Fire Safety: Research is Needed

Charles E. Peck, Vice President of Owens-Corning Fiberglas Corporation, a major producer of building materials, has challenged scientists to help those involved in fire safety efforts to understand where priorities ought to lie in the field of fire safety, and to conduct basic research which will help define current fire safety problems in their total context.

At an annual meeting of the American Association for the Advancement of Science in Boston, Peck told scientists that “producers can offer the public an almost infinite range of fire safety materials.

“But, amid the conflicting voices of middlemen, misconceptions about the real fire problems, and a lack of scientific knowledge on an increasingly complex subject, we are finding it difficult to determine exactly which types of materials will give the public the most efficient and economical solutions to current fire safety problems.”

Conflicting Voices

“One of the greatest difficulties materials producers face in the arena of fire safety,” Mr. Peck said, “is that we rarely have a chance to work with the public.”

“We must deal with architects and engineers,” says Mr. Peck, “who claim to speak for the building owners. But much of their work is done for developers who, in turn, are middlemen for the eventual owners.

“We must deal with interior designers who are employed by the users of the buildings. But the users who are the ultimate consuming public often merely rent the property.

“We must deal with fire insurance companies and building code regulators, fire marshals and city politicians.”

Each has a different idea about the materials that ought to be used.

But their judgements are often based on misconceptions about fire hazards.

High-Rise Myth

One major misconception concerns fire safety in high-rise buildings, Peck said.

“Although it is common to speak of a high rise fire problem, there has not been much of a problem in the United States to date,” said Mr. Peck, quoting from the Fact Sheet on High Rise Fires, published in 1974 by the National Bureau of Standards.

“In the decade 1962-1972, there were 12 fatalities per year in high rise building fires in the U.S. In that same 10-year period, there were 6,000 fatalities per year in residential fires.”

In fact, the Bureau of Standards reports, “the over-all risk of dying in a high rise fire is less than that of being struck by lightning.”

Studies conducted by the National Commission on Fire Prevention.

(Continued on Page 55)
FIRE:
(Continued from Page 35)

tion and Control show that residential fires account for about 70 per cent of annual one million building fires, 85 to 90 per cent of all fire deaths, and about 40 per cent of all property losses due to fire.

“Considering these fundamental facts,” Mr. Peck asked, “why has so much effort been expended the past few years in an attempt to deal with the high-rise fire problem, while very little has been done with respect to residential fire safety?”

Real Hazard

“The principle fire hazard in large buildings is their contents, not the products used to build them,” Mr. Peck told the scientists. In most large buildings, materials of construction make up only one per cent of the combustible fire load. The other 99 per cent includes furnishings, draperies and other working materials brought into the buildings.

When this fact is more widely recognized, he argued, more attention will likely be given to regulating the fire safety properties of building contents. “But it is unlikely that we will want to concentrate all our efforts there. We could build completely fire safe homes and offices by building furniture as well as structures out of materials such as steel, concrete or clay tiles. But I am sure that we would find these expensive and uncomfortable.”

“Once we begin to approach fire problems in their broadest perspective, the best safety measures may come in the form of systems that detect then control the fires once they occur and help get occupants out of the threatened areas in time.”

Fist steps

As the first step toward solving these problems, Mr. Peck said, “we need a valid data base to help us understand the complex fire problems we are facing.”

This information should then be disseminated to the middlemen who are making the actual decisions concerning regulation, design, manufacture, and installation of fire safety measures.

Peck noted that the Federal Fire Prevention and Control Act of 1974 has taken an important step in this direction since it assigns responsibility for the collection and dissemination of fire safety information to the National Fire Control and Prevention Agency. As producers, we welcome this initiative.”

Beyond the collection of a data base, Mr. Peck challenged scientists to conduct more basic research on fire safety. In doing this he recommended a focus on fire problems in residential housing rather than high rises, on fire detection and suppression systems, and on other means of reducing the costs of efficient fire safety.