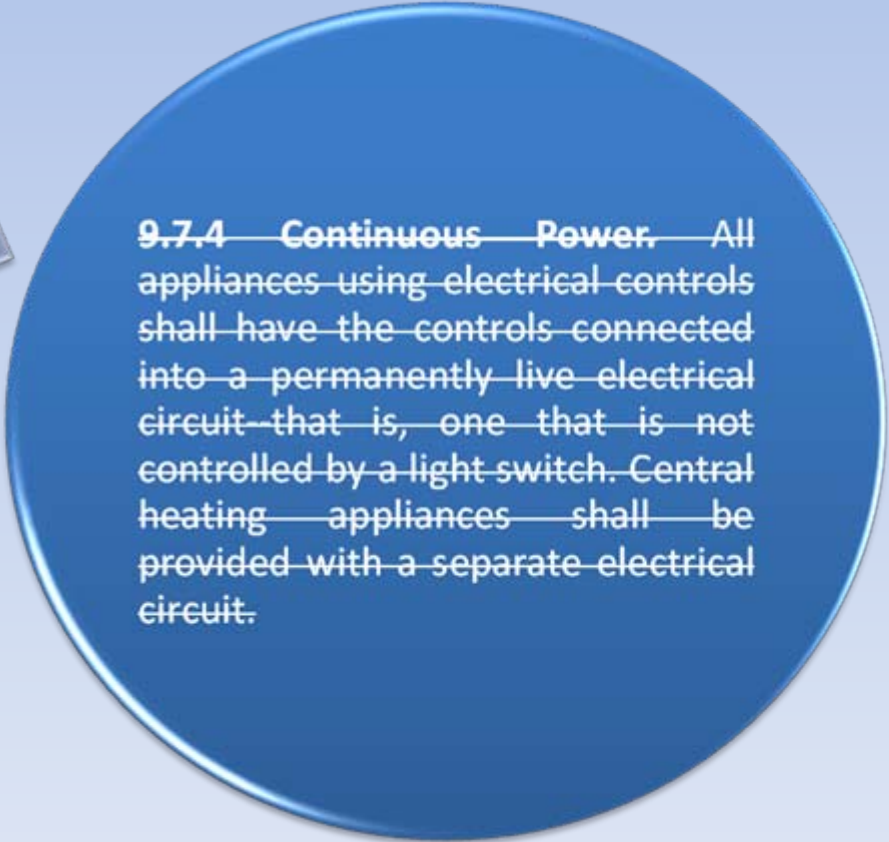
9.6.2 Use of Nonmetallic Gas Hose Connectors.

(2) *Outdoor.* Where Outdoor gas hose connectors are ~~permitted~~ used to connect portable outdoor appliances, the connector shall be listed in accordance with ANSI Z21.54 Gas Hose Connectors for Portable Outdoor Gas-Fired Appliances.

Proposed Revisions

Appliance Installation

DELETED – Refer to NEC electric requirements



~~9.7.4 Continuous Power.~~ All appliances using electrical controls shall have the controls connected into a permanently live electrical circuit that is, one that is not controlled by a light switch. Central heating appliances shall be provided with a separate electrical circuit.

Proposed Revisions

Appliance Clearances

DELETED –

Central furnace,
boiler and AC
Clearances

Term eliminated
and code
coverage
rewritten

Room size no
longer matters


~~3.3.90 Room Large in Comparison with Size of Appliance.~~ Rooms having a volume equal to at least 12 times the total volume of a furnace or air-conditioning appliance and at least 16 times the total volume of a boiler.

~~10.1.3 Room Size in Comparison Calculation.~~ Where the room size in comparison with the size of the appliance is to be calculated, the total volume of the appliance is determined from exterior dimensions and is to include fan compartments and burner vestibules, where used. Where the actual ceiling height of a room is greater than 8 ft (2.4 m), the volume of the room is figured on the basis of a ceiling height of 8 ft (2.4 m).


