

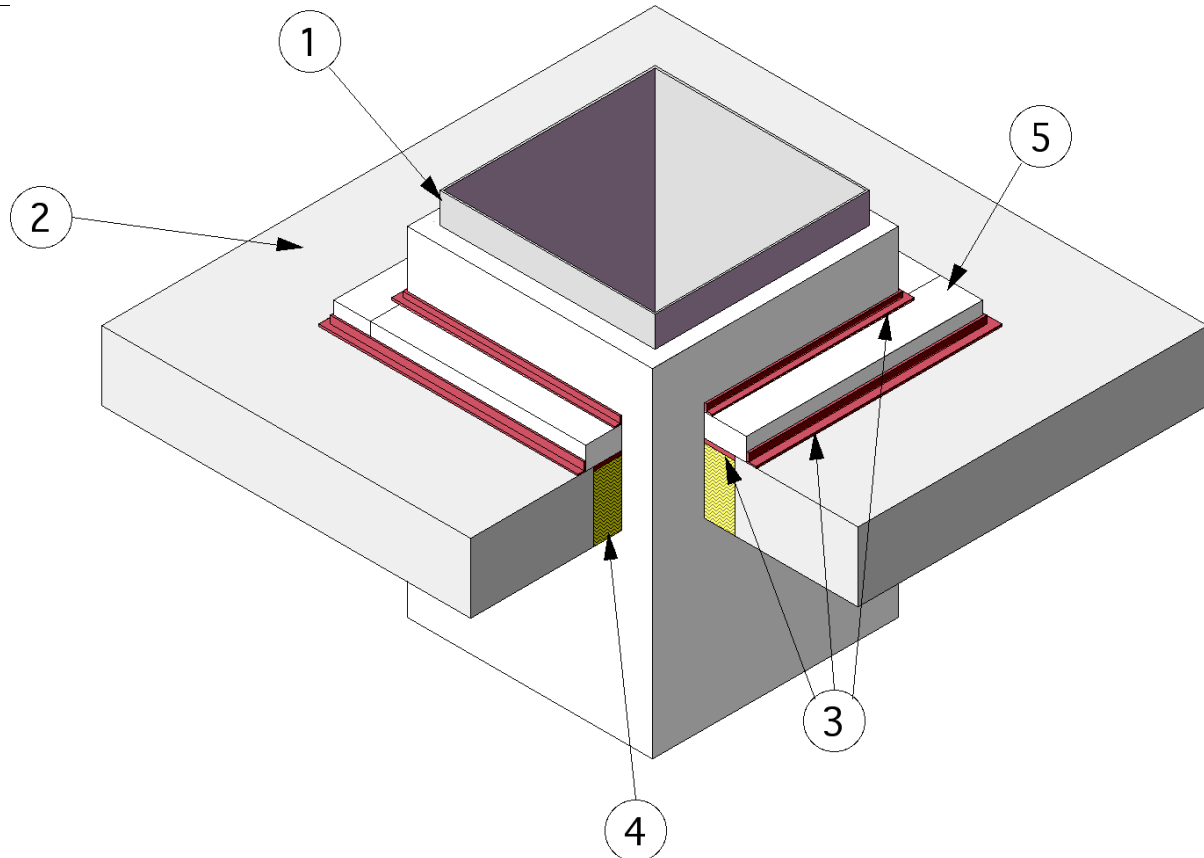
Design No. FS 545 F

**FIRE PENETRATION SEAL**

**Penetrating Item Grease Duct**

**T-Rating - 2 hr**

**F-Rating - 2 hr**



1. **PENETRATING ITEM:** A 16 GA continuously-welded, liquidtight grease duct system, with both horizontal and vertical shafts permitted, constructed of sheet steel with outside dimensions of max. 48-in. wide x max. 48-in. high, and protected as detailed in Design GD 515 R.
2. **FLOOR/CEILING ASSEMBLY:** The two-hour fire-rated floor/ceiling assembly consists of min. 4-1/2 in. thick normal weight (100-150 pcf) reinforced concrete. Create an opening in the floor/ceiling assembly measuring max. 58" x 58". Center the duct assembly in the opening so that the annular space is a max. 1-1/8 in. on all sides.
3. **FILL, VOID OR CAVITY MATERIAL:** Apply a min. 1/8-in. depth of sealant fill material to the packing material in the recess

around the top surface of the floor through-penetration opening. Overlap the sealant onto the surface on the floor/ceiling assembly and the penetrating item a min. of 1 in. After the cover strips are secured in place, apply a min. 1-in. overlap of sealant to the cover strips and the penetrating item. Also apply a min. 1-in. overlap of sealant to the cover strips and the floor/ceiling assembly.

**Listed Manufacturer:**

**Johns Manville Corporation**

Firestopping

Firestopping Sealant

Firetemp™ SI

4. **PACKING MATERIAL:** Fill the annular space with loose fill high temperature soluble

amorphous wool blanket packed to a min. density of 10 pcf. Recess the surface of packing material a min. 1/8 in. from the top surface of the floor/ceiling assembly.

**Listed Manufacturer:**

**Johns Manville Corporation**

Applied Fireproofing

Ceramic Blanket

Firetemp™ Wrap

5. COVER STRIPS: Cut strips of nom. 2-3/4-in. thick Super Firetemp™ L boards min. 3-in. wide by 53-in. long. Apply the cover strips over the sealant covered packing material after the sealant is completely dry.

**Listed Manufacturer:**

**Johns Manville Corporation**

Board Fireproofing

Mineral and Fiber Boards

Super Firetemp™ L

6. ATTACHMENTS: (Not Shown) Cement all joints together, between the penetrating item and the cover strips, with a compatible high temperature ceramic cement by coating both mating surfaces before joining. Use nom. 1/8-in. thick layer of compatible high temperature ceramic cement to mate Super Firetemp™ L boards together at butt splices. Coat Super Firetemp™ L board edges using approximately 1 gal of compatible high temperature ceramic cement per 50 lf. Compress mating boards tightly together so that high temperature ceramic cement continuously protrudes from butt joint. After cementing the cover strips in place secure the strips with min. 5-in. long drywall screws spaced a max. of 8-in. o. c.