

NOW: An Acceptable Procedure

Confidence, Quality in Application of Sprayed Fire Protection Materials Offered by New iaWCC Document

For more than two years, iaWCC Technical Subcommittee 4 (Sprayed Fireproofing) has been preparing for the association an inspection procedure for field applied sprayed fire protection materials.

Close liaison and direction was provided by Joe Feldner and Bob Whittle, co-chairmen of iaWCC's Technical Committee, because the need for a field inspection procedure has long been a prime requisite among architects, owners, and government authorities. Material manufacturers are under Underwriters Laboratories label service which provides rigid control at the manufacturing level of the tested materials.

But the field application, equally important, has been left to the applicator, experienced or otherwise, to provide the quality of application necessary.

Casual Checking

Field inspection has always been somewhat casually handled by either an architect's representative or the general contractor checking for required thickness and general uniformity. At the same time, equally important application features such as density and adhesion/cohesion of the sprayed materials became increasingly important.

The awareness of field installation's importance has increased in recent years. Field inspection by outside testing companies became a more common occurrence, while the lack of a standard testing procedure caused considerable confusion and contradiction.

ASTM's Subcommittee E 06.21 worked for several years to prepare a field inspection procedure along with a document covering laboratory material testing. So far, it has not produced an acceptable document.

Two years ago, the Sprayed Mineral Manufacturers Associa-

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tion, representing only two suppliers, published a field inspection procedure. But it was and remains unacceptable to iaWCC.

Now, iaWCC Technical Subcommittee 4 has completed the task of preparing an industry standard, and it will soon be made available by the iaWCC to contractors. The document was prepared by knowledgeable fire protection contractors working with such associate member manufacturers of sprayed fire resistive materials as United States Mineral Products, Sprayon Research, W.R. Grace Company, and Spraycraft Corporation.

What does this document do?

For contractors who have not been exposed yet to field inspection, it should be very beneficial because rigid fire inspection will soon be common in all areas. Following a practical rather than a theoretical approach, the iaWCC procedure will serve contractor protection as well as to upgrade quality standards of application.

Quicker Reporting

Many contractors doing large sprayed fire protection jobs have probably worried about "what happens if we have completed 15 floors and the general contractor calls to advise that some of the floors failed to pass inspection." To

make it worse, the contractor may not have known that testing was being carried out.

The iaWCC procedure now calls for the testing company to report simultaneously the findings to the owners or his representatives, the general contractor, and the fire protection contractor no later than one week after completion of one floor or 10,000 square feet.

Thus, the test area would still be available for correction.

To assure representative testing, the iaWCC procedure uses random sampling of areas that are preselected from the contract drawings.

Whereas previous testing procedures were ambiguous with individual testing companies applying their own interpretations, we feel the iaWCC procedure will clear the confusion. But contractors must be familiar with the procedure and its intent.

For example, in the past thickness was measured from the surface texture to the substrate, resulting in higher thickness readings. This made densities more difficult to achieve.

Should Coordinate

The key of the iaWCC document calls for measuring thickness and density as the average plane of the material, i.e., the average plane between crests and valleys. This can only be achieved by exerting enough pressure on the disc of the thickness gauge. As a word of caution, contractors will probably find that where they earlier achieved one inch in thickness, the new procedure will now result in less thickness — with correspondingly higher density.

The iaWCC document also calls for trained personnel, who are thoroughly familiar with the procedure's details, to conduct the testing.

Particularly in areas where field

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inspection may be somewhat new, the contractor should coordinate with the testing company to assure an understanding of the procedures. My own company's experience has taught me to work closely with testers as their continual testing can be of help to sprayers.

The iaWCC-developed Testing Procedure described here is now being printed and will be distributed to all members. For members wishing extra copies of the manual, the price is \$5 each; \$10 for non-members.

A contractor shouldn't hesitate to request a meeting with the testing company's representative prior to starting. At this meeting, he should review the procedures and designs being employed as well as to arrange scheduling of testing and reporting procedures.

I might also suggest that the foreman should, of course, check thickness application as well as density checking as the work

progresses. As mentioned, he should maintain close liaison with the testing company personnel.

Should the testing company report an area below requirement, it should not necessarily be accepted as fact. Those questioned areas should be checked with the contractor's own personnel and, if necessary, density cuts should be taken immediately adjacent to confirm or disprove the testing company's results.

Another important document item involves the owner's responsibility to ascertain that patching of damaged areas is restored. This is a MUST in assuring the sprayed fire protection system is completed according to standards.

That the iaWCC Technical Subcommittee 4 has been successful in completing the first joint contractor-manufacturer document in field inspection procedures can be attributed in large part to the excellent cooperation from the manufacturers in establishing a relationship between thickness and density in spray application.

Sprayon Research, Inc., has led the way with small scale testing at

U.L.I., and it has been reported that United States Mineral Products (CAFCO) plans to test in this direction. Hopefully, the results will prove that increased thickness will compensate for less than design densities within restricted parameters.

Such continued testing will be of great benefit to the industry and Technical Subcommittee 4 will watch these and other tests carefully as part of its periodical review of the iaWCC procedure document. Updating will be performed as required under the revision procedures.