GLAZING NOTES

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What is New

Welcome to the October edition of this newsletter for glazing contractors!

The 2010 Florida Building Code took effect on March 15th as scheduled, and as the enforcement of the updated sections becomes more common, an awareness that things have changed and that one needs to be updated places pressures on both designers and contractors.

In the last issue, we outlined several areas as it related to the fire rated glazing which included the clarification under Chapter 7, specifically 715..4.5, the changes in systems it relates to, and the impact of the updated Energy Code among others.

It came to my attention that we had overlooked in posting that issue (June 2012) to our website, and this will be corrected in the next few days, and this issue will also be posted at the same time.

In connection to the June issue, we had mentioned that an outreach via the use of on-line webinars was being undertaken with the cooperation of Vetrotech Saint-Gobain, the first covering the major changes under the 2010 Florida Building Code and this was in the process of being scheduled. Due to other commitments we had to let this slide a bit, but we are now looking to do the first session in mid-December or mid-January, and will be sending out an invitation with an outline and more information in the next two weeks.

In connection with this, we were asked if we could provide a more focused and detailed session dealing with products and systems both to acquaint glazing firms with the various product offerings and options, as well as opportunities that the Code changes offer. This is an excellent suggestion and we will be working on a separate session to address this as we would like to keep each webinar session duration to an hour to better fit with the busy schedules. More information on what these webinar sessions will cover as well as schedules will follow.

That being said, do you have questions as to how the changes affect you? What new opportunities does this offer? What are your responsibilities? What does it mean to designers? How are they being enforced? What is on the horizon as far as additional changes?

The webinar sessions will be at no cost, with registration required, and we are looking to schedule at least two offerings of each to allow the greatest

In this issue:

Is change the incentive to keep one interested in what is going on?

How does common sense fit into the requirements under the Code?

Does anyone really know where the economy is headed or are they as confused as I am?

opportunity to participate. It will be live so you will have a chance to ask specific questions and also invite others in your firm or colleagues to attend. Be on the lookout for this invitation, and we will also post information on our website.

In addition you may have noted that we made a slight change in our publishing schedule. We will maintain the quarterly approach but have changed the dates by a month so we will be making the issues available in January, April, July and October to better fit schedules and events thru the year.

We are also working to create a checklist and other resources for both designers and glazing firms as they relate to the 2010 Florida Building Code as it relates to the issue of fire rated glazing components and systems. It is a project that will take some time to design, compile and proof, but we are looking to have it up on the website by the first quarter 2013.

If you have some suggestions such as your most common questions or challenges, let us know as we want this to be a resource which is useful for you!

Common Terms under Fire Rated Glazing

Fire rated glazing component - typically rated glass being installed into rated frame or door; the glass must be tested, listed and labeled for the use and rating

HM - Hollow metal framing; can consist of sidelights to door, transoms above door(s), and borrowed frames. Rated HM is installed in rated walls but can only achieve a maximum rating of 45 minutes under Code reference NFPA 257 standard.

HM Door(s) - Hollow metal doors can be fire rated when the meet NFPA 252, and this standard combines conventional and temperature rise products. Fire rated glazing components must be used on rated doors, and on temperature rise doors ceramic glazing is limited to 100 square inches, while intumescent glazing may be installed up to the listed sizing.

Laminated Intumescent glazing - Multi-ply unit with layers of glass separated by intumescent chambers making layers. Layers provide the fire resistance, and the number of layers achieve the overall rating. The overall thickness will depend on the number of layers, which is determined by the desired rating.

In order to achieve a system rating, both the glazing, framing and/or door must be rated and have similar ratings.

Temperature rise systems - In framing, the profiles must protect the safe or non-exposed side from the fire exposed side by creating within the design a “break” thus the radiant heat transfer will not exceed 250 degrees F.

Wall systems must be tested under ASTM E119 or UL 263, while the doors must be tested under NFPA 252 as temperature rise products. Proper and matching glazing must be installed into the frames and/or doors.

Currently, there are various systems available which meet this requirement, but conventional HM framing does not.

Labeling - Fire rated framing, doors and glazing components must be permanently marked. Most common are components and systems labeled under UL (Underwriters Laboratory) or WHI (Warnock Hersey International).

Glass is permanently etched, while frames and doors will have metallic labels attached to them.

ASTM E119 - Test standard which tests systems as a wall equivalent. There are two sub-sections, one being for non-load bearing wall systems (drywall is an example), the other load bearing (this requires a weight as dead load applied during the fire test).

Fire rated glazing systems tested for temperature rise are tested as non-load bearing walls.

The test is comprised of fire endurance, smoke control, temperature rise (limited to maximum of 250 degrees F, and hose stream. Fixed framing as well as doors are typically tested as part of a system.

New at Vetrotech Saint-Gobain North America

As mentioned in our last issue, Vetrotech Saint-Gobain has updated its product binder and the new binder not only contains updated component information on the glazing but also has fuller information and details on the VDS Lite, VDS, VDS Curtain Wall and Contraflam Structure systems. Available both in a printed and electronic format, the later can be downloaded from their website at www.vetrotechusa.com or via a link we will be posting to our website.