Proposed Revisions

Appliance Clearances

Listed AC in
accordance with
manufacturer
instructions



Specific AC listed
for closet
installation
covered b y 10.2.3



10.2.3 Clearances for Indoor Installation. The installation of air-conditioning appliances shall comply with the following requirements:

(1) ~~Listed air conditioning appliances installed in rooms that are large in comparison with the size of the appliance~~ shall be installed with clearances in accordance with the manufacturer's instructions. ~~[See Table 10.2.3(a) and Section 3.3.87 Room Large in Comparison with Size of Appliance.]~~

(2) ~~Air-conditioning appliances installed in rooms that are NOT large (such as alcoves and closets) in comparison with the size of the appliance~~ shall be listed for such installations and installed in accordance with the manufacturer's instructions. ~~Listed clearances shall not be reduced by the protection methods described in Table 10.2.3(b), regardless of whether the enclosure is of combustile or noncombustible material.~~

Proposed Revisions

Appliance Clearances

Unlisted AC in accordance with instructions but not less than 18"

(32) Unlisted air-conditioning appliances shall be installed with clearances from combustibile material of not less than 18 in. (460 mm) above the appliance and at the sides, front, and rear ~~and 9 in. (230 mm) from the draft hood~~ and in accordance with the manufacturer's installation instructions.

(43) Listed and unlisted air ~~Air-conditioning appliances (listed and unlisted) installed in rooms that are large in comparison with the size of the appliance~~ shall be permitted to be installed with reduced clearances to combustibile material, provided that the combustibile material or appliance is protected as described in Table 10.2.3(b) ~~{see 10.2.3(5)}~~ and such reduction is allowed by the manufacturer installation instructions.

Listed and unlisted AC clearance can be reduced

Instructions must allow reductions

Proposed Revisions

Appliance Clearances

Listed furnace & boiler in accordance with manufacturer instructions

Specific furnace & boiler listed for closet installation covered above in 10.3.2.1

10.3.2.1 ~~Listed central heating furnaces and low-pressure boilers installed in rooms large in comparison with the size of the appliance~~ shall be installed with clearances in accordance with the manufacturer's instructions. ~~[see Section 3.3.90 Room Large in Comparison with Size of Appliance.]~~

10.3.2.2 ~~Central heating furnaces and low-pressure boilers installed in rooms that are NOT large (such as alcoves and closets) in comparison with the size of the appliance shall be listed for such installations. Listed clearances shall not be reduced by the protection methods described in Table 10.2.3(b) and illustrated in Figures 10.3.2.2(a) through 10.3.2.2(b), regardless of whether the enclosure is of combustible or noncombustible material~~

Proposed Revisions

Appliance Clearances

Unlisted furnace and boiler clearance in accordance with Table 10.2.3(a)

10.3.2.3 Unlisted central heating furnaces and low-pressure boilers ~~installed in rooms that are large in comparison with the size of the appliance~~ shall be installed with clearances from combustible material not less than those specified in Table 10.2.3(a).

10.3.2.4 Listed and unlisted central ~~Central~~ heating furnaces and low-pressure boilers ~~(listed and unlisted) installed in rooms that are large in comparison with the size of the appliance~~ shall be permitted to be installed with reduced clearances to combustible material provided that the combustible material or appliance is protected as described in Table 10.2.3(b) [see 10.3.2.2] and such reduction is allowed by the manufacturer installation instructions.

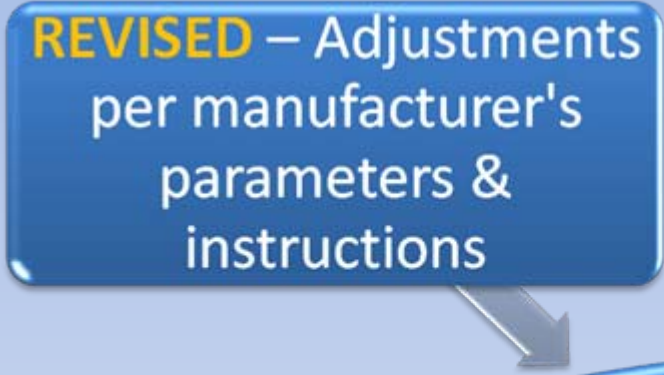
Listed and unlisted furnace & boiler clearance can be reduced

