INSIDE: A Special GANA Member Supplement

Glass Goes Green

Winners of the Green Design Awards

Also Inside:
- ASHRAE 90.1 Changes Appealed
The FireLite® family of fire-rated glazing from Technical Glass Products is the definition of high quality. Now, take a closer look at the improvements we’ve made to surface quality and color. This new ultraHD™ Technology delivers a clearly superior product at a competitive price. Simply put, we’ve turned up the heat.

Now in HD™

The FireLite® family of fire-rated glazing from Technical Glass Products is the definition of high quality. Now, take a closer look at the improvements we’ve made to surface quality and color. This new ultraHD™ Technology delivers a clearly superior product at a competitive price. Simply put, we’ve turned up the heat.

SEE THE DIFFERENCE AT FIREGLASS.COM/HD

ultraHD™ TECHNOLOGY
DEPENDABLE PROTECTION FOR UNPREDICTABLE CONDITIONS.

Protecting people and property is the job of an impact resistant glazing system. M-Pact Safe® laminated glass made with tough DuPont™ SentryGlas® has been tested and used in a variety of curtain wall, storefront and skylight systems designed to meet building code requirements for glazing in wind-borne debris regions. DuPont™ SentryGlas® interlayers can be used in either wet or dry glazed systems.

CLASSIC LINE™ ARCHITECTURAL PRODUCTS
ENERGYGLAZE® INSULATED GLASS  HEATPRO® HEAT-TREATED GLASS
M-PACT SAFE® GLASS  OPACISPAN® SPANDREL GLASS

ENVISION THE POSSIBILITIES.®
vitroamerica.com | 800.238.6057 | sales@vitroamerica.com

DuPont™ SentryGlas® is five times stronger and up to 100 times stiffer than conventional interlayers.
features

20 The Winners of the USGlass Green Design Awards

USGlass is recognizing projects that exemplify the many ways in which glazing materials can contribute to a building’s overall “greenness.”

27 Special GANA Supplement

Here we have the latest on how the Glass Association of North America, and its members, continue to strive to improve the glass industry.

27 GANA Makes a Difference

30 GANA Membership Application

32 Great Products from GANA’s Members

42 Trump Card?

When Donald Trump commented in a recent interview that he’d ordered thousands of windows from China because “it’s hard to get them anywhere else,” U.S. window manufacturers responded in force.

44 New Solutions for Familiar Challenges

GlassBuild America featured a number of product introductions and enhancements for fabricators and installers looking to stand apart from the crowd.

Special Sections

Architects’ Guide to Glass

50 Re-Birth: Glass Plays a Critical Role in Downtown Pittsburgh’s First New Skyscraper in 20 Years
Super Spacer® Premium Edges Out Competition to Win Green Spacer Award

Super Spacer® Premium was chosen by judges because of its enhanced performance and third-party testing, which provides unbiased verification that Super Spacer achieves the warmest edge of glass temperature, lowest effective thermal conductivity and highest condensation resistance over competitive spacer products. Edgetech also won a DWM Green Award in 2009, the program’s inaugural year.

RENOVATE® by BERKOWITZ is a revolutionary, patent-pending commercial window retrofitting solution that combines existing non-operable single-pane units and IG manufactured by JE Berkowitz to create an energy efficient triple-pane system. The single and double-paned units are joined together from the inside of a building using a custom version of Super Spacer® TriSeal™.

Super Spacer® products - Proven in the field worldwide for more than 20 years to provide superior thermal performance and durability.
Online Survey

Speak out and tell us what you think with our online reader poll. Read the articles inside the issue and then cast your votes online. This month’s question:

A recent class-action lawsuit claims that the U.S. Green Building Council has engaged in deceptive trade practices, false advertising and anti-trust in promoting its Leadership in Energy and Environmental Design certification program (see page 14). What requirement do you feel is the most important one that a green building certification process should have?

- Continuous monitoring of the building’s post-occupancy energy usage
- Contract with occupants regarding optimal building operation and maintenance
- Coordination with or reference to green building codes and standards
- Use of proven sustainable and efficient materials

October Survey Results

What do you see as the best way to reduce your company’s workman’s compensation claims?

- 0% Working with an injury management company
- 50% Providing frequent safety training to employees
- 25% Encouraging employee safety by using incentive programs
- 25% Holding regular safety inspections

Visit our online discussion boards at www.usglassmag.com/phpBB2 to ask questions and share experiences about business and life in the glass industry.
Fine-tuned to perfection

- Slide and Turn Systems
- Folding-Sliding-Systems
- Horizontal-Sliding-Wall Systems

Experience German precision at its finest with a SUNFLEX glass wall system. State of the art technology and the most innovative product line in the world.
Choose the Strong Silent Type

With the QEL Exit Device, you won’t be the center of attention every time you step out of the room.

