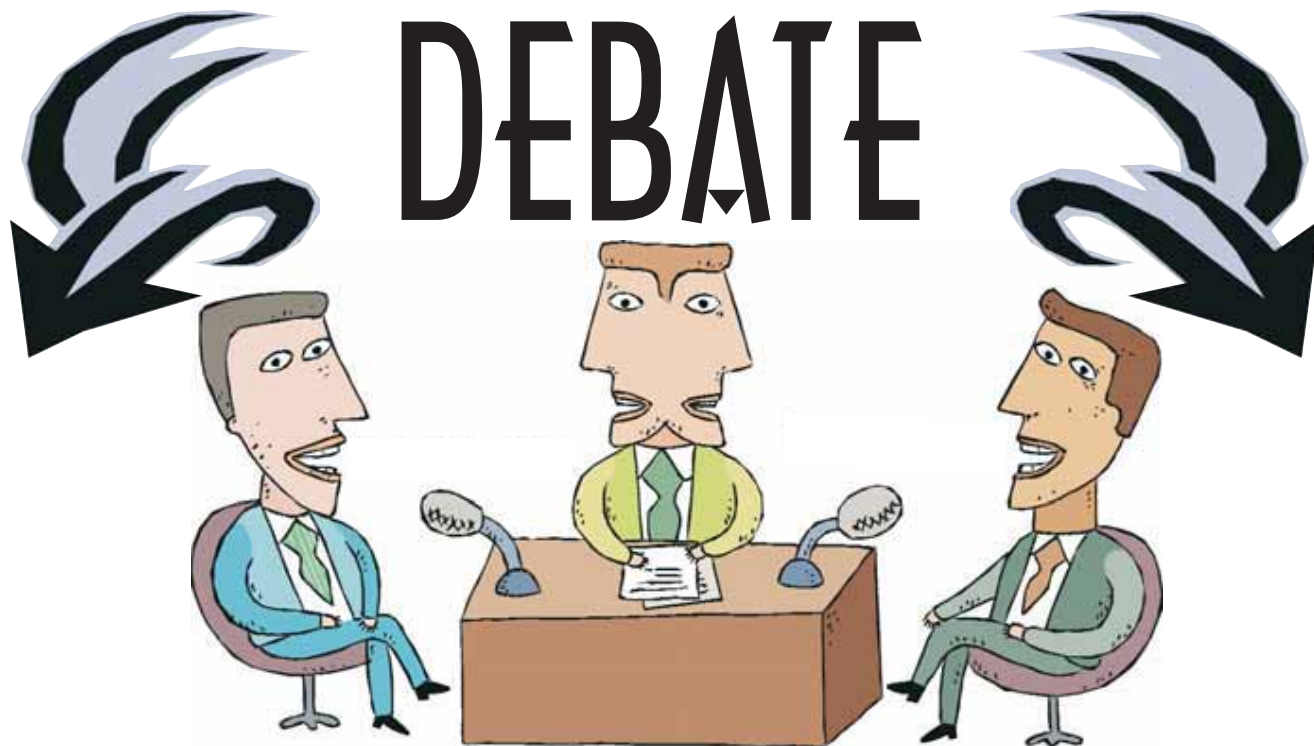


WIRED-GLASS DEBATE



Those For and Against Wired Glass Make Their Claims

Proponents of safety glazing, such as Bill O’Keeffe of O’Keeffe’s Inc., have attacked the wired-glass industry for producing products that they feel are unsafe to the public. But, the wired-glass manufacturers, such as Pilkington, disagree with these claims and say wired glass isn’t to blame for fatal accidents that may have occurred; instead they say non-

compliance with the codes or improper installations are the cause.

Which side is correct? O’Keeffe’s submitted an article to USGlass magazine which talks about what the company feels are some deficiencies with wired-glass products. We then asked Pilkington to voice their opinion on the flip side of the issue. So, hopefully, after reading these articles you will have some valuable info on both sides of this great wired-glass debate.

In Support of Safety Glazing Products

BY WILLIAM F. O'KEEFFE

A great debate has been brewing in this country for more than 20 years. How do we balance the need for affordable safety glass in our public areas—glass that offers both fire protection and personal impact safety? For me, this pursuit has been both personal and professional. Compared to the primary glass manufacturers, we are a relatively small U.S. architectural glazing manufacturer and contract glazier. Still, we have held a firm belief that it is possible to manufacture a variety of glazing products that meet the above challenges.

