“WACHUWANANO”

Q & A

“WACHUWANANO” is the feature that answers readers’ questions on technical aspects of the wall and ceiling industry. AWCI’s Technical Staff is available through this column to be your personal consulting firm and answer your specific technical questions.

If you need more information or more details to help you do your job better, send your questions to the AWCI Technical Staff, 1600 Cameron Street, Alexandria, VA 22314-2705, (703) 684-2924, Fax (703) 684-2935, and we’ll get back to you in an upcoming issue.

Q: We did a spray fireproofing job in a multi-story building. The inspector is following Technical Manual 12-A and has found a thickness deficiency on one of the secondary beams selected for inspection. As a result he has rejected that floor of the building. I need to know whether I can just respray the beam that he inspected and ask for a retest, or do I have to do more?

A: The inspection and testing procedures described in Technical Manual 12-A are based on the concept of using representative random sampling. What this means in this case is that the inspecting agency selected one primary and one secondary beam for testing with the understanding that the selected beams represent either all of the other beams on that floor, or for a floor whose area exceeds 10,000 sq ft, represents all of the other beams in a specific 10,000 sq ft area. If the tests on the representative beams pass, then the entire area represented is assumed to have passed. On the other hand if the test on either of the representative beams fails, the entire area represented fails.

To simply respray the specific beam that failed will, no doubt, solve the problem for that beam. Bear in mind, however, that we are dealing with a random sample. The inspector can select any beam in the represented area for his retest. He may not select the same beam tested the first time. You should inspect several other beams in the represented area for the property that failed to assure that the area will pass if the inspector decides to check a different beam.

This procedure of random sampling is based on the concept of statistical methods which use certain mathematical principles regarding probabilities and sampling methods. It is designed to avoid the older practice of testing every beam or every deck panel. Over the years, data collected in the field has shown that a single beam can be tested at random with a high degree of confidence that the other beams, sprayed at the same time, with the same materials, to the same thickness, would also pass. This is not a 100% guarantee that all beams will pass, only that a high degree of certainty exists. By the same token, there is no guarantee that all of the beams in the representative area are deficient just because one sample failed; however, there is a high degree of certainty that this would, in fact be the case.

When one sample fails to pass on one property, it does not necessarily mean that the entire area needs to be resprayed. What it does mean is that the entire area represented needs to be thoroughly inspected and those smaller areas or elements found to be deficient resprayed accordingly.

Standard Practice for the Testing and Inspection of Field Applied Sprayed Fire-Resistive Materials; an Annotated Guide (Technical Manual 12-A) is a publication of the Foundation of the Wall and Ceiling Industry, Inc. (FWCI). Additional information on this publication is available by calling FWCI at (703) 548-0374. ☐