The QEL Exit Device from Von Duprin is whisper-quiet both electrically and mechanically, and features all the high-performance that has made these products world famous.

This is the silent solution for environments where the slightest noise makes a big difference. A wide range of finish and trim options allow the QEL to blend with any existing architecture.

So remember, you don’t have to go out with a bang . . .

Contact Access Hardware Supply at (800) 348-2263, or visit www.accesshardware.com
Build Greater Profits With Erdman Equipment

Erdman® Commercial Equipment Lines have helped our customers more than double their production without increasing their cost.

Unitized Curtainwall & Interior Glass Partition Equipment:
- Frame Assembly Station
- Structural Sealant Applicators
- Cap Bead Applicators
- Rubber Gasket Inserters
- Sawing Equipment
- Glass Handling Manipulators
- Conveyor Lines
- Tilt/Tip Equipment
- Screw Feeding Equipment

Erdman® Commercial Glass Lines provide safe and easy handling and precise manufacturing. We can help you achieve increased production and a higher level of consistent quality product. Product rejection is significantly reduced. Contact us today for an Erdman® Commercial Equipment Catalog!

& For Your IG Production Needs...

The Erdman® Fixed Head IG Secondary Sealer is a simple and economical answer to your Insulating Glass Secondary Sealing needs. The stationary sealant application system on the Erdman® Fixed Head IG Secondary Sealer gives your operator the ability to easily apply a professional, high quality, consistent secondary seal to your insulating glass units.

- Dispensing capability of hot, cold or two-part sealant
- Both dual and triple glazed unit capability
- Option for single pass on tripies (increased speed)
- Noticeable reduction of waste and clean up
- High end components and steel tube frame
- Custom models & sizes available

Call Us Today! 763-389-9475
www.erdmanautomation.com
Built In the USA | Patents Pending
Will You be Wallypipped This Year?
How to Stay on Top of the Game

By Paul Bieber

First, a little history. Wally Pipp was a major league first baseman for the New York Yankees from 1915-1925. He was the American League home run champion in 1916 and 1917. Wally was a journeyman player, playing in 136 games or more in each season with the Yanks. The Yankees, with Pipp, won the pennant in 1921 and 1922, and the World Series in 1923.

In the summer of 1923 the Yankees signed a local boy as a pinch hitter. This boy sat on the bench, getting to play in only 23 games during the next two years, always as a pinch hitter.

On June 2, 1925, the veteran Pipp told his manager he was tired and had a headache. The manager looked down the bench and saw the boy whose name he could hardly remember. The manager told him to get his glove and go play first. The boy was Lou Gehrig and he didn’t sit down on the bench for the next 15 years, playing in 2,130 consecutive ball games. Pipp’s career as a Yankee was over.

Suggestions for Staying a MVP

Being “pipped” or “wallypipped” became verbs in the ’30s, being used when someone or some company was left out of their own future.

This happens every day to companies across the country. A steady customer calls you up and asks you to do an emergency repair. You say you can’t get there for a couple of days. They look in the yellow pages and . . . you get pipped.

A customer asks if you carry a certain type of product. You say you don’t and suggest they try another vendor. Guess what? You are about to be pipped.

There is no customer who is guaranteed to come back to you next time. You have to be on the top of your game every day. So what do you do? Do you take a money-losing job just to stay on with a customer? Do you bump someone else from your schedule?

Here are some ideas that may prevent you from being wallypipped:

• A customer wants a job done now and you don’t have time. Do not tell your customer you can’t do it. Call another glass shop and sub the work to them. Tell your customer you will get it taken care of for them. Bill your customer yourself and pay your sub. Keep a list of glass companies in your area that you trust to do your work—and offer them the same cooperation when they call you.

• A customer wants a product you don’t carry. After you offer them similar products and they won’t bite, get them the same cooperation when they call you.

• A customer calls and you will get back to her in a couple of days with the answer. No advice will help you . . . you will be pipped.

• A competitor undercuts you on a bid, trying to steal your customer. The customer gives you the option of matching the bid. You have to gamble here. If the “other guy” is unreliable and weak, it might be a good bet. If he is reliable, take the job at his price, and learn how to do things with a lower overhead. This may be a real wake-up call for you.

• A customer leaves a message on your phone to call about a problem. You put it off for a day or two because it is unpleasant. And, your phone number will now be 1-800-wpipped.

You get the picture. Don’t screw-up. Customers are too valuable.