Obviously, the most heated debate within our industry has been between the wired glass manufacturers and the clear fire-rated glass makers. As the manufacturer of the first optically clear, wireless fire- and safety-rated glass ever produced in the United States, we strive to market products that do not compromise any aspect of safety. Our glazing products not only meet the fire standards but exceed the American National Standards Institute's (ANSI) safety standards as well as those set by the U.S. Consumer Product Safety Commission (CPSC) in 1977.

Fire and Safety Number One

We clearly have a vested interest in safe glazing products. But as we watched the foreign manufacturers from the sidelines as they were granted a temporary exemption that has now lasted 25 years, we had to ask ourselves, "Isn't it possible to manufacture a wired-glass product that meets or exceeds CPSC standards?"

As most of us in the glass business know, wired glass is commonly used in schools, colleges and most educational facilities, and is located in corridors, stairwells, gymnasiums and other areas where fire-resistive construction and vision are required. Although wired-glass meets the fire-rating criteria for view panels in fire assemblies, it is not classified as safety glazing by the CPSC under the 1977 U.S. Safety Glazing Standard because of the exemption.

Because of this "temporary exemption," foreign wired-glass manufacturers have been labeling products shipped to the United States as safety glazing using a lower voluntary consensus standard known as ANSI Z97.1. Unfortunately, the CPSC rejected this lower ANSI Z97.1 standard, having found it inadequate to protect children or adults and barely capable of protecting children under five years old.

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Fire Safety: The Real Debate

BY THOMAS S. ZAREMBA

For years now, O'Keeffe's Inc. (a.k.a. SAFTI) has been using the press to attack the use of wired glass. That is not too surprising since O'Keeffe's stands to gain market share if its attacks are successful. However, the truth is that O'Keeffe's attacks often use "recycled" injuries. What are "recycled" injuries? They are a sleight of hand that can be



Wired glass is often used in exit doors, such as this one.

used whenever a product is "grandfathered" under existing regulations. (A "grandfathered" product is one that is exempt from a regulation because it was installed before the regulation's effective date.)

For example, injuries resulting from glass used in doors prompted the Consumer Product Safety Commission (CPSC) to issue safety regulations in 1977 (*See 16 C.F.R. §1201*). However, those regulations did not apply to glass installed in doors before its effective date. As a result, when the CPSC's regulations were enacted, some injuries of the same kind that prompted the issuance of the regulation could reasonably be expected until all of the "grandfathered" glass is eventually replaced.

Unfortunately, some injuries involving wired glass do occur, as with virtually every other product on the market today. However, they are limited in number and most relate to installations that either pre-date the issuance of the CPSC's safety regulations, or they are found to be in violation of current model building code regulations. Virtually all of them involve either an athletic facility or an educational occupancy and only a few are known to involve installations that comply with model building code regulations.

At the request of the wired-glass industry, the International Code Council (ICC) appointed an *ad hoc* committee to study

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In Support of Safety Glazing Products ... continued

Cutting Edge Technology

For years, our company has maintained that it was possible to develop a wired-glass product with full impact safety protection as well as fire protection. But, as a small glazing manufacturer, we left this challenge to the foreign manufacturers of wired glass, the largest glazing producers in the world, with claims of technological leadership in other markets including such innovative products as self-cleaning and non-reflective glass.

As time went by, though, and innocent children and young adults continued to be seriously or permanently injured every year as a result of wired glass, we felt the need to try and step in and fill this necessary void.

Over the past two years SAFTI, at my discretion, has been developing several new types of fire-rated glazing, some using cutting-edge technology. These include gel types as well as common wired glass with a film or laminate. All of these new fire-rated glazing products, due on the market later this year, will meet all the requirements of the fire code as well as the safety requirements of the CPSC.

Not only will the new SAFTI wired glass provide full impact safety, but also cost only minimally more than the unsafe wired glass that is currently available. With these new additions and our optically clear glazings, SAFTI is offering a complete line of competitive fire-rated and safety-rated glass, door, window and wall systems.

