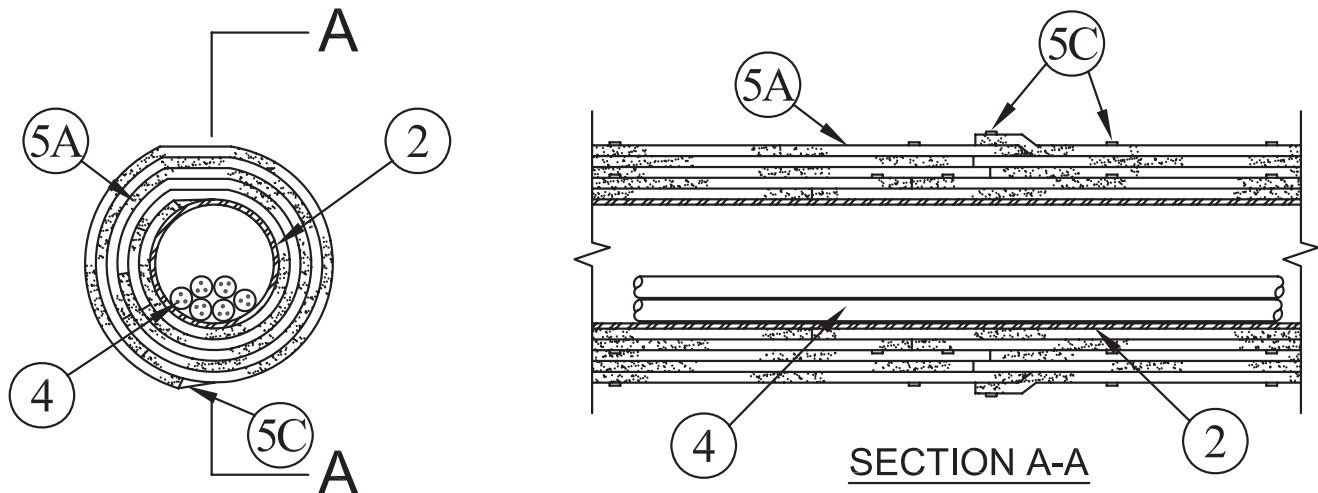


System No. 34

September 17, 2012
Fire Rating - 2Hr



1. **Wall or Floor Assembly** – (Not Shown) – Concrete or masonry wall or concrete floor having a fire rating equal to or greater than the fire rating of the electrical circuit protective system. Diam of opening in wall or floor through which conduit passes is to be max 1-1/2 in. (38 mm) larger than the outside diam of the conduit. Conduit installed eccentrically or concentrically in the opening with a min 0 in. (point contact) to max 3/4 in. (19 mm) annular space. Through opening in wall or floor to be firestopped prior to installation of the electrical circuit protective system using min 4 pcf (64 kg/m³) mineral wool batt packing material throughout the thickness of the floor or wall except for a recess at each surface to accommodate the caulk fill material (Item 5D). A min 1/2 in. (13 mm) depth of caulk fill material (Item 5D) is required to be installed in the annular space flush with each surface of the floor or wall assembly. The perimeter of the firestopped through opening shall be within the outer bounds of the electrical circuit protective system.
2. **Steel Conduit** – Nominal 4 in. (102 mm) to 6 in. (152 mm) Trade Size rigid steel conduit. Conduit shall be installed as a complete system in accordance with all provisions of the current National Electrical Code.
3. **Conduit Supports** – (Not Shown) – Conduit system shall be supported by steel pipe hangers in conjunction with min 3/8 in. (10 mm) diameter threaded steel rod.
4. **Cables** – Min No. 16 AWG jacketed multi-conductor cables and/or min No. 12 AWG single-conductor copper power cables. Cables to be installed in conduit in accordance with all provisions of the current National Electrical Code.
5. **Electrical Circuit Protective System** – The electrical circuit protective system consists of a mat wrap, foil tape, stainless steel banding straps and caulk. The system shall be installed in accordance with the detailed installation instruction manual supplied by the manufacturer of the **Electrical Circuit Protective Materials***. The details of the electrical circuit protective system are summarized below:
 - A. **Electrical Circuit Protective Materials* – Mat Wrap** – Nom 0.4 in. (10 mm) flexible sheet material supplied in 24 in. (610 mm) wide rolls. A min of four layers of mat wrap are required. Each layer of mat wrap installed by cutting to size and wrapping around the conduit and itself such that a min 2 in. (51 mm) overlap is present along the longitudinal seam. With the exception of the final layer of mat wrap, adjacent lengths of mat wrap in each layer to be installed with tightly-butted end seams. Successive layers of mat wrap installed in same manner with butted end seams offset min 2 in. (51 mm) from butted end seams of preceding layer. For final layer of mat wrap, adjacent lengths of mat wrap to overlap the preceding length by a min of 2 in. (51 mm). All seams in each layer of mat wrap to be sealed with foil tape (Item 5B). Mat wrap layers secured in place with stainless steel banding straps (Item 5C) on outermost layer.

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3M FIRE PROTECTION PRODUCTS – Type E-5A-4, E-54A or E-54C

- B. **Foil Tape** – (Not Shown) – 4 in. (102 mm) wide min 3 mil (0.08 mm) thick pressure-sensitive aluminum foil or stainless steel foil tape, supplied in rolls. Used to secure seams of mat wrap (Item 5A).
- C. **Steel Banding Straps** – Min 1/2 in. (13 mm) wide by 0.020 in. (0.5 mm) thick stainless steel straps used in conjunction with stainless steel crimp clips. Banding straps spaced max 8 in. (203 mm) OC to secure mat wrap layers.
- D. **Electrical Circuit Protective Materials* – Caulk** – (Not Shown) - Thick bead of caulk applied around entire perimeter of each layer of mat wrap at its interface with the firestop system and the floor or wall surface. Any joint between the adjacent layers of mat wrap that exceed 1/16 in. (1.6 mm) in width shall be filled with caulk. Each layer of E-Mat on the conduit supports abutting the mat wrap on the conduit shall also be sealed with caulk.

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3M FIRE PROTECTION PRODUCTS – CP 25WB+

*Bearing the UL Classification Mark

**Bearing the UL Listing Mark

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Flexible Wraps

Endothermic Mat

Electrical Circuit Protection

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