The author

Paul Bieber has 30 years in the glass industry, including 21 years as the executive vice president of Floral Glass in Hauppauge, N.Y., from which he retired in 2005. Mr. Bieber’s opinions are solely his own and do not necessarily reflect the views of this magazine.
The new fascia mount adapter

More than just an excellent design

The latest Q-railing fascia mount adapter from the Easy Glass System program is the ultimate answer to the demand for affordable block assembly in glass railing systems. Combining the advantages of a minimalist design with maximum ease of assembly, model 0760 provides an incredibly elegant stainless steel solution. It is suited for tempered or laminated glass of 1/2” up to 1”. Once again Q-railing sparks a much talked about evolution in railing technology!
Glazing Industry Groups Win Their Appeal of ASHRAE 90.1-2010

The glassing industry successfully overturned new, “unnecessarily restrictive” glazing provisions from taking effect this month as a part of ASHRAE 90.1-2010’s prescriptive path for code compliance (see November 2009 USGlass, page 14, for related article). In a joint statement issued by the Glass Association of North America (GANA), the Aluminum Extruders Council (AEC), the Insulating Glass Makers Alliance (IGMA), AGC Flat Glass North America Inc., Guardian Industries Corp. and Pilkington North America Inc., the group states that an ASHRAE appeals panel reversed a decision by ASHRAE’s Standing Standard Project Committee 90.1 to reduce the amount of glass permissible in the envelope of commercial buildings using the prescriptive path by a full 25 percent—from a maximum window-to-wall ratio of 40 percent to a maximum of 30 percent. It also reversed the proposed inclusion of more restrictive U-factors and solar heat gain coefficient (SHGC) values and the addition of a new minimum for VT/SHGC (of 1.1) in ASHRAE 90.1’s prescriptive path.

Appeals were taken on behalf of the glazing industry on the grounds that:

1) The Project Committee’s decisions were technically flawed since they lacked sound estimates of likely energy saving; and

2) The process used by the Project Committee violated ASHRAE and ANSI procedures since the glazing industry was not provided adequate representation on either the Committee or its Envelope Subcommittee.

In its decision, the Appeals Panel held that “Addendum bb to ANSI/ASHRAE/IESNA Standard 90.1-2007 will be retracted to the Project Committee to address the portions of this appeal that were upheld [respecting U-factor, SHGC, VT/SHGC and WWR]. The Project Committee will determine what changes, if any, will be made, and addendum bb, or portions thereof, would need to go through the public review process again.”

Members of the glazing industry have been actively involved in the process leading to the change since last fall when concerns first arose regarding the ASHRAE proposal.

"The success of our appeal clearly demonstrates that ASHRAE supports changes that are justified..."  
—Margaret Webb, IGMA

"It has been a real challenge trying to educate the ASHRAE committee about modern glazing technology, and the important role glazing can play in high-performance buildings," says Thomas Culp, Ph.D. of Birch Point Consulting, an industry consultant who has been involved with this effort from the beginning. "Many seemed to still hold onto 1980s perceptions about glass, and incorrect attitudes that 'windows are only poor walls,' without considering the benefits of daylighting and views. We have started to change these attitudes, as shown by our success with the appeal panel, but it will be a continued process."

Culp says the unity of the industry was a key factor in this recent success. "Unfortunately, our industry has a history of fighting itself in the code arenas, so it was powerful when all the associations and companies came together to present a united front. Also, I believe the committee overstepped itself under the pressure of its goal to increase the stringency of the standard by 30 percent, and we were able to show they did not have the proper technical justification for their proposals."

"I am extremely pleased with the decision. The glazing industry strongly supports ASHRAE’s efforts to improve energy efficiency in commercial buildings, but all improvements need to be based on sound technical analysis," says Bill Yanek, executive vice president of GANA. "As major stakeholders, the glazing industry also needs to be part of the process throughout. This is a major step forward."

Margaret Webb, IGMA executive director, adds, "Joint efforts and leadership provided by Dr. Tom Culp, Urmilla Sowell (GANA technical director) and others representing the industry, were based on well documented facts. The success of our appeal clearly demonstrates that ASHRAE supports changes that are justified, which has always been the cornerstone of the organization."

The industry had filed two coordinated appeals, one by Thomas S. Zaremba of Roetzel & Andress on behalf of Pilkington North America Inc. and AGC Flat Glass North America Inc., and the other filed jointly by GANA, AEC, IGMA and Guardian Industries Corp. with Culp and Sowell leading the joint appeal.