Instructions must allow reductions

Proposed Revisions

Appliance Startup

REVISED – Adjustments
per manufacturer's
parameters &
instructions



11.4 Automatic Ignition. Appliances supplied with means for automatic ignition shall be checked for ~~proper~~ operation within the parameters provided by the manufacturer. Any adjustments made shall be in accordance with the manufacturer's installation instructions. ~~If necessary, proper adjustments shall be made.~~

11.5 Protective Devices. Where required by the manufacturer's installation instructions, all protective devices furnished with the appliance, such as a limit control, fan control to blower, temperature and pressure relief valve, low-water cutoff device, or manual operating features, shall be checked for ~~proper~~ operation within the parameters provided by the manufacturer. Any adjustments made shall be in accordance with the manufacturer's installation instructions. ~~If necessary, proper adjustments shall be made.~~

Proposed Revisions

Appliance Startup

REVISED – Guidance
text deleted



11.6* Checking the Draft. ~~Vent-connected~~ Draft hood equipped appliances shall be checked to verify that there is no draft hood spillage after 5 minutes of main burner operation. ~~operated for several minutes and checked to see that the combustion products are going up the chimney or gas vent properly, by passing a lighted match or taper around the edge of the relief opening of the draft hood. Where the chimney or gas vent is drawing properly, the match flame is drawn into the draft hood. Where not drawing properly, the combustion products tend to extinguish this flame. Where the combustion products are escaping from the relief opening of the draft hood, the appliance shall not be operated until proper adjustments or repairs are made to provide adequate draft through the chimney or gas vent.~~

Proposed Revisions

Venting General

REVISED— Guidance
text deleted



12.1 Minimum Safe Performance. A Venting systems shall be designed and constructed to ~~develop a positive flow adequate to~~ convey all flue ~~or~~ and vent gases to the outdoors.

~~12.2.1 Materials. This chapter recognizes that the choice of venting materials and the methods of installation of venting systems are dependent on the operating characteristics of the appliance.~~

~~12.2.2 Categories. The operating characteristics of vented appliances can be categorized with respect to the following:~~

~~(1) Positive or negative pressure within the venting system~~

~~(2) Whether or not the appliance generates flue or vent gases that can condense in the venting system~~

~~See Section 3.3.6.11 for the definition of these vented appliance categories.~~

Proposed Revisions

Venting General

NEW— Guidance text from 12.1 moved to Annex A & expanded

A.12.1 Minimum Safe Performance. This chapter recognizes that the choice of venting materials and the methods of installation of venting systems are dependent on the operating characteristics of any connected appliances. The operating characteristics of vented appliances can be categorized with respect to whether greater-than-atmospheric or sub-atmospheric pressure exists within the operating vent system and to whether or not an appliance generates flue or vent gases that can condense in the venting system (See Section 3.3 for the definition of these vented appliance categories.)

Draft-hood-equipped appliances require a vent design which provides a draft to draw vent products into and through the vent system. Vent design tables and the requirements within this code, both for vents and for provision of combustion air, may be used to ensure that vents will provide this draft.

Higher efficiency appliances which generate low temperature vent gases that can condense require a venting system that can accommodate the condensate produced. Design of these venting systems is accomplished by the appliance manufacturer. Vent system installation requirements for these appliances are contained in the manufacturer's appliance installation instructions.

Proposed Revisions

Venting - Incinerators

NEW – Refer to NFPA 82 for incinerators



12.3.7 Incinerators, Commercial-Industrial.
Commercial-industrial-type incinerators shall be
vented in accordance with NFPA 82, Standard on
Incinerators and Waste and Linen Handling
systems and Equipment.


Proposed Revisions

Venting - Termination

12.9.6 Vent terminals that terminate through an outside wall of a building shall be located not less than 10 feet horizontally from an operable opening in an adjacent building.

