Where in the World is Wired Glass?

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Now and Next: Surviving the COVID-19 Crisis
All About Small Business Loans
April 22, 2020 at 1:00 pm ET
webinar

Thirsty Thursday – Latest IBC Railing Requirements
May 21, 2020 at 1:00 pm ET
webinar

NGA Glass Conference
week of July 27, 2020

GlassBuild America, with Glazing Executives Forum
Sept 15-17, 2020
Las Vegas, NV

April 16, 2020
Learning Outcomes

Upon completion of this webinar, you will be able to

• Define wired glass
• Describe where wired glass is installed
• Understand how wired glass behaves in a fire
• Describe how wired glass is used in safety glazing applications in the US and Canada
• Identify alternatives to wired glass
Wired Glass – What is it?

Polished annealed glass with a layer of wire embedded in the middle.

Square (Georgian) pattern

Diamond pattern
Why is wire embedded in the glass?
What was/is wired glass used for?

- Appearance of security: Jewelry display cases
- Prevent broken glass from falling: Skylights
- Prevent glass breakage during fire: Fire-Rated applications
Why is wired glass used in fire rated applications?

Prevents flame, smoke and hot gasses from passing through for 45 minutes
What happens to wired glass in a fire?

Exposed to fire, wired glass cracks as its temperature reaches +/- 100° C or 212° F.

When the glass breaks, the wire in the glass holds it together in its frame.

As temperature increases, the glass softens & heals the cracks, all while being held together by the wire.
Hose Steam Test
Is wired glass “Safety Glazing?”

www.ansiz97.com
Wired Glass Safety Glazing Regulations in the United States

IBC Chapter 24
Glass and Glazing

- **Safety Glazing**- minimize cutting or piercing injuries
  - Tempered or laminated glass
  - Monolithic wired glass not permitted
  - Consumer Product Safety Commission/ANSI Z97.1
Wired Glass Safety Glazing Regulations in Canada

- CAN/CGSB-12.1-2017 Safety Glazing
  - Tempered or laminated glass
  - Monolithic wired glass not permitted
- Canadian Commission on Building and Fire Codes of the National Research Council of Canada
  - Task group voted to adopt CAN/CGSB-12.1-2017 in 2020 edition of CNBC
Can wired glass pass Safety Glazing standards?
Alternatives to Wired Glass

Glass-Ceramic:
- Passes fire exposure up to 3 hours
- Zero coefficient of expansion: Does not expand or contract
- Passes hose stream test
- Requires organic coating in hazardous locations
Alternatives to Wired Glass

Intumescent Filled Glazing:
• Passes fire exposure up to 3 hours
• Prevents passage of flame, hot gasses and smoke
• Blocks thermal heat transfer
• Passes hose stream test
• Meets safety glazing requirements in hazardous locations
Pre-Existing Installations

• Pre-existing installations in hazardous locations:
  What should I do?
  • Nothing?
  • Replace?
  • Modify?

• What if a pre-existing installation breaks? Is the result any different?
Questions?

The chat bar will open to the right of the presentation screen on teams.

Click here to ask a question.
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