

**1704.11 Vertical masonry foundation elements.** *Special inspection* shall be performed in accordance with Section 1704.5 for vertical masonry foundation elements.

**1704.12 Sprayed fire-resistant materials.** *Special inspections* for sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be in accordance with Sections 1704.12.1 through 1704.12.6. *Special inspections* shall be based on the fire-resistance design as designated in the *approved construction documents*. The tests set forth in this section shall be based on samplings from specific floor, roof and wall assemblies and structural members. *Special inspections* shall be performed after the rough installation of electrical, automatic sprinkler, mechanical and plumbing systems and suspension systems for ceilings, where applicable.

**1704.12.1 Physical and visual tests.** The *special inspections* shall include the following tests and observations to demonstrate compliance with the listing and the fire-resistance rating:

1. Condition of substrates.
2. Thickness of application.
3. Density in pounds per cubic foot ( $\text{kg/m}^3$ ).
4. Bond strength adhesion/cohesion.
5. Condition of finished application.

**1704.12.2 Structural member surface conditions.** The surfaces shall be prepared in accordance with the *approved* fire-resistance design and the written instructions of *approved* manufacturers. The prepared surface of structural members to be sprayed shall be inspected before the application of the sprayed fire-resistant material.

**1704.12.3 Application.** The substrate shall have a minimum ambient temperature before and after application as specified in the written instructions of *approved* manufacturers. The area for application shall be ventilated during and after application as required by the written instructions of *approved* manufacturers.

**1704.12.4 Thickness.** No more than 10 percent of the thickness measurements of the sprayed fire-resistant materials applied to floor, roof and wall assemblies and structural members shall be less than the thickness required by the *approved* fire-resistance design, but in no case less than the minimum allowable thickness required by Section 1704.12.4.1.

**1704.12.4.1 Minimum allowable thickness.** For design thicknesses 1 inch (25 mm) or greater, the minimum allowable individual thickness shall be the design thickness minus  $\frac{1}{4}$  inch (6.4 mm). For design thicknesses less than 1 inch (25 mm), the minimum allowable individual thickness shall be the design thickness minus 25 percent. Thickness shall be determined in accordance with ASTM E 605. Samples of the sprayed fire-resistant materials shall be selected in accordance with Sections 1704.12.4.2 and 1704.12.4.3.

**1704.12.4.2 Floor, roof and wall assemblies.** The thickness of the sprayed fire-resistant material applied to floor, roof and wall assemblies shall be determined in accordance with ASTM E 605, making not less than four measurements for each 1,000 square feet ( $93 \text{ m}^2$ ) of the sprayed area in each *story* or portion thereof.