

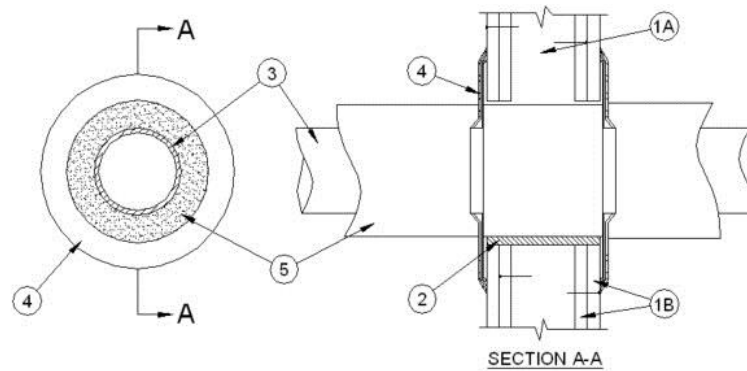
Through-penetration Firestop Systems

System No. W-J-5142

June 24, 2008

F Rating — 2 Hr

T Ratings — 1 and 1-1/2 Hr (See Item 2)



1. **Wall Assembly** — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 18-5/16 in. (465 mm). The diam of the opening shall be min 1 in. (25 mm) to max 3 in. (76 mm) larger than the outside diam of pipe covering (see Item 3).

See **Concrete Blocks (CAZT)** in Volume 1 of the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants** — One metallic pipe or tube installed concentrically or eccentrically within the firestop system. Pipe or tube to be rigidly supported on both sides of the wall. The following types and sizes of through penetrants may be used:

- A. **Steel Pipe** — Nom 12 in. (305 mm) diam (or smaller) Schedule 30 (or heavier) steel pipe.
- B. **Iron Pipe** — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
- C. **Copper Tubing** — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
- D. **Copper Pipe** — Nom 6 in. diam (152 mm) (or smaller) Regular (or heavier) copper pipe.

The T Rating is 1 hr when copper penetrant is used. The T Rating is 1-1/2 hr when steel or iron penetrant is used.

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

- A. **Pipe and Equipment Covering Materials*** — Nom 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) 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 butt tape supplied with the product. The annular space between the insulated through penetrant and the periphery of the opening shall be min 0 in. (0 mm, point contact) to max 1-9/16 in. (40 mm).

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 and Equipment Covering Materials* — Nom 2 in. (51 mm) thick unfaced mineral fiber pipe insulation having a min density of 3.5 pcf (56 kg/m³) and sized to the outside diam of the pipe or tube. Pipe insulation secured with min 18 AWG steel wire spaced 12 in. (305 mm) OC. The annular space between insulated penetrating item and the periphery of the through opening shall be min 0 in. (0 mm, point contact) to max 1-9/16 in. (40 mm).

C. Sheathing Material* — 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 and transverse joints sealed with metal fasteners or 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. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Nom 1 in. (25 mm) foam backer rod firmly packed into the opening as a permanent form to prevent leakage of fill material during installation. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material*- Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with each surface of wall. At point contact location, a min 3/8 in. (10 mm) bead of fill material shall be applied to the wall/pipe covering interface on both surfaces of the wall.

ACCUMETRIC L L C — Boss 816

*Bearing the UL Classification Mark