

PIPING SPECIFICATION

The following specification language may be inserted into the 15050 or other sleeve specifications in plumbing, mechanical, fire-protection, or electrical sections:

1.1 MECHANICAL SLEEVE SEALS for Exterior Walls and Floor Slab-on-grade

- A. Description: **Cast-in-place watertight device** for protecting penetrating objects from expansion and contraction of concrete. Factory-assembled for use in cast-in-place concrete floors and walls and consisting of two outer sleeves and a one-piece radial extended-flange waterstop gasket, with mid-body seal for embedment and sealing to concrete slab and continuous water seal extending to the penetrating pipe.
1. Basis-of-Design Product: Subject to compliance with requirements, provide HOLDRITE® HydroFlame™; Hydro Preseal, or a comparable product by:
 2. Outer Sleeves: attached to the mid-body seal forming an area with which to attach the device to the structural reinforcing rod determining the position of sleeve in the wall.
 3. Water Stop Mid-body Seal: with a radial extended flange consisting of one to three concentric raised rings which lock into the concrete as the concrete cures and over time contracts from the sleeve.

1.2 FIRE-RESISTANCE RATED SLEEVES

- A. Description: **Cast-in-place, factory-assembled, one piece watertight firestop sleeve** device for use in concrete floors to protect penetrating objects from expansion and contraction of concrete, thermal and seismic movement, and the passage of air, smoke and fire and hot gasses.
1. Basis-of-Design Product: Subject to compliance with requirements, provide HOLDRITE® HydroFlame™; Hydroflame Sleeve, or a comparable product by one of the following:
 - a. (insert comparable product here)
 2. Consists of an outer sleeve lined with an intumescent strip, and a radial extended flange attached to one end of the sleeve for fastening to concrete formwork.
 3. With a waterstop gasket and mid-body seal consisting of one to three concentric raised rings for embedment and sealing to the concrete slab.
- B. Description: **Cast-in-place, factory-assembled, one-piece watertight firestop sleeve** device for use in floors formed with steel decking to protect penetrating objects from expansion and contraction of concrete, thermal and seismic movement, and the passage of air, smoke and fire and hot gasses.
1. Basis-of-Design Product: Subject to compliance with requirements, provide HOLDRITE® HydroFlame™; Hydroflame CMD Metal Deck Device, or a comparable product by one of the following:

- a. (insert comparable product here)
 - 2. Consists of an outer sleeve lined with an intumescent strip, and wide outside wings attached to one end of the sleeve for fastening to metal deck concrete formwork and span deck corrugations.
 - 3. With a cone attached to the base for extending the device through the metal deck and a waterstop gasket and mid-body seal consisting of one to three concentric raised rings for embedment and sealing to the concrete slab.
 - 4. Provide up to a three-hour fire-resistance rated assembly when tested according to ASTM E 814, ANSI/UL 1479
- C. Description: **Cast-in-place, watertight tub box drain block out firestop device** for use in concrete floors formed with wood decking to protect penetrating objects from expansion and contraction of concrete, thermal and seismic movement, and the passage of air, smoke and fire and hot gasses.
- 1. Basis-of-Design Product: Subject to compliance with requirements, provide HOLDRITE® HydroFlame™; Hydroflame Tub Box, or a comparable product by one of the following:
 - a. (insert comparable product here)
 - 2. Consists of a reinforced polymer box containing a 2-1/2-inches (63.5 mm) thick polystyrene foam insert with an upper water seal consisting of absorbent material and a pitched water trough.
 - 3. With a sleeve lined with an intumescent strip, a radial extended flange attached to one end of the sleeve for fastening to concrete formwork.
 - 4. With two support legs each with a radial extended flange for balance and for fastening to concrete formwork, and a lower water-seal and radial extended flange attached to the lower end of the sleeve for fastening to concrete formwork and a waterstop gasket with three concentric raised rings for embedment and sealing to the concrete slab.
- D. Galvanized-Steel Sheet: 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint.
- E. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

NOTE: When 1.2D and 1.2E are selected contractor must provide a firestop system meeting ASTM E-814 and UL/ANSI 1479 for an hourly rating equal to the hourly rating of the floor being penetrated.