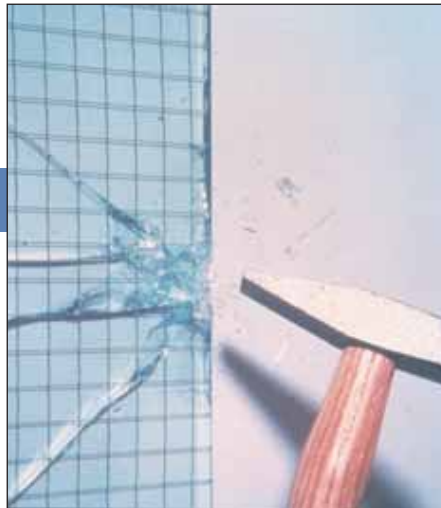
Safety at Stake

For the last two years, the International Code Council (ICC) has considered revisions to the International Building Code (IBC) to eliminate the safety glazing exception that holds wired glass in fire assemblies to a lower

(ANSI Z97.1) impact test. Additionally, the IBC Structural Committee and the IRC Building and Energy Committee have twice recommended approval of a code proposal to eliminate the lower impact test. For more than two years, we have felt the wired-glass industry has blocked final code action and the vote by ICC members. They did this by filing appeals on “procedural technicalities”—not the merits. The ICC committee will hear the proposal for the third time at the April 2002 hearings. A compromise will be put forth at this time.

The compromise offered by the wired glass industry proposes to eliminate the wired-glass exception for educational occupancies (K-12) only. They also proposed to revise section 2408 to require glazing subject to impact load in athletic facilities (including basketball and multipurpose gymnasiums) to meet Category II of CPSC 16 CFR 1201.

These proposals certainly recognize that wired glass is dangerous in hazardous locations in schools and everywhere in gyms and athletic facilities, based on the many children and young adults seriously injured by impact with wired glass, some resulting in amputations, paralysis, permanent nerve damage and lost mobility. What they don't recognize is that people are at risk for the same serious injuries due to impact with wired-glass panels in hazardous locations in any type of building. There are injury reports that show serious injuries can occur in other building uses, such as college dormitories,



Wired glass, used in most schools and other commercial buildings shatters into dangerous shards that cling to the wire, creating a safety issue, according to O'Keeffe's.

classrooms, fraternities, apartments, hospitals, psychiatric wards and correctional facilities. Do injury reports have to be found for every single building use or can a reasonable person conclude that wired glass poses an unac-

ceptable risk of injury from impact in all hazardous locations of a building? Two ICC code committees for the last two years certainly reached that conclusion and recommended eliminating the exception. The fact that the wired-glass industry, through the “compromise,” acknowledges the dangers of wired glass has an immediate effect on the industry.

Regardless of the outcome of the current debates within the ICC code development proceedings, the glass industry will see new and safer glazing in 2002 guaranteed to enhance the ability to provide proper safety for children and young adults affordably. Most exciting from a cost standpoint will be the long-awaited availability of fire- and safety-rated wired glass products, manufactured in the United States (patent-pending) that meet the CPSC standards hands-down with no temporary exemptions and no safety or health compromises. ■

the author



William O'Keeffe is the president and CEO of O'Keeffe's Inc. and its SAFTI division, both with corporate offices in San Francisco. Mr. O'Keeffe's opinions are solely

his own and not necessarily those of this magazine.

Fire Safety: The Real Debate ... continued

these and other issues involving the regulation of safety glazing. Working with the ad hoc committee, the Glazing Industry Code Committee (GICC) and other interested parties, the wired-glass industry helped develop proposed revisions to the IBC. If adopted this will require all glazing used in athletic facilities to meet CPSC's Category II impact standards and all glazing used in educational occupancies to meet CPSC's Category I or II impact standards. The wired-glass industry is also pursuing the adoption of similar proposals in the first edition of NFPA 5000.

The ICC's ad hoc committee included six independent building code officials selected from all areas of the United States. They permitted O'Keefe's and its witnesses nearly a full day and a half to present all of their anti-wired-glass rhetoric and evidence. Only then did

they vote to adopt the restrictions on the use of glazing in educational occupancies and athletic facilities described above. At the ad hoc committee meetings, O'Keefe's voted in favor of these ad hoc committee recommendations, which were actually proposed by GICC.

It is important to realize that wired glass is primarily a fire-rated product. For that reason, since the enactment of the CPSC's regulations in 1977, the use of wired glass in doors has been limited to those doors that are fire-rated. It may not be used in doors that are not fire-rated.

The focus of public concern and debate should be on fire-rated glazing products. To determine whether glass can safely protect occupants intending to exit a building using a one-hour fire corridor, the IBC has three

basic requirements. First, the glass must be able to withstand the fire test for a minimum of 45 minutes. Second, at the end of the fire test, the glazing must remain intact after being struck with the full force of a hose stream of water. Finally, it must pass both of these tests from either side, since it is impossible to predict the direction from which a fire might attack building occupants. ■

the author

Thomas S. Zaremba is a consultant to the wired-glass industry. Zaremba lives in Toledo, Ohio, and has been a consultant to the glass industry for the last 15 years. Mr. Zaremba's opinions are solely his own and not necessarily those of this magazine.



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