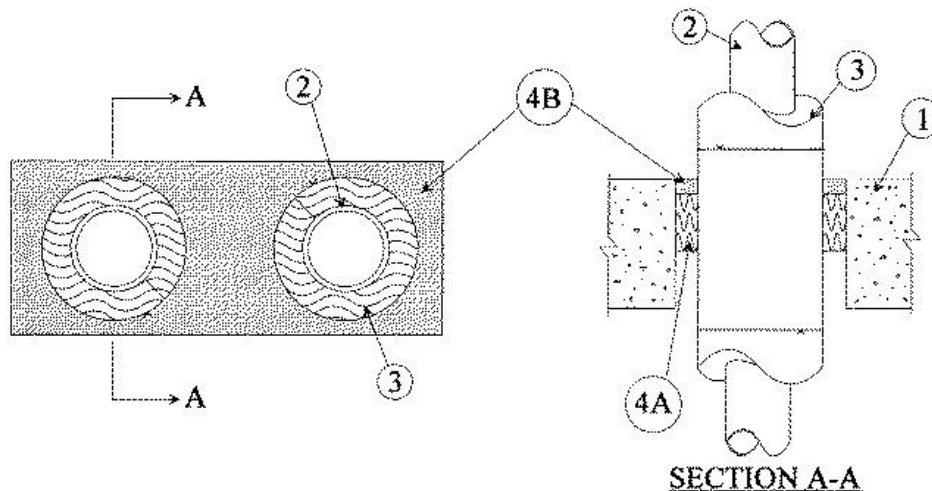


F Rating — 3 Hr  
T Rating — 1 Hr



1. **Floor or Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks**\*. Max area of opening is 96 sq in. with max dimension of 16 in. See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Copper Tubing** — Nom 3 in. diam (or smaller) Type M (or heavier) copper tube. Copper tubing to be rigidly supported on both sides of floor or wall assembly.

3. **Pipe Covering Materials\*** — Nom 1 in. thick unfaced mineral fiber pipe insulation having a nom density of 10.0 pcf (or heavier) sized to the outside diam of pipe or tube. Pipe insulation secured with min 18 AWG steel wire spaced max 6 in. OC and 3 in. from each side of butted seams. A clearance of min 1 in. to max of 2-1/4 in. is required between adjacent insulated copper tubes or pipes within the firestop system. An annular space of min 1/2 in. to max of 2-1/4 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

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

A. **Packing Material** — Min 2 in. thickness of min 4 pcf 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\*** — **Caulk** — Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.

**RECTORSEAL** — [Metacaulk 950](#)

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

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