



System No. W-L-5031
XHEZ.W-L-5031
Through-penetration Firestop Systems

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
 - Authorities Having Jurisdiction should be consulted before construction.
 - Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
 - When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
 - Only products which bear UL's Mark are considered Certified.
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XHEZ - Through-penetration Firestop Systems

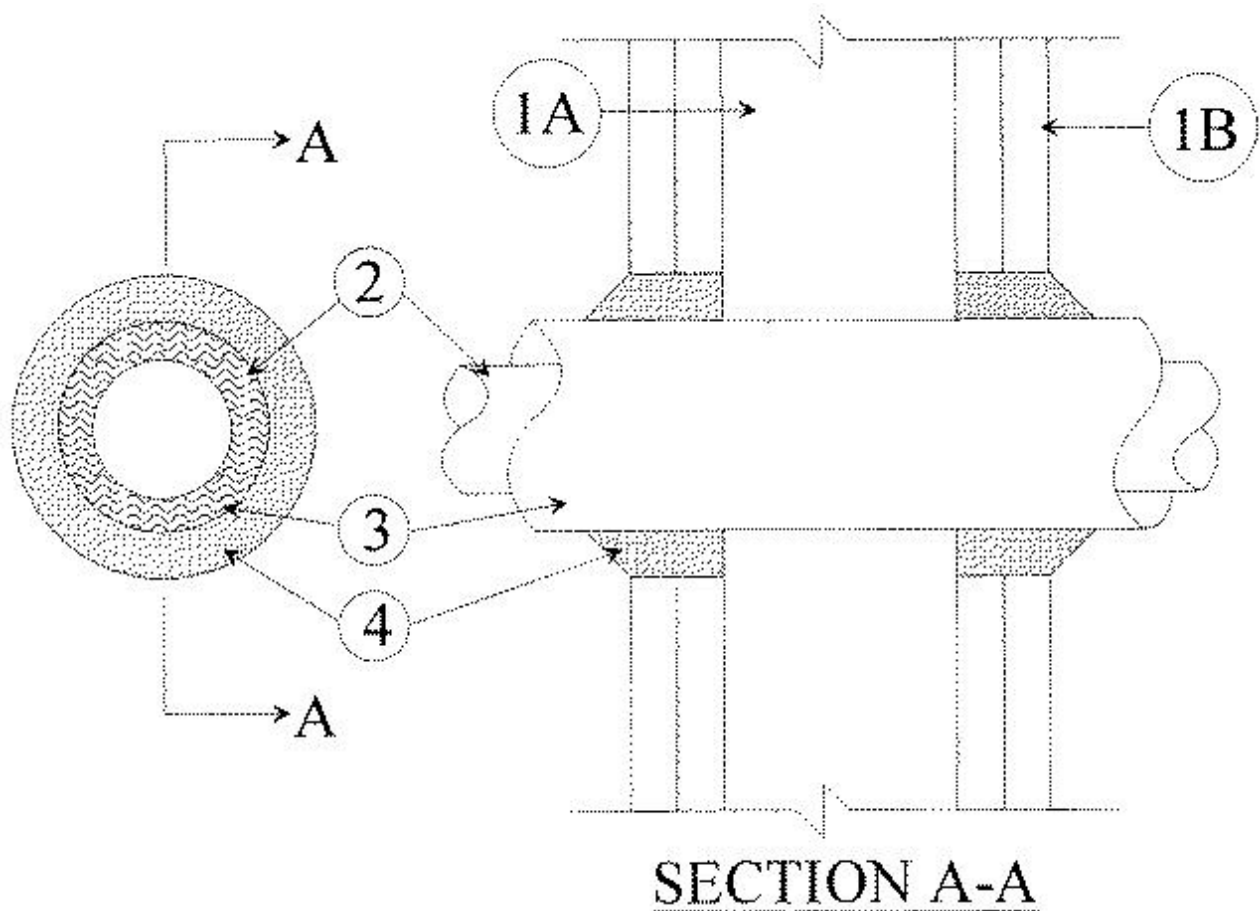
See General Information for Through-penetration Firestop Systems

System No. W-L-5031

August 19, 1997

F Rating — 1 and 2 Hr (See Item 1B)

T Rating — 1/2 Hr



1. **Wall Assembly** — The 1 or 2 h fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.

B. **Gypsum Board*** — 1/2 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 5-5/8 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through-Penetrants** — One metallic pipe or tubing centered within the firestop system. Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:

A. **Steel Pipe** — Nom 3 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

B. **Copper Pipe** — Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.

C. **Copper Tubing** — Nom 3 in. diam (or smaller) Type M (or heavier) copper tube.

3. **Pipe Covering*** — One of the following types of pipe coverings shall be used:

A. **Pipe and Equipment Covering — Materials*** — Nom 1 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. A nom annular space of 1/4 in. is required within the firestop system.

See **Pipe and Equipment Covering Materials** — (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

B. **Pipe Covering Materials*** — Nom 1 in. thick unfaced mineral fiber pipe insulation having a nom density of 3.5 pcf (or heavier) and sized to the outside diam of pipe or tube. Pipe insulation secured with min 8 AWG steel wire spaced max 12 in. OC. A nom annular space of 1/4 in. is required within the firestop system.

INDUSTRIAL INSULATION GROUP L L C — High Temperature Pipe Insulation 1200, High Temperature Pipe Insulation BWT or High Temperature Pipe Insulation Thermaloc

C. **Sheathing Material*** — (Not Shown) — Used in conjunction with Item 3B. Foil-scrim-kraft or all service jacket material shall be wrapped around the outer circumference of the pipe insulation (Item 3B) with the kraft side exposed. Longitudinal joints and transverse joints sealed with metal fasteners or with butt tape.

See **Sheathing Materials** (BVDV) category in the Building Materials Directory for names of manufacturers. Any sheathing material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

4. Fill, Void or Cavity Material* — Caulk — In 2 h fire-rated assemblies, min 1 in. thickness of fill material applied within the annulus on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating item.

In 1 h fire-rated assemblies, min 1/2 in. thickness of fill material applied within annulus on both surfaces of wall. Additional fill material to be installed such that a min 3/4 in. crown is formed the penetrating item and lapping 1 in. beyond the periphery of the opening.

A/D FIRE PROTECTION SYSTEMS INC — A/D FireBarrier Silicone

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 1997-08-19

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