Exception: This shall not apply to vent terminals that are 2 feet or more above or 25 feet or more below operable openings.

NEW – Adjacent building openings clearances




Same distances as currently specified for *in situ*

Proposed Revisions

Venting – Unconditioned Space

REVISED— 12.11.2.3 combined
with 12.11.2.2



12.11.2.2 Where the vent connector used for an appliance having a draft hood or a Category I appliance is located in or passes through an unconditioned area, attic or crawl space, that portion of the vent connector shall be listed Type B, Type L, or listed vent material having equivalent insulation qualities.

Exception: Single-wall metal pipe located within the exterior walls of the building and located in an unconditioned area other than an attic or a crawl space areas having a local 99 percent winter design temperature of 5°F or higher [see Figure G-2.4].

~~**12.11.2.3** Where the vent connector used for an appliance having a draft hood or a Category I appliance is located in or passes through attics and crawl spaces, that portion of the vent connector shall be listed Type B, Type L, or listed vent material having equivalent insulation qualities.~~

Proposed Revisions

Venting – Connectors

~~12.11.6 Avoid Unnecessary Bends.~~ A vent connector shall be installed so as to avoid turns or other construction features that create excessive resistance to flow of vent gases.

~~12.11.9.1~~ A vent connector shall be as short as practical, and the appliance located as close as practical, to the chimney or vent.

RELOCATED— Guidance text moved to Annex A

Comment needed to tie guidance to code provision

Proposed Revisions

Venting - Termination

REVISED – Vents above 5 ft are considered exposed unless...

Vents above 5 ft can be enclosed and are not exposed


13.1.11 Chimneys and Vent Locations. Table 13.1(a) through Table 13.1(e) shall only be used for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. Where vents extend outdoors above the roof more than 5 ft higher than required by Table 12.7.2, and where vents terminate in accordance with Section 12.7.2(b), the outdoor portion of the vent shall be enclosed as required by this paragraph for vents not considered to be exposed to the outdoors or such venting system shall be engineered. A type B vent passing through an unventilated enclosure or chase insulated to a value of not less than R8 shall not be considered to be exposed to the outdoors. Table 13.1(c) in combination with Table 13.1(f) shall be used for clay-tile-lined exterior masonry chimneys, provided all of the following requirements are met:

13.2.22 Chimneys and Vents Locations. Table 13.2(a) through Table 13.2(e) shall only be used for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. Where vents extend outdoors above the roof more than 5 ft higher than required by Table 12.7.2, and where vents terminate in accordance with Section 12.7.2(b), the outdoor portion of the vent shall be enclosed as required by this paragraph for vents not considered to be exposed to the outdoors or such venting system shall be engineered. A type B vent passing through an unventilated enclosure or chase insulated to a value of not less than R8 shall not be considered to be exposed to the outdoors. Table 13.2(f), Table 13.2(g), Table 13.2(h), and Table 13.2(i) shall be used for clay-tile-lined exterior masonry chimneys, provided all of the following conditions are met:

Proposed Revisions

Venting - Termination

NEW – Provides 2 ways to used tables where height does not match table



13.1.18 Height entries. Where the actual height of a vent falls between entries in the height column of the applicable table in Tables 13.2(a) through 13.2(i), either:

- (1) Interpolation shall be used, or
- (2) The lower vent capacity shown in the table entries shall be used for FAN MAX and NAT MAX column values and the higher vent capacity shall be used for the FAN MIN column values.

13.2.30 Height entries. Where the actual height of a vent falls between entries in the height column of the applicable table in Tables 13.2(a) through 13.2(i), either:

- (1) Interpolation shall be used, or
- (2) The lower vent capacity shown in the table entries shall be used for FAN MAX and NAT MAX column values and the higher vent capacity shall be used for the FAN MIN column values.

