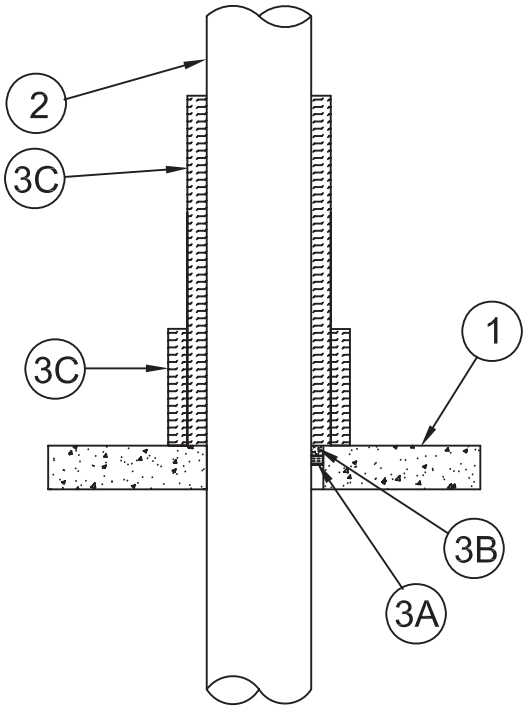
System No. F-A-1057

August 18, 2009
F Rating – 2 Hr
T Rating – 2 Hr
L Rating at Ambient – 2 CFM/sq ft
L Rating at 400°F – Less than 1 CFM/sq ft
W Rating – Class 1 (See Item 3)



SECTION A-A

1. **Floor Assembly** – Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. As an alternate, any min 2 hr fire rated D700, D800 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory having a min 2-1/2 in. (64 mm) thickness of lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete topping over the steel deck may be used. Max diam of opening is 12-3/4 in. (324 mm).

1A. **Steel Sleeve** – (Optional, Not Shown) – Nom 12 in. (305 mm) diam (or smaller) sleeve fabricated from nom 0.028 in. (0.71 mm) thick galv steel cast or grouted into floor assembly flush with floor surfaces.

2. **Through-Penetrant** – One metallic pipe or tubing installed concentrically or eccentrically within opening. Annular space between penetrant and periphery of opening shall be min of 0 in. (0 mm) (point contact) to max 2 in. (51 mm). Penetrant to be rigidly supported on both sides of floor assembly. The following types and sizes of penetrants may be used:
   A. **Steel Pipe** – Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe** – Nom 10 in. (254 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Copper Tubing** – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   D. **Copper Pipe** – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
   E. **Conduit** – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.

3. **Firestop System** – The details of the firestop system shall be as follows:
   A. **Packing Material** – Min 1 in. (25 mm) thickness of min 4 pcf (64 kg/m^3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Materials*** – **Caulk, Sealant or Putty** – Min 1 in. (25 mm) thickness of caulk or putty applied within the annulus, flush with top surface of floor.

      3M COMPANY – CP 25WB+ caulk, FB-3000 WT sealant or MP+ putty
      (Note: W Rating applies only when FB-3000 WT is used.)
   C. **Duct Wrap Material*** – Nom 2 in. (51 mm) thick duct wrap tightly wrapped around penetrant to extend 36 in. (914 mm) above floor. An additional layer of nom 2 in. (51 mm) thick duct wrap tightly wrapped around the first layer of duct wrap to extend 12 in. (305 mm) (914 mm) above floor. All longitudinal seams of both layers of duct wrap are sealed with foil tape.

      3M COMPANY – Fire Barrier Duct Wrap 20A, 3M Fire Barrier Duct Wrap 615, 3M Fire Barrier Duct Wrap 615+

*Bearing the UL Classification Mark

This material was extracted and drawn by 3M Fire Protection Products from the 2009 edition of the UL Fire Resistance Directory. c UL us