

# CHAPTER 15

## FIRESTOP PROTECTION

### 1501.0 General Requirements.

**1501.1 Applicability.** Piping penetrations of required fire-resistance-rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance with the requirements of the Building Code, and this chapter.

### 1502.0 Plans and Specifications.

**1502.1** Plans and specifications shall indicate with sufficient detail how penetrations of fire-resistance-rated assemblies shall be firestopped prior to obtaining design approval.

### 1503.0 Installation.

**1503.1** Firestop materials shall be installed in accordance with this chapter, the Building Code, and the manufacturer's instructions.

### 1504.0 Combustible Piping Installations.

**1504.1** Combustible piping installations shall be protected in accordance with the appropriate fire resistance rating requirements in the Building Code that list the acceptable area, height, and type of construction for use in specific occupancies to assure compliance and integrity of the fire resistance rating prescribed.

**1504.2** When penetrating a fire-resistance-rated wall, partition, floor, floor-ceiling assembly, roof-ceiling assembly, or shaft enclosure, the fire resistance rating of the assembly shall be restored to its original rating.

**1504.3** Penetrations shall be protected by an approved penetration firestop system installed as tested in accordance with ASTM E119, ASTM E814, UL 263, UL 1479 or equivalent International Standard(s) approved by the Authority Having Jurisdiction with a positive pressure differential of not less than 0.25mm (0.01 in.) of water. Systems shall have an F rating of not less than 1 hour but not less than the required fire resistance rating of the assembly being penetrated. Systems protecting floor penetrations shall have a T rating of not less than 1 hour but not less than the required fire resistance rating of the floor being penetrated. Floor penetrations contained within the cavity of a wall at the location of the floor penetration do not require a T rating. No T rating shall be required for floor penetrations by piping that is not in direct contact with combustible material.

**1504.4** When piping penetrates a rated assembly, combustible piping shall not connect to non-combustible piping unless it can be demonstrated that the transition complies with the requirements of Section 1504.3.

**1504.5 Insulation and Coverings.** Insulation and coverings on or in the penetrating item shall not be permitted unless the specific insulating or covering material has been tested as part of the penetrating firestop system.

**1504.6 Sleeves.** Where sleeves are used, the sleeves should be securely fastened to the fire-resistance-rated assembly. The (inside) annular space between the sleeve and the penetrating item and the (outside) annular space between the sleeve and the fire-resistance-rated assembly shall be firestopped in accordance with the requirements for a sleeve penetrating item.

### 1505.0 Noncombustible Piping Installations.

**1505.1** Noncombustible piping installations shall be protected in accordance with the appropriate fire resistance rating requirements in the Building Code that lists the acceptable area, height, and type of construction for use in specific occupancies to ensure the compliance and integrity of the fire-resistance rating prescribed.

**1505.2** When penetrating a fire-resistance-rated wall, partition, floor, floor-ceiling assembly, roof-ceiling assembly, or shaft enclosure, the fire-resistance rating of the assembly shall be restored to its original rating.

#### Exceptions:

- (1) Concrete, mortar, or grout shall be permitted to be used to fill the annular spaces around cast-iron, copper, or steel piping that penetrates concrete or masonry fire-resistant-rated assemblies. The nominal diameter of the penetrating item shall not exceed 150mm (6 in.), and the opening size shall not exceed 929cm<sup>2</sup> (144 in.<sup>2</sup>).

The thickness of concrete, mortar, or grout should be the full thickness of the assembly or the thickness necessary to provide a fire-resistance rating not less than the required fire-resistance rating of the assembly penetrated, or

- (2) The material used to fill the annular space shall prevent the passage of flame and hot gases sufficient to ignite cotton waste for the time period equivalent to the fire-resistance