

1210.16 Electrical Circuits. Electrical circuits shall not utilize gas piping or components as conductors. [NFPA 54-09:7.14]

Exception: Low-voltage (50 V or less) control circuits, ignition circuits, and electronic flame detection device circuits shall be permitted to make use of piping or components as a part of an electric circuit.

1210.17 Electrical Connections.

- (A) Electrical connections between wiring and electrically operated control devices in a piping system shall conform to the requirements of NFPA 70, *National Electrical Code* or equivalent International Standard(s) approved by the Authority Having Jurisdiction. [NFPA 54:7.15.1]
- (B) Any essential safety control depending on electric current as the operating medium shall be of a type that will shut off (fail safe) the flow of gas in the event of current failure. [NFPA 54:7.15.2]

1211.0 Appliance Connections to Building Piping.

1211.1 Connecting Gas Appliances. Gas utilization appliances shall be connected to the building piping in compliance with Section 1211.5 by one of the following [NFPA 54:9.6.1]:

- (1) Rigid metallic pipe and fittings.
- (2) Semirigid metallic tubing and metallic fittings. Aluminum alloy tubing shall not be used in exterior locations.
- (3) Listed flexible gas connectors in compliance with CSA Z21.24, *Standard for Connectors for Gas Appliances* or equivalent International Standard(s) approved by the Authority Having Jurisdiction. The connector shall be used in accordance with the terms of their listing that are completely in the same room as the appliance.
- (4) CSST where installed in accordance with the manufacturer's instructions.
- (5) Listed nonmetallic gas hose connectors in accordance with 1211.3.
- (6) Gas-fired food service (commercial cooking) appliances listed for use with casters or otherwise subject to movement for cleaning, and other large and heavy gas utilization appliances that can be moved, shall be connected in accordance with the connector manufacturer's installation instructions using a listed appliance connector complying with CSA Z21.69, *Standard for Connectors for Movable Gas Appliances* or equivalent International Standard(s) approved by the Authority Having Jurisdiction. [NFPA 54:9.6.1.1] The commercial cooking appliance connector installation shall be configured in accordance with the manufacturer's installation instructions.

- (7) Movement of appliances with casters shall be limited by a restraining device installed in accordance with the connector and appliance manufacturer's installation instructions.
- (8) In 1211.1(2), (3), and (5), the connector or tubing shall be installed so as to be protected against physical and thermal damage. Aluminum alloy tubing and connectors shall be coated to protect against external corrosion where they are in contact with masonry, plaster, or insulation or are subject to repeated wettings by such liquids as water (except rain water), detergents, or sewage.

1211.2 Suspended Low-Intensity Infrared Tube Heaters. [NFPA 54-09:9.6.1.3] Suspended low-intensity infrared tube heaters shall be connected to the building piping system With a connector listed for the application in accordance with CSA Z21.24/CGA 6.10, *Connectors for Gas Appliances* or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

- (A) The connector shall be installed in accordance with the tube heater installation instructions, and shall be in the same room as the appliance.

- (B) Only one connector shall be used per appliance.

1211.3 Use of Nonmetallic Gas Hose Connectors. Listed nonmetallic gas hose connectors shall be used in accordance with the terms of their listing and as follows [NFPA 54:9.6.2]:

- (A) **Indoor.** Indoor gas hose connectors shall be used only to connect laboratory, shop, and ironing equipment requiring mobility during operation. An equipment shutoff valve shall be installed where the connector is attached to the building piping. The connector shall be of minimum length and shall not exceed 1.8m (6 ft.). The connector shall not be concealed and shall not extend from one room to another or pass through wall partitions, ceilings, or floors.
- (B) **Outdoor.** Outdoor gas hose connectors are permitted to connect portable outdoor gas-fired appliances. An appliance shutoff valve, a listed quick-disconnect device, or a listed gas convenience outlet shall be installed where the connector is attached to the supply piping and in such a manner to prevent the accumulation of water or foreign matter. This connection shall be made only in the outdoor area where the appliance is to be used. The connector length shall not exceed 4.6m (15 ft.).

1211.4 Connection of Portable and Mobile Industrial Gas Appliance.

- (A) Where portable industrial gas utilization appliances, or appliances requiring mobility or subject to vibration, are connected to the