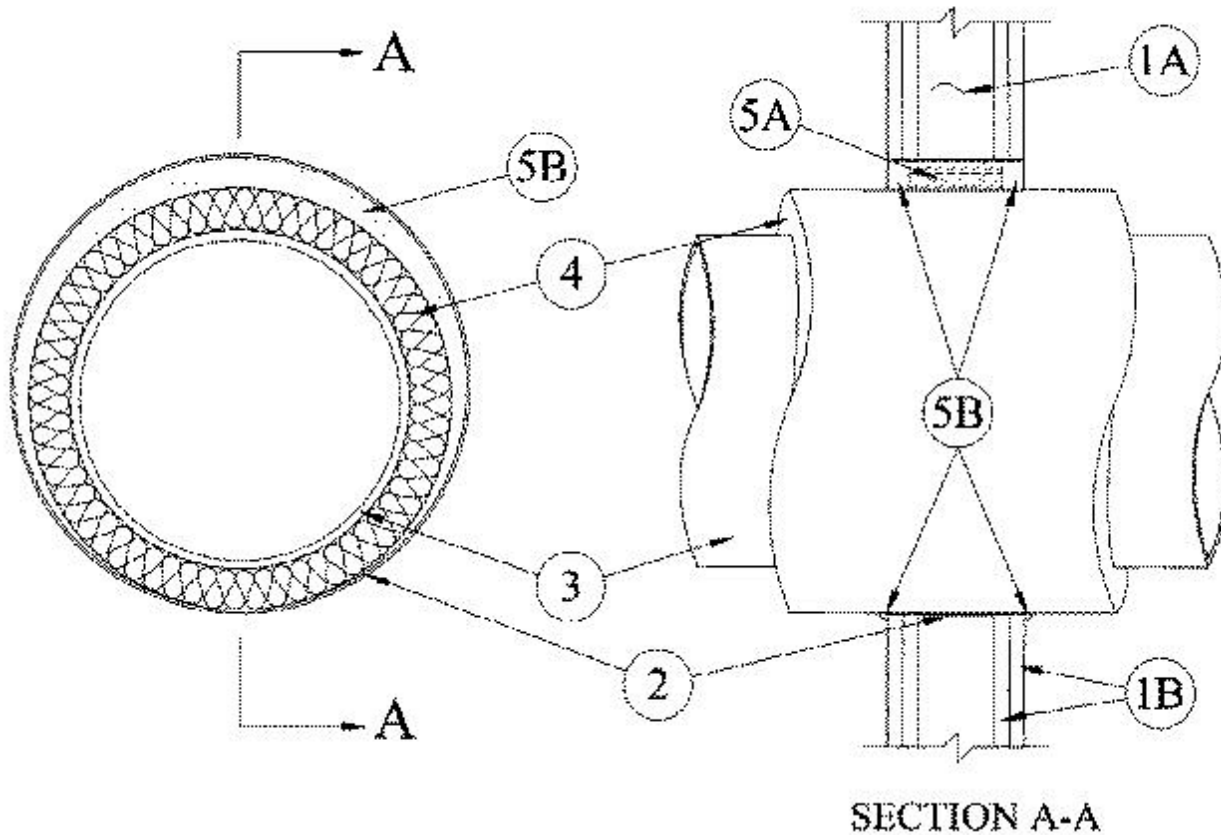


System No. W-L-5093

May 13, 2004

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 1, 1-1/2 and 2 Hr (See Item 4)



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

A. Studs — Wall framing shall consist of either wood or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-1/2 in. wide and spaced max 24 in. OC.

B. Gypsum Board* — Min 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers and orientation shall be as specified in the individual U300 or U400 Wall and Partition Design. Max diam of opening is 16-1/4 in.

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

2. Steel Wire Mesh — Cylindrical sleeve fabricated from No. 8 steel wire mesh and having a min 1 in. lap along the longitudinal seam. Length of steel mesh to be equal to thickness of wall. Steel wire mesh to be formed to fit periphery of through opening.

2A. Metallic Sleeve — (Optional) — Cylindrical sleeve fabricated from min No. 26 gauge galv sheet steel and having a min 1 in. overlap along the longitudinal seam. Ends of sleeve to be flush with or extend a max 1 in. beyond each surface of wall.

3. **Through Penetrants** — One metallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe 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 10 in. diam (or smaller) Schedule 40 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 10 in. diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing** — Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

D. **Copper Pipe** — Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

4. **Pipe Covering*** — Nom 1-1/2 or 2 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. The annular space between insulated pipe and periphery of opening shall be min 0 in. (point contact) to max 1-5/8 in. **T Rating is 1 hr when either 1-1/2 or 2 in. thick pipe covering is used in 1 hr fire rated walls. T Rating is 2 and 1-1/2 hr when 1-1/2 and 2 in. thick pipe covering, respectively, is used.**

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.

5. **Firestop System** — The firestop system shall consist of the following:

A. **Packing Material** — Min 3-3/4 or 5 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form for 1 or 2 hr fire rated walls, respectively . 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* — Caulk** — Min 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At point contact location, a min 1/4 in. diam bead of fill material shall be applied to the wall/pipe covering interface on both surfaces of the wall.

RECTORSEAL — Biostop 500+ Caulk

*Bearing the UL Classification Mark