Culp had recently been appointed to voting membership on the ASHRAE 90.1 Committee and its Envelope Subcommittee, and Sowell had been appointed as a consultant to the Envelope Subcommittee. Culp and Sowell, representing AEC and GANA, say they will continue to advocate for the commercial glazing industry at ASHRAE as the Project Committee and its Envelope Subcommittee revisit the commercial glazing issues
specified by the appellate panel.

Culp says the 2010 version of ASHRAE 90.1 will be published without the proposed reduction in glazing area, new VT/SHGC requirement or revised U-factor and SHGC criteria. In the mean time, addendum bb will be sent back to the committee.

“We will stay actively engaged with ASHRAE during this process to help them achieve their goals of increased energy efficiency, while also ensuring all proposed requirements are properly justified and reflective of the benefits of modern glazing,” Culp says.
United Glass Corp. Closes the Columbus Operations of Mid Ohio Tempering

Louisville, Ky.-based United Glass Corp. (UGC) closed the Columbus, Ohio, operations of Mid Ohio Tempering (MTO), effective October 11. Company chair and chief executive officer Lawrence O’Connell said the decision to close MTO was made to improve the operating efficiencies of all UGC branches and to allow more capacity out of the larger facilities. About 40 employees were affected by the closure.

“We decided some time ago that to survive the economic downturn we’d have to improve our efficiencies,” O’Connell told USGlass. “So, we made the decision to close MTO, which was a small shop that really only handled specialty work such as polishing, edging, beveling, hole-drilling, etc.”

O’Connell added, “The response from customers so far has been positive, because they would prefer to have their orders come in on one truck.” He explained that customers in the Columbus region previously were serviced with a combination of partial services from that facility as well as one of the other larger facilities. Customers’ orders now will be filled from one of the major facilities with a single truck delivery.

The MTO equipment will be going to the company’s locations in Atlanta, Michigan and Pittsburgh, which will allow those branches to expand their value-added production capabilities.

“Making it easier for our customers in that region to do business with us, and increasing capabilities at the Michigan, Pittsburgh and Atlanta facilities will only improve the UGC operations and allow us to meet the needs of our customer base,” O’Connell said. “In these troubling times that our industry and customers are facing it is imperative that quality, pricing and timeliness of deliveries be as efficient as possible.”

Erie Architectural Relocates and Expands

Erie Architectural Products Inc. has relocated and expanded its Lakeshore, Ontario, headquarters. The new 11-acre property will provide the company with more than double the production capacity of its previous facility in Blenheim, Ontario, with additional of room for future growth. “We are investing today for tomorrow,” says Ron Stronks, president.

According to information from the company, the Lakeshore location was selected during the expansion process because it allowed for the retention of existing staff. The location also is relatively close to the company’s U.S. affiliate companies and the Detroit Metro Airport.

“Being a part of the greater Detroit-Windsor community gives us greater access to future professional engineering talent,” Stronks says. “As well as expanding our production capacity, we are committed to further growing the engineering team within our business.”
by enabling the company to build up its silicone sealants offering, particularly in the growing solar and façade markets in North America.

May National, founded in 1984 in Lakewood, N.J., manufactures and markets a full range of silicone, polyurethane, hybrid and acrylic sealants and adhesives. The company has annual sales revenue of approximately $20 million and 60 employees. It will operate as a subsidiary of Sika Corp. and will be managed under the existing May National management team.

Unicel Architectural Forms Distribution Agreement with METRA Systems

Unicel Architectural, a Longueuil, Quebec-based manufacturer of aluminum and glass solutions, has announced an exclusive licensing agreement with METRA Systems that encompasses the marketing and distribution of the METRA solar shading systems and motorized louvers in North America. METRA Systems, a division of METRA in Italy, provides aluminum products and solutions designed to improve architectural sustainability, performance and aesthetics.

“The METRA solar shading systems and motorized louvers are the perfect extension to our aluminum and glass solutions,” says Jean-Francois Couturier, chief executive officer of Unicel. “We can now provide architects with a complete selection of the industry’s finest vision and daylight control solutions for virtually any building design. We are excited to offer Europe’s premium solar shading systems to the North American marketplace.”

The Nation’s Most Trusted Security Door Hardware Wholesaler

Excellence in customer service is our priority. We go above and beyond your expectations to ensure your security door hardware needs are always met. Along with top quality products, we provide expert support and technical advice.

- Takeoffs
- Line item pricing
- Templates
- Installation information
- Wiring diagrams
- Cut sheets

Specializing in top quality hardware from Ingersoll-Rand to Assa Abloy, JLM offers more than 12,000 individual items from over 80 quality manufacturers from our two warehouses. We offer a huge variety of products catering to the glass industry.

