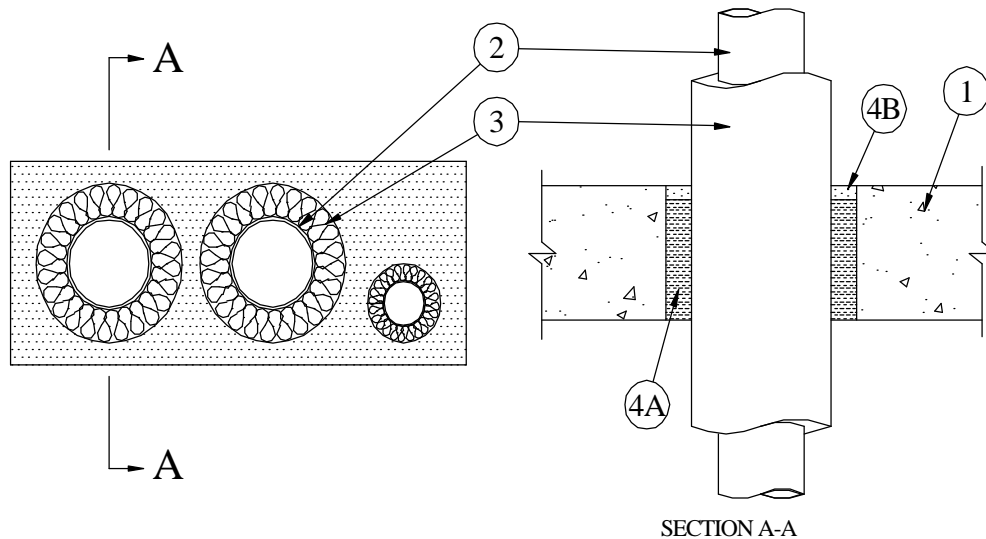


System No. C-AJ-5239

April 10, 2003
F Rating — 3 Hr
T Rating — 3/4 Hr
(UL/cUL)



1. **Floor or Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf (1600-2400 kg/cu meter)) concrete floor or min 4-3/4 in. (121 mm) thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening is 96 sq in. (619 sq cm) with max dimension of 16 in. (406 mm).

See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Through-Penetrants** — One or more pipes or tubing to be installed within the opening. The annular space between pipes or tubing and the periphery of the opening shall be min 1/2 in. (13 mm) to max 3 in. (76 mm). The annular space between the pipes or tubing shall be min 1 in. (25 mm) to max 1-3/16 in. (30 mm). Pipes or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - A. **Steel Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. **Iron Pipe** — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
 - C. **Copper Tubing** — Nom 3 in. (76 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - D. **Copper Pipe** — Nom 3 in. (76 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. **Pipe Coverings*** — One of the following types of pipe coverings shall be installed on each penetrant in the opening:

- A. **Pipe and Equipment Covering Materials*** — Nom 1 in. (25 mm) thick hollow cylindrical heavy density (min 3.5 pcf (56.1 kg/cu meter)) 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.

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. **Tube Insulation - Plastics+** — Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The max size of penetrants that can be used with this insulation is 2 in. diam for penetrants A and B and 1 in. diam for penetrants C and D.

See **Plastics+** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

4. **Firestop System** — The firestop system shall consist of the following:
 - A. **Packing Material** — Min 4-1/4 in. (108 mm) thickness of min 4 pcf (64.1 kg/cu meter) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
 - B. **Fill, Void or Cavity Material* - Sealant** — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall assembly.

TREMCO INC — Fyre-Sil and Fyre-Sil S.L. (floors only)

+Bearing the UL Recognized Component Mark

*Bearing the UL Classification Mark



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