Proposed Revisions

Annex C – Pipe System Design

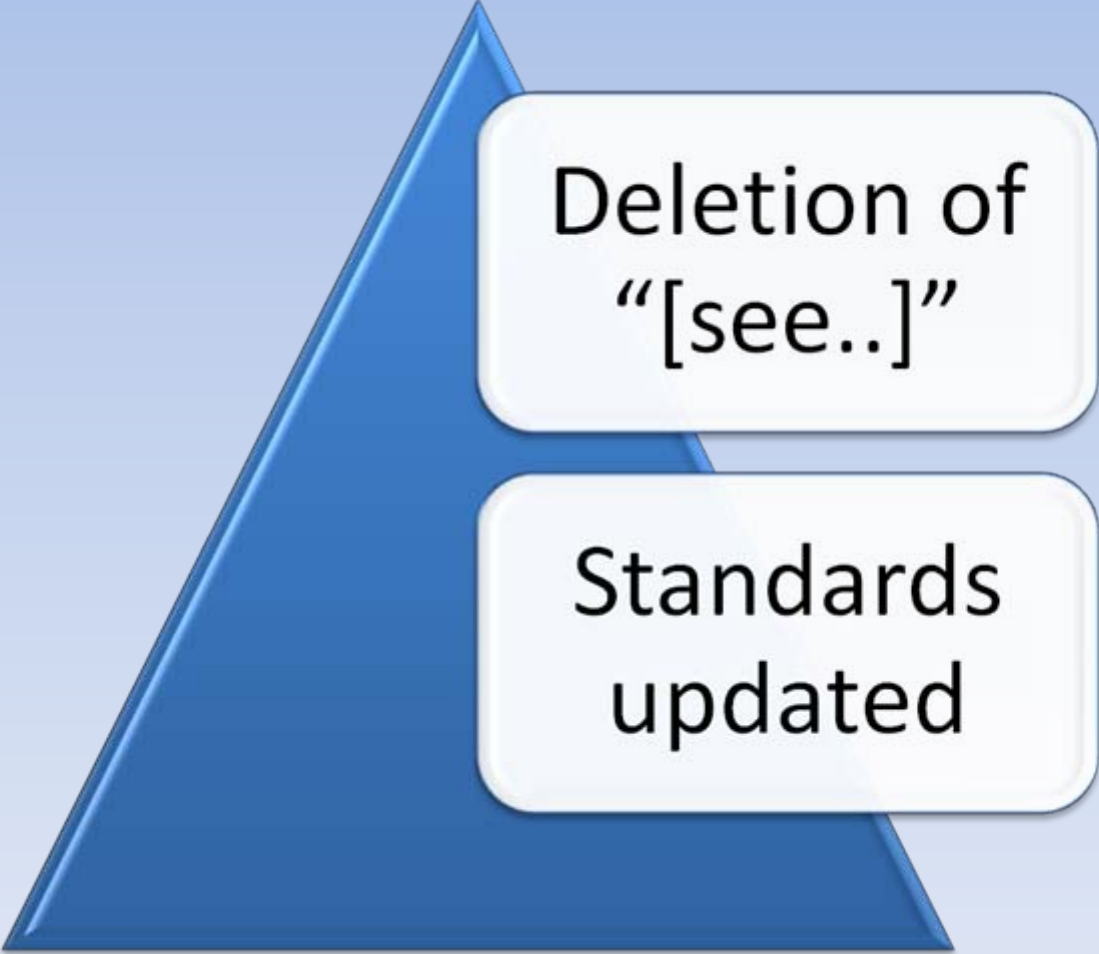
DELETE– Sizing charts in C.7 deleted



~~C.7 Use of Sizing Charts.~~

~~A third method of sizing gas piping is detailed below as an option that is useful when large quantities of piping are involved in a job (e.g., an apartment house) and material costs are of concern. If the user is not completely familiar with this method, the resulting pipe sizing should be checked by a knowledgeable gas engineer. The sizing charts are applied as follows:~~

GLOBAL CHANGES



Deletion of
“[see..]”

Standards
updated

TOP FIVE REVISIONS

- CSST Bonding
- Appliance Connector Leakage Check
- Purging
- Room Large in Comparison to Appliance Size
- Excessive Vent Height Termination

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