Midwest 1.800.522.2940
Southeast 1.800.768.6050
www.jlmwholesale.com
A class-action lawsuit filed in October claims that the U.S. Green Building Council (USGBC) has engaged in deceptive trade practices, false advertising and anti-trust in promoting its Leadership in Energy and Environmental Design (LEED) certification program. The class-action lawsuit was filed by Henry Gifford of Gifford Fuel Saving Inc. and others in the U.S. District Court for the Southern District of New York.

According to court documents, the plaintiff alleges, “USGBC’s LEED rating system is supplanting building codes in many jurisdictions, undermining marketplace competition and obscuring other building standards that are proven—unlike LEED—to reduce energy use and carbon emissions…” The documents go on to state that “when LEED-accredited professionals design and build buildings instead of skilled professionals … with years of experience making safe, comfortable and energy-efficient environments, the marketplace, consumers and the environment often suffer.”

Gifford has spoken out about the LEED rating system before. In a September NPR interview, he said, “It’s impossible to go out and buy a building with a guarantee for how much energy it won’t use. And the LEED system, by basing everything on energy predictions, continues that.”

Court documents note that, among others, the class-action suit is brought on behalf of “trades injured by USGBC’s deceptive trade practices because they lose money and valuable time to comply with LEED specifications and the buildings they do build do not use 25 percent less energy, or any less energy, than non-LEED certified properties.”

USGBC representatives could not comment on pending litigation.
SOFTTECH

SOFTWARE TO UNLEASH PRODUCTIVITY

- Estimating
- Material Ordering
- Shop Drawings
- Fabrication Documents
- Interface with ERP/CNC

FOR CUSTOM/MODIFIED AND STANDARD GLAZING SYSTEMS

REAL DATA FROM A REAL NINE STORY TWIN TOWER PROJECT USING V6

60% Reduction in Time for Estimating
80% Reduction in Time for Architectural Profiles
87% Reduction in Time for Take Off
95% Reduction in Time for Fabrication Tickets
30% Reduction in Time for Shop Drawings

SOFTTECH GROUP

1040 Bayview Drive • Suite 800
Fort Lauderdale, Florida 33304
t: (954) 568-3198
t: (954) 569-6116
www.softtechnz.com

United States • United Kingdom • France • India • Dubai • Australia • New Zealand

www.softtechnz.com
Researchers Study “Cradle-to-Grave” Life Cycle of North American Windows

A new report focused on providing a standardized, accurate and representative environmental life cycle assessment (LCA) for commercial and residential windows has been released as a precursor to a full “cradle-to-grave” LCA study of commercial and residential windows. The study, once completed, is expected to serve as a roadmap for collecting, compiling and interpreting that data. It will be based on case studies and review more than 150 window variations, with the expectation that it will lead to a modular database through which additional window permutations and combinations may be assessed.

The report, “Life Cycle Assessment of North American Residential and Commercial Windows: Life Cycle Goal and Scope Specification,” was published by the Center for Sustainable Building Research at the University of Minnesota and the Athena Sustainable Materials Institute. Its goal and scope were commissioned by the Department of Energy, and the LCA will be commissioned by other U.S. government departments as well as a number of industry organizations, including the American Architectural Manufacturers Association (AAMA), the Glass Association of North America (GANA) and the Insulating Glass Manufacturers Alliance. Jeff Inks, vice president of code and regulatory affairs for the Window and Door Manufacturers Association (WDMA), says his group also is considering levels of funding for the program.

“Because LCA is growing in importance as criteria for energy-efficient and green building programs and now new green building codes and standards, we are very interested in this work,” Inks says.

“Many component manufacturers have been scrambling to assess and prove their green credentials and how they can help designers and owners accumulate points in the various green building rating systems,” says Rich Walker, AAMA president and chief executive officer. “These rating systems go beyond energy efficiency to address a much wider range of concerns involving site use and occupant wellbeing. LCA is considered the scientific way to assess the overall environmental impact of materials, products and building assemblies. LCA is a systematic, cradle-to-grave evaluation from resource extraction and embodied energy (energy used in the production of the product) through to disposal.”

Bill Yanek, executive vice president of GANA, says the association and its membership believe that in energy-efficiency debates emphasis is too often placed upon the energy intensity of the glass manufacturing process.

“The energy saving and energy producing aspects of value-added glass...
products and clean energy using glass should be part of the debate. A thorough life cycle analysis will provide a more complete picture of the role of glass in energy efficiency,” Yanek says.

The report notes that case studies for the commercial functional unit will include 1,500- by 2,500-mm (fixed), 900- by 1,500-mm (casement) and 1,500- by 2,500-mm (curtainwall) windows installed in a high-rise office building for 73 years, modeled in six climates; double- and triple-glazed produced with sputter-coat and hardcoat low-E glass, all with air-fill and aluminum spacers; and frames made of fiberglass and aluminum.

