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August 23, 1989

Mr. Jerry West
INSTEEL CONSTRUCTION SYSTEMS, INC.
2610 Sidney Lanier Drive
Brunswick, GA 31520

Dear Jerry:

Les Martin asked me to write to you to explain the letter I wrote to Dave Stevenson of Truss-Tech on June 7, 1985.

The calculations I made are based on results of a fire test sponsored by Truss-Tech at Warnock Hersey in 1985, and the exponential formula developed by the Bureau of Standards around 1942. The specimen used in the fire test had 1 1/4 in. of portland cement plaster (stucco) applied to each side of a Truss-Tech panel with a 2 inch layer of polyurethane insulation. The resulting 102-minute fire endurance was used as a basis for determining the thicknesses of stucco needed for a 2-hr fire endurance.

Apparently Covington sponsored a series of fire tests at Warnock Hersey. I have never had access to Covington's data so I am not sure if they achieved the 1-hr and 2-hr ratings based on fire tests, or if data from the fire tests were analyzed and the required thicknesses were obtained from "engineering studies."

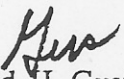
The calculations I made for Insteel were based on published data on fire endurance for various thicknesses of concrete. I modified the data for the fact that small aggregates are used (instead of the usual 3/4-in. maximum). I used the same exponential formula.

Perhaps the thickness of concrete can be reduced but results of a fire test will be needed to justify the reduction. If you decide to sponsor a fire test, I suggest that you consider using the Warnock Hersey lab in California.

Let me know if you have any questions.

Sincerely,

THE CONSULTING ENGINEERS GROUP, INC.


Armand H. Gustafarro
Consulting Engineer

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