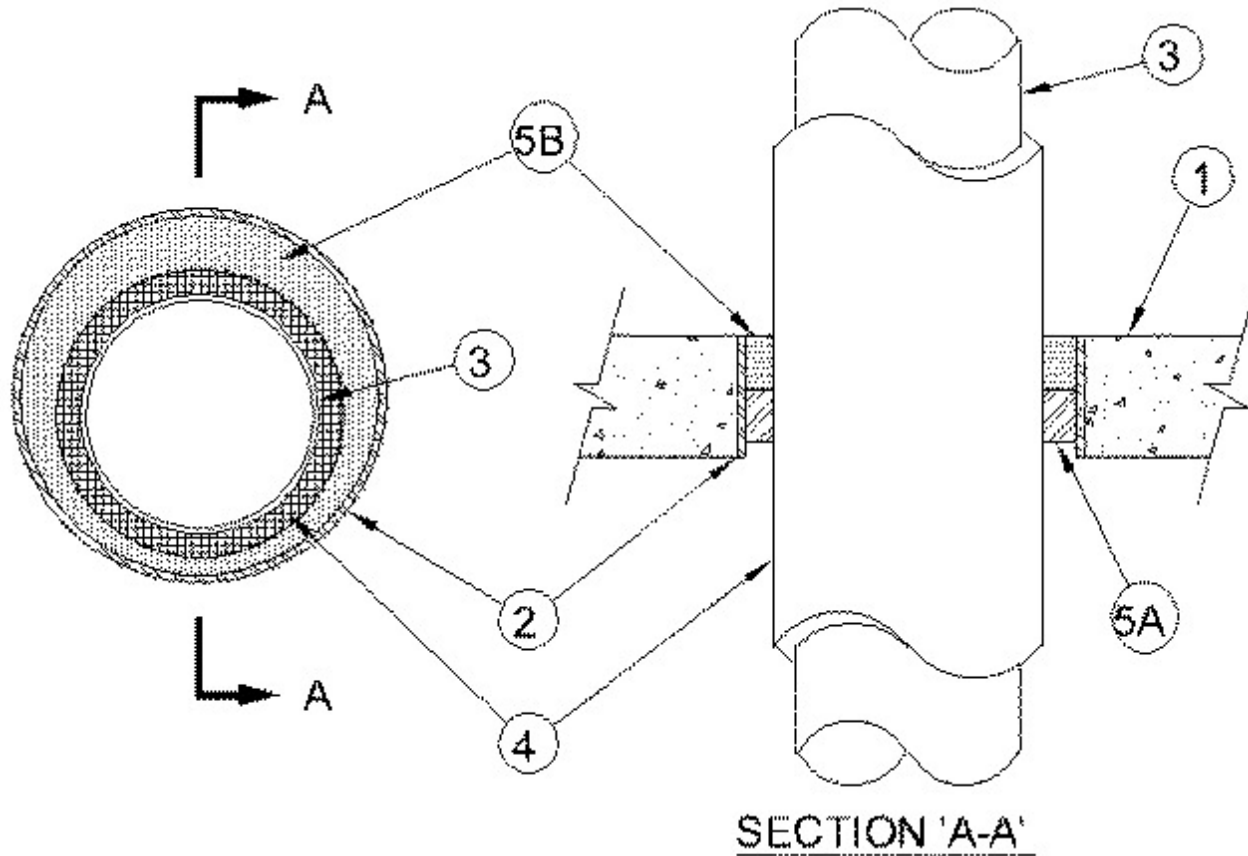


System No. C-AJ-5222

October 25, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 3/4 and 1 Hr (See Item 5)	FT Rating — 3/4 and 1 Hr (See Item 5)
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating — 3/4 and 1 Hr (See Item 5)



1. **Floor or Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced light weight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete floor or min 6 in. thick reinforced light weight or normal weight concrete wall. Floor may also be constructed of any min 6 in. thick UL Classified hollow core **Precast Concrete Units***. When precast concrete units are used, the max diam of opening is 7 in. Wall may also be constructed of any UL Classified Concrete Units*. Max diam of opening is 29-1/2 in. (749 mm).

See **Concrete Blocks (CAZT)** and **Precast Concrete Units (CFTV)** categories in the Fire Resistance Directory for names of manufacturers.

2. **Metallic Sleeve** — (optional) - Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces.

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 24 in. (610 mm) diam (or smaller) Schedule 20 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 24 in. (610 mm) diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing** — Nom 4 or 6 in. (102 or 152 mm) diam (or smaller) Type L (or heavier) copper tubing. See table below.

D. **Copper Pipe** — Nom 4 or 6 in. (102 or 152 mm) diam (or smaller) Regular (or heavier) copper pipe. See table below.

4. **Pipe Covering*** — Nom 2 in. (51 mm) thick hollow cylindrical glass fiber units, of min 4.5 pcf (72 kg/m³) density, 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 the opening is specified in the table below.

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 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation or nom 1 in. diam foam backer rod (see table below) firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall to accommodate the required thickness of fill material manufactured by:

B. **Fill, Void, or Cavity Materials* - Sealant** — Min 1, 1-3/4 or 2 in. (25, 44 or 51 mm) thickness (see table below) of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.

Type of Pipe	Nom Pipe Diam, in. (mm)	Annular Space, in. (mm)	Type of Sealant	Type of Packing Material	Thickness of Sealant, in. (mm)	F Rating Hr.	T Rating Hr.
Steel and Iron Pipe	24 (610)	5/8 to 1-1/4 (16 to 32)	FS1900, Metacaulk 1000, Metacaulk 350i, Biostop 350i or Biostop 500+	Mineral Wool	2 (51)	2	3/4
Copper Tube and Pipe	4 (102)	5/8 to 1-1/4 (16 to 32)	FS1900, Metacaulk 1000, Metacaulk 350i, Biostop 350i or Biostop 500+	Mineral Wool	2 (51)	2	3/4
Steel and Iron Pipe	24 (610)	5/8 to 1-1/4 (16 to 32)	FS900+, FlameSafe FS 1900, Metacaulk MC 150+, Metacaulk 1000, Metacaulk 350i, Biostop BF 150+, Biostop 350i or Biostop 500+	Mineral Wool	2 (51)	2	1
Copper Tube and	6 (152)	5/8 to 1-1/2 (16 to	FS900+, FlameSafe FS 1900,	Mineral Wool	1 (25)	2	1

Pipe		38)	Metacaulk MC 150+, Metacaulk 1000, Metacaulk 350i, Biostop BF 150+, Biostop 350i or Biostop 500+				
Steel and Iron Pipe	12 (203)	5/8 to 1-1/2 (16 to 38)	FS900+, FlameSafe FS 1900, Metacaulk MC 150+, Metacaulk 1000, Metacaulk 350i, Biostop BF 150+, Biostop 350i or Biostop 500+	Mineral Wool	1 (25)	2	1
Steel and Iron Pipe	12 (203)	1/2 to 3/4 (13 to 19)	FS1900, Metacaulk 1000, Metacaulk 350i, Biostop 350i or Biostop 500+	Foam Backer Rod	1-3/4 (44)	2	3/4

RECTORSEAL — FS900+, FlameSafe FS 1900, Metacaulk MC 150+, Metacaulk 1000, Metacaulk 350i, Biostop BF 150+, Biostop 350i or Biostop 500+

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