Researchers say that the results of the LCA may be incorporated into programs such as ENERGY STAR® and included in various software and calculation tools. They add that the methodology, results and interpretation of the LCA study will be subjected to concurrent critical review to ensure the project is consistent with ISO 14040 standards.

ICC Draws Criticism in Draft Green Code; Promotes Green Federal Buildings

The International Code Council (ICC) announced that Rhode Island is the first state to adopt the International Green Construction Code (IGCC). The Rhode Island Green Buildings Act identifies the IGCC as an equivalent standard in compliance with requirements that all public agency major facility projects be designed and constructed as green buildings. The Rules and Regulations to implement the Act take effect this month.

The International Code Council (ICC) announced that Rhode Island is the first state to adopt the International Green Construction Code (IGCC). The Rhode Island Green Buildings Act identifies the IGCC as an equivalent standard in compliance with requirements that all public agency major facility projects be designed and constructed as green buildings. The Rules and Regulations to implement the Act take effect this month.

The comments continue, “For heavy commercial windows, this would require triple glazing in Hawaii, and sometimes even quadruple glazing in the middle and north of the country. Also of significant concern, ADA-compliant commercial entrance doors would not be able to comply. Finally, the inconsistency with the format of ICC’s own International Energy Conservation Code, as well as other standards like ASHRAE 90.1, ASHRAE 189.1, and ANSI/GBI 01, will create confusion for building code officials, designers and manufacturers.”

Rather than ask that the IGCC begin from scratch, the group offered some suggestions: “The correction proposed here is to simply reference the prescriptive tables of ANSI/ASHRAE/USGBC/IES Standard 189.1. With the new partnership between IGCC and ASHRAE 189.1, it makes sense to simply refer to the prescriptive tables of ASHRAE 189.1, as an appropriate high performance green standard that has already gone through a consensus-based process.”

The Public Version 2.0 has been posted online for code change submittals. The deadline for submitting code change proposals is January 3, 2011, with hearings scheduled for May 16-22, 2011, at the Sheraton Dallas Hotel in Dallas.
ShowCase

scratch removal
GlassRenu Introduces RenuDisk
GlassRenu® in Pacheco, Calif., a manufacturer of solutions for removing scratches and acid damage of any size and depth from all types of glass, has introduced its new conditioning disk technology (CDT). When used within the GlassRenu Scratch Removal process, the new abrasive allows users to not only reduce the time of repair but also reduce the material costs for repairs.

The company also says it’s offering an abrasive disk that actually performs better the more it is used. By allowing users to continue to use disks that otherwise would have been discarded after 15 square feet of use, the CDT RenuDisk are expected to provide excellent repair results for up to 1,000 square feet of glass. The cost savings of being able to reuse disks from repair to repair will allow users to save around 30 percent of the cost per repair.

The contractor grade scratch removal system is available as a field-ready kit with all tools and enough materials to repair approximately 500 square feet of glass. ► www.glassrenu.com

protective glazing
Non-Fragmenting Blast-Resistant Glazing Among New Products From Sheffield
Sheffield Plastics in Sheffield, Mass., says its new blast-resistant product exceeds the current GSA and Department of Defense anti-terrorism force protection standards, including those with the highest levels of pressure loads and shock waves. According to the manufacturer, Makrolon® Hygard EX can withstand exterior blasts without splintering on the interior face of the material.

It provides an improved level of optical quality in a highly UV-resistant material for sky-lighting and other overhead applications. Unlike glass and acrylic, which require thermal pre-forming, the material can be formed in place for more cost-effective curved glazing installations, according to the manufacturer. ► www.sheffieldplastics.com

sunshades
YKK AP Expands Application of Sun Control System to Storefront Facades
YKK AP America in Austell, Ga., has expanded the application of its energy-efficient sun control system, ThermaShade, to include storefront facades. The industry’s only sunshade system to feature a thermal barrier, ThermaShade reduces solar heat gain to help lower the overall energy consumption of a building. ThermaShade also is available for curtainwall applications. Designers can now take advantage of the proven sun control system and apply it across the entire building facade, including storefronts and curtainwalls, to maintain a consistent appearance.

For simple installation, pre-engineered solutions are available in more than 100 configurations, including four standard outrigger designs, eight standard lower options and five standard fascia options. An integral hook mechanism also is included on outriggers.
ThermaShade is part of YKK AP’s energGfacade product line of energy-efficient, thermally broken solutions for the building envelope. ► www.ykkap.com

metal
Recycled Aluminum Now Standard on Wausau’s Products
Wausau Window and Wall Systems of Wausau, Wis., is supporting the U.S. Green Building Council LEED® Rating System™ criteria for recycled content by fabricating all of its products using aluminum extrusions exclusively from secondary billet that contain a minimum of 70 percent total recycled content.

