We have an inspector who is insisting the one-inch liner panels in a shaftwall be taped or fire-caulked at the horizontal joints. He has a rated design that does not say specifically to do this, but it doesn’t say not to. What is the necessary procedure?

According to the Gypsum Association, none of the shaftwall designs in their Fire Resistance Design Manual, GA 600, is tested with those joints taped. If they were, the taping requirements would be spelled out. According to the test lab, only the outer layer of the finished side requires taping and joint treatment on the joints and nail heads.

I am looking for a floor/ceiling assembly comprised of cold formed steel floor joists, a portland cement plaster over expanded metal lath ceiling, with a plywood floor that has a one-hour fire rating. Do you know of a tested assembly?

I have looked through our documents and those of other associations, including UL. I also called the tech guy at one of the metal lath manufacturers and finally the tech services department of a steel framing manufacturer. Apparently no test has been run on that particular combination. I found one design depicting the same assembly using gypsum board for the ceiling, and, in some jurisdictions, you may substitute plaster for gypsum board—7/8 inch three-coat plaster generally gets a one-hour rating. (Best to get the approval of the code official first though.)

After installing a whole bunch of steel doors in several partitions constructed of gypsum board over 25-gauge cold-formed steel framing, which we have done countless times in the past, we discovered that the plans call for 18 gauge studs at the door openings. Will the 25-gauge studs be okay, and in whose judgment?

This one took some serious chasing of the tail to get a very anti-climactic answer.

According to several of the steel framing manufacturers I talked with, 25-gauge studs are “OK,” but it really depends on how much force is exerted on the partition when the door closes. To be sure, I checked with a couple of the steel framing associations, which had a similar opinion but recommended that I check with the building code body of jurisdiction. I did and was told, of course, that in this circumstance, the code body would refer back to the manufacturer’s specifications. (Note, according to the Steel Stud Manufacturers Association’s Right STUF, 25 gauge is now officially 0.0188 base metal thickness, and 18 is 0.0451 base metal thickness, but “gauge” is a lot easier to type than “base metal thickness.”)

In the second edition of AWCI’s Technical Manual 12A, Standard Practice for the Testing and Inspection of Field Applied Spray Fire-Resistive Materials; an Annotated Guide, it requires that when performing the adhesion/cohesion test, a 12-inch by 12-inch area be cut through to the steel before the testing is done. In the third edition, the requirement for cutting is no longer there. Was this inadvertently left out, or was this an intentional change, and, if so, why?

The change was intentional. According to one of the fireproofing manufacturers, it was decided that cutting through the material disturbed it enough to create a potential thermal short, and the requirement for the cutting was consequently removed in the third edition.

About the Author
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