ELECTRICAL INSPECTION BULLETIN

B-10-406

Interior Metal Gas Pipe Bonding

(Effective 03/01/2000)

A need for clarification has arisen as to what the bonding requirements are for interior metal gas piping and short metal sections of gas piping that are run directly into a building from the outside. Gas fireplace installations are a typical example where such concerns apply.

Rule 10-406(4) requires that all interior metal gas piping which may become energized shall be made electrically continuous and shall be bonded to ground.

The reference "may become energized" in this rule, is to be understood to mean either that, the gas pipe is connected to other equipment which has electrical connections, or that the gas pipe is routed in proximity to energized wires or equipment. Wiring of some description will generally be situated in the area of metal gas piping.
Gas fireplaces, for example, typically have electric fans installed. In such an installation there is a definite possibility that the gas pipe or the fireplace cabinet or the chimney may become energized.

The most practical method to comply with this rule, is to connect a copper bond wire, not smaller than # 6 AWG, between the metallic gas pipe sections using approved bonding clamps, and then to connect to the system grounding conductor, or to the nearest metal cold water pipe provided that the metal cold water piping is being used as a system grounding electrode, as per Rule 10-700 (1) (a).

All bond wire clamps are to conform to Rule 10-602, which requires that a metal clamp be used which will minimize deterioration from galvanic action with the gas pipe metal.

To minimize confusion for gas fitters and to be consistent, strict compliance with the code rule 10-406(4) is mandatory and *all* interior gas piping is to be bonded, including short pipe sections.