In LEED-NC, Version 3, Materials and Resources Credits 4.1 and 4.2 require separate reporting for pre-consumer and post-consumer recycled content. These are used to calculate “combined” recycled content, equal to post-consumer plus one-half of pre-consumer recycled content. Depending upon the customer specification and extrusion source, Wausau’s recycled aluminum extrusions have a LEED combined content of 42 to 69 percent, with total recycled content of 70 to 83 percent. ► www.wausauwindow.com

doors and windows
Horton Offers Two New Door Systems for Airborne Infection Isolation Rooms
Many hospitals today are renovating and adding patient care areas designed specifically for isolation control as part of a focused initiative to reduce the possibility of patients spreading contagious airborne infectious diseases. Horton Automatics in Corpus Christi, Texas, is meeting this challenge by offering two new door systems that are tested to strict air infiltration standards and designed for airborne infection isolation rooms (AIIR).

The new 2000-IDS is an automatic trackless system designed with “Knowing Act” activation (touchless sensor or push plate), recessed pull handle, presence sensor, perimeter seals and self-closing operation. This model is available in unit widths ranging from 7
Solar Innovations Slides Out New Thermally Broken Products

Solar Innovations Inc. in Pine Grove, Pa., has released a new thermally broken Lift Slide product for door and window applications. At first glance, the Lift Slide door shares its appearance with the traditional sliding glass door, but it operates with ease and is designed to meet the growing trend of larger doors in commercial projects and homes.

A traditional sliding door requires more force to operate the large sizes specified by architects and often cannot meet high performance demands, but because of its high thermal, air and water performance, and ease of operation, the Lift Slide can. The key to its design is the lifting of the panel above the water seals, which allow for smooth, almost effortless operation. Each panel can weigh up to 440 pounds with standard hardware. Larger sizes are available with custom hardware.

To open or close the door, the operator simply lifts the handle up and walks with the panel, then turns down the handle again to lock the door in the desired location. Lowering the handle seals the gaskets tightly. The strong seal allows for a higher projected testing score for air, water, structural and thermal performance; the design currently is undergoing testing.

The Lift Slide doors are available in standard color selections; custom colors are available upon request. The system can also be finished with a variety of metal and wood cladding options. The new product is available in a variety of configurations.

www.solarinnovations.com

IGMA Continues Harmonization with ISO Standard for Insulating Glass

The Insulating Glass Manufacturers Alliance (IGMA) announced the publication of ISO 20492, Parts 1, 2, 3 and 4 for insulating glass units. The ISO/TC 160/SC 1-WG4 Insulating Glass convened for the first time in 1995 and, according to IGMA, the standard’s publication represents years of dedicated effort by the industry.

In its announcement, IGMA extended special thanks to the task group convener and its technical consultant Bill Lingnell of Lingnell Consulting Services and Jeff Haberer of Cardinal IG, who acted as the secretary for the group. The standard is comprised of four parts:

- 20492-1 Glass in buildings—Insulating glass—Part 1: Durability of edge seals by climate tests;
- 20492-2 Glass in buildings—Insulating glass—Part 2: Chemical fogging tests;
- 20492-3 Glass in buildings—Insulating glass—Part 3: Gas concentration and gas leakage; and
- 20492-4 Glass in buildings—Insulating glass—Part 4: Methods of test for physical attributes of edge seals.

This standard combines the IG test methods and specifications of ASTM (E2188, E2189, and E2190) and EN 1279 parts 2, 3, 4 and sections of part 6.

www.igmaonline.org

Peerless Products and Benson Industries Submit Products for CMAST Database

The National Fenestration Rating Council (NFRC) announced that Peerless Products Inc. in Fort Scott, Kan., is the most recent frame component manufacturer to submit products into the Component Modeling Approach Software Tool (CMAST) database. This most recent addition brings the total number of frame component manufacturers with products in the database to six. The five other frame component manufacturers are:

- EFCO Corp. in Monett, Mo.;
- Kawneer North America in Norcross, Ga.;
- TRACO in Cranberry Township, Pa.;
- FM Graham in Merrill, Wis.; and
- Wausau Window and Wall Systems in Wausau, Wis.