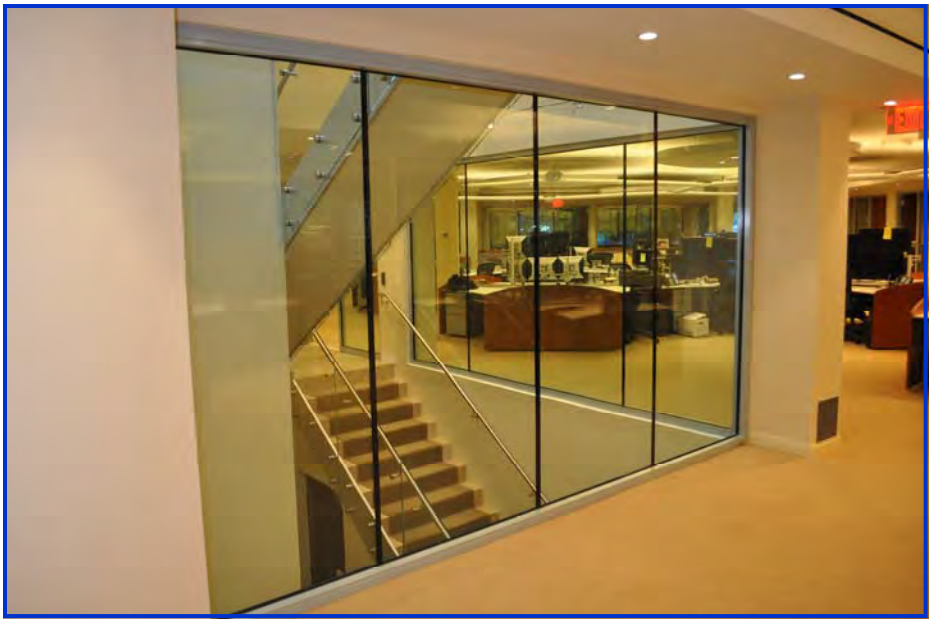
We had mentioned that VSGNA has expanded its offering of hurricane impact glazing components in both the Contraflam, Keralite FR-Ultra and Swissflam lines with available ratings from 45 to 90 minutes. The glazing is UL listed and can be used with a variety of low-e laminated make-ups, allowing it to be installed into rated framing. We had received inquiries asking it the products could be customized to allow for the use of matching low-e glazing, and this is possible in the majority of cases. If you have such application, supply the information with your inquiry.

We also want to update you on the Contraflam Structure, the interior butt-glazed wall system available in one and two hour ratings. Tested as a non-load bearing wall system under ASTM E119, this system gives you a number of options in aesthetics while being cost effective. The UL listed systems allow a number of options and offer large height options and panel areas. For example, the one hour system, with recently updated testing, features a daylight height of 138" (per panel sizing of over 50 square feet), while the two hour version has a daylight height of 126". Both are manufactured to meet CPSC 16 CFR Part 1201 category II safety glazing requirements.

Pyroswiss, Swissflam, and Contraflam glazing components are manufactured in the USA, and the VDS temperature rise framing and doors, as well as the VDS Curtain Wall system, is fabricated in the USA. The ceramic products are manufactured in France and stocked in the USA in various locations. (No current manufacturer of labeled architectural ceramic currently produces the product in the USA).

All fire rated glazing components and systems are tested, listed and labeled under UL auspices, and you can check listings by going to www.ul.com, scrolling down to the bottom section and click on "Product Directory Listing", then filling in the name "Vetrotech Saint-Gobain" to view our listings. You can also search any manufacturer using the same approach.

For more information, costing or questions, just give us a call.



Aluflam North America

The true aluminum fire rated system - - news

Aluflam, which features the only true aluminum fire rated framing system and doors, has been doing some updating on its details in response to requests from designers. In addition it has completed its scheduled testing program for a ninety minute rated door to go with its UL listed two hour curtain wall. The new offering is available for quoting and shipping, and is available as single (up to 3080) or pairs (up to 6080).

This will complement its up to one hour storefront and one hour curtain wall systems which currently feature a door option with ratings up to one hour. Manufactured in southern California, this provides additional options as well as reasonable delivery times for your projects.

Tested, listed and labeled under UL auspices, you can get updated information on their website, **www.aluflam-usa.com**.

When sending an inquiry to Aluflam you would supply the typical information including elevations, sizing, quantities, specification data (color, hardware and related information), and you will typically have a quote back in one to two working days. This will include your framing, doors, hardware and all glazing, so you have a one-stop source for a true aluminum fire rated system!

