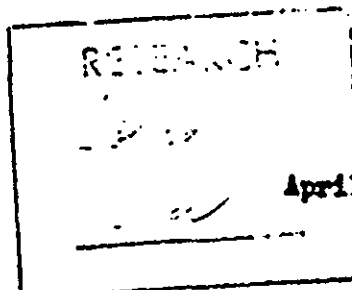


J. F. O'Rourke

F. M. Stumpf

Miscellaneous CAPCO Tests



April 18, 1962

Most of our laboratory tests resulting in Research Bulletins were on BLAZE-SHIELD such as deflection characteristics, corrosion resistance, etc. You requested that we provide test results for HEAT-SHIELD. Since we have no such test reports, we made arrangements with the International Testing Laboratories to conduct a series of tests which we felt would be applicable. Since most of the cost of the test is in set-up and not in testing, it was possible to test different products at very little extra cost. Therefore, tests were conducted on CAPCO BLAZE-, HEAT- and SOUND-SHIELD, and Linpet LN25.

Please find the original test reports which you may assign C-numbers and have the reports duplicated for distribution. The report on the competitive Linpet is not included because there was an error in reporting their density, and therefore the report is being revised.

All products were applied using normal application methods and densities which are as recommended. They were CAPCO BLAZE-SHIELD - 11.2 lbs./cubic foot, HEAT-SHIELD - 9.85, SOUND-SHIELD - 17.9, and Linpet approximately 9 lbs./cubic foot.

In the Moisture Absorption Test, specimens were maintained in a humidity chamber at 95% relative humidity and 120°F. for 96 hours. This is an extremely severe test and is as specified in Commercial Standards CS131-46. The maximum gain was for SOUND-SHIELD which was 3.02% by weight. This fairly insignificant when considering wood normally has a moisture content of around 8 - 10%. This test result has nothing to do with condensation, where under the proper conditions, the weight can more than double due to pick up of water.

The Corrosion Resistance Tests were also conducted according to Commercial Standards CS131-46 and are a duplication of the test we reported in Research Bulletin CR418, except that only cold rolled steel was used. These specimens were also maintained at 95% relative humidity at 120°F. for 96 hours and the steel protected with fibers cannot show greater corrosion than the unprotected steel. As indicated in their report, the unprotected steel showed heavy spots of corrosion throughout, while the steel protected with CAPCO showed no noticeable corrosive effect, and they therefore conclude it actually protects the metal from serious corrosive action. This concurs with the results from the Associated Testing Laboratories Corrosion Tests conducted in 1959.

A number of deflection tests were reported in our Research Bulletin CR372. This same type of test was not run because it would be excessive in costs, and although it may be very practical it is not conducted on as scientific a basis as the laboratory would like, and therefore only simple deflection tests were run. CAPCO 1" thick was applied 4" wide x 22" long to steel plates 4" x 24" x 10 ga. and were deflected by applying a concentrated load in the center until failure occurred. These results are extremely good since even the poorest HEAT-SHIELD required 2.5" of deflection per 22" of span or 1/11.4 of the span. It may be a little difficult to apply these results to what might happen at a metal building. However, it does point out that CAPCO, if properly applied, would take severe deflection.

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Mo to J.F.O'Rourke

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Subj: Miscellaneous CAPCO Tests

Dusting and flaking tests are currently in progress. This vibration test conducted is related to this problem. Kearsby and Mattison Company describe this Rotap method in their literature and request that it be specified in architectural specifications to eliminate blended products, which they claim will show a greater percentage of fall-out than with Limpet. Using their test method, the results indicate BLAZE-SHIELD without sealer with 1.0% fall-out as compared to Limpet with 1.2% fall-out. BLAZE-SHIELD with sealer and HEAT- and SOUND-SHIELD without sealer all were less than 1%.

We also conducted a series of Bond and Shear Strength tests. However, due to difficulty with their testing apparatus, erroneous results were obtained. We expect to repeat these tests.

Please advise if you would like our department to place this in a form of a Research Bulletin to be distributed.

FMS/ec

cc:

J. P. Verhalen
F. Chambers

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