In addition, Portland, Ore.-based Benson Industries LLC, a manufacturer of commercial fenestration products, including proprietary curtainwalls, sky- lights and storefronts, also has submitted its products into NFRC’s CMAST database.

www.solarinnovations.com
It's not uncommon to read an editorial in the consumer press where the question is posed “Wouldn't our buildings be more efficient if we got rid of the glass altogether?”

Much to the glass industry’s chagrin, it’s a question that was echoed earlier this year when the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) considered reducing in its 90.1 standard the amount of glass permissible in the envelope of commercial buildings using the prescriptive path by a full 25 percent (that decision was recently overturned—see page 10 for related story).

It is true that the single-pane glazing of yesterday easily transmitted the summer heat and winter chill to buildings’ interiors, but today’s products are able to provide a view and thermal performance. As the industry has enthusiastically embraced the energy-efficiency bandwagon, more and more glass products embody green in additional ways, such as using framing with recycled materials and ceramic frits free of lead; integrating window systems with sunshades, light louvers and other devices for optimizing daylight; and promoting the many benefits that windows naturally offer, such as natural ventilation, free daylighting and a healthy connection to the outdoors.

In recognition of the many ways in which glass products promote the “green” message, USGlass is acknowledging buildings in the categories of Active Glazing, Retrofit and New Construction that show the world just how green glass can be. These buildings were nominated by the readers of the USGNN.com™ e-newsletter.

**Awards Criteria**

In selecting the buildings they felt best conveyed how glazing can contribute to a building’s overall “greenness,” the judges considered a variety of factors. Information was provided by the nominees, including building certifications; glass type; framing type; the glazing products’ integration with other building components; the glass choice’s contributions to cost savings; “green” production and/or installation processes; and other information that are unique to each building. The winning projects are noted on the following pages along with all of the nominees.

**ACTIVE GLAZING FINALIST**

**Chabot College Community and Student Services Center**

**Hayward, Calif.**

**Architect:** tBP Architecture

**Glazing contractor:** Capital Glass Co. in Benicia, Calif.

**Supplier(s):** SAGE Electrochromics in Faribault, Minn.

**How Glass Makes It Green:** A key feature of the building is the south facing 2-story atrium. Rather than impeding the views with screens or blinds necessary to manage heat gain and glare in the atrium, approximately 2,900 square feet of electronically tintable glass was specified for the atrium in 4- by 2 ½-foot panels, eight panels tall. The glass is divided into six control zones, which tied to the building’s energy management system. Each zone can be dynamically tinted or cleared independently to account for the location of the sun based on the time of day and year. The use of dynamic glass to control the amount of sunlight entering the atrium allowed the architects to create an HVAC-free space.
Glazing contractor: LinEl Signature in Mooresville, Ind.  
Supplier(s): Oldcastle BuildingEnvelope™ in Santa Monica, Calif.; PPG Industries in Pittsburgh; Solutia in St. Louis  
How Glass Makes It Green: The historic skylights installed atop the museum in 1897 featured ¼-inch clear wired glass. Although the building owners were concerned with UV fading the artwork on the walls—as well as poor thermal performance—maintaining the historic look was critical. Ultimately the entire skylight was replaced with low-E coated laminated insulating glass units of varying transparency. Five types of glass were specified with various combinations of ceramic frits and opaque interlayers.

SAP Headquarters Building  
Architect: FXFOWLE Architects in New York  
Glazing contractor: APG International in Glassboro, N.J.  
Supplier(s): Viraco in Owatonna, Minn.  
How Glass Makes It Green: The project’s goals were to optimize visible light and views; control the natural ventilation and unwanted heat gain; and manage the abundant, natural light. At least eight different glass types were specified, including electrochromic glazing and triple-pane insulating glass units. Some of the 600 high-performance windows also feature between-glass “light louvers” to push light deeper into the interior. Every workstation has 100 percent daylighting, controlled by tintable glazing in some cases and custom, exterior “bonnet” sunshades in others. At night, the building’s climate sensors automatically open the clerestory windows to purge unwanted heat from the building, naturally cooling it for the next business day.

continued on page 22
was largely accomplished through the use of high performance triple-glazed insulating glass units incorporated into the curtainwall façade. The custom argon-filled, low-E coated insulating glass units were shop-glazed into the energy-efficient curtainwall framing system and installed onsite as a unitized curtainwall system. The building’s sensor system is integrated with the exterior shading devices incorporated in the glass curtainwall façade to automatically adjust the light transmitted and help control the temperature level in the facility. The floor-to-ceiling glass exterior and green roof integrate the office with its natural surroundings to create an exceptional work environment. SAP estimates that the building is one-third more energy-efficient compared to conventional buildings using intelligent design features.

Westhampton Free Library
Westhampton Beach, N.Y.