Resources

What are some of the most common resources you can use today:

- Code books, standards and other resources - **www.iccsafe.org**
- Training sessions on Florida Code and Code officials data - **www.boaf.net**
- Product approval process and search database of approved products - **www.floridabuilding.org**
- UL Product Directory - **www.ul.com**
- WHI Product Directory - **www.intertek.com**

Calendar

NOVEMBER

22nd and 23rd — Office closed for Thanksgiving Holiday

(Aluflam and VSGNA also closed)

DECEMBER

21st – 31st — Office closed for Xmas Holiday

(expect Aluflam and VSGNA to be closed also on these dates)

JANUARY

1st — Office closed for New Year's Holiday

MARCH

18th — Program for Jacksonville CSI Chapter

29th — Office closed for Good Friday

Questions Received

Q. ***Who determines what is fire rated and the required rating? In asking questions I sometimes get the response that this is the contractor's responsibility.***

R. Under Florida statutes the architect or designer of record has the responsibility to determine and supply the information including fire safety (ratings and design) as well as design pressures and other critical information. The contractor, general and specialty, is required to show conformance or meeting the requirements to meet those ratings. So if you have a one hour wall (as detailed in the life safety and architectural drawings) you would have to supply products or systems which meet that requirement as a minimum and submit the proper documentation attesting to it.

Q. ***I had attended a presentation you made several months back in which you cited and showed that the new Code update (section 715.4.5) stated that any assembly over ¾ hour is required to meet a higher standard (ASTM E119 / UL 263) which bars the use of hollow metal framing in fixed applications (sidelights, transoms and borrowed frames) as it does not meet the standard cited by the Code. Recently I was asked to bid on supplying glazing for some HM openings that included glazing for door lights and sidelights. When I asked what the rating was to be, they verified that the schedule showed a one hour ratings was required, and when I asked how that could be in relation to the new Code requirements I was told the HM supplier said he could supply manufacturer's label for a one hour rating. So, what do I supply and how can I make sure I don't get caught in any disputes in case the information is incorrect?***

R. The Code is clear and what I assume the HM supplier may have stated is that the HM manufacturer would supply what are called "manufacturer's labels" which simply are not accepted or allowed per Code. Either they have to supply a UL or WHI label attesting that it meets ASTM E119 or UL 263 requirements or they do not meet the requirements.

As far as what to supply, in your case the door lights are small enough that a ceramic may be used (door lights are under 100 square inches daylight area), but the sidelights should be an intumescent glass. Unfortunately a one hour intumescent product installed in properly labeled HM sidelights would have an assembly rating of 45 minutes, which is less than the required one hour rating. Code has a simple rule of thumb applicable in this case which is the lowest rated component (in this case HM framing) would be the rating of the assembly.

You can submit an RFI and hope that they realize their oversight, or if that does not work submit the required product sheets showing you are going to supply the proper glazing and state that the framing, by others, must come with either a UL or WHI label showing conformance to the proper standard and rating. Once approved you then have some good ammunition when the matter arises in the almost certain event that it does not conform to the Code requirements.

Q. ***It seems that there are two common terms used for the temperature rise glass products one being laminated intumescent and the other gel filled. What do they mean and how do they differ?***

R. They are not the same as the approach and chemistry is a bit different. Vetrotech Saint-Gobain and Pilkington market laminated intumescent products which meet the temperature rise requirements. These use different and proprietary formulations but use a multiple glass ply approach separated by measured chambers which are filled with the intumescent product. The layers provide better control in production and also give it a different cured state, which is more stable.

SAFTI First is the best example of a gel filled product which encapsulates the material within typically two pieces of glass, which makes it a bit simpler. Unfortunately this uses an older technology which leaves the intumescent layer as a more pliable or gel type product when it sets, which seems to be more temperature sensitive and has had some history of delayed curing. The basic chemistry differs, but the products react to the stimulus of radiant energy (from a fire typically) in order to react and intumesce thus providing protection from a fire.

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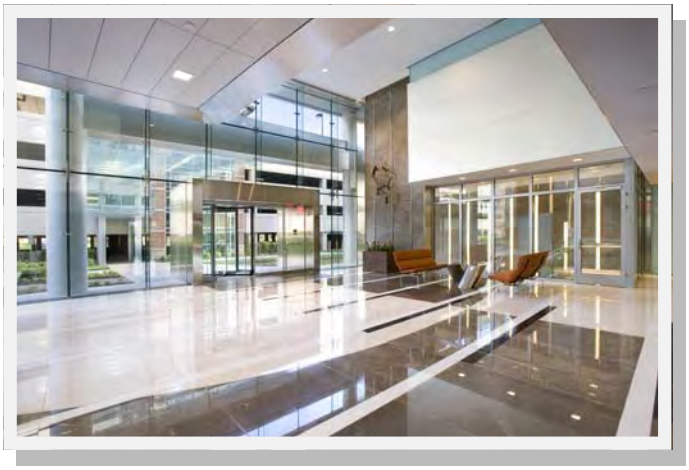

Application of open concept meeting Code with fire rated curtain wall at exterior and interior system at vestibule.

Materials by Vetrotech Saint-Gobain North America

We have additional information on our website for your reference - - www.rjlassoc.com

Education and information to assist commercial glaziers, designers and code officials

Are you still chugging along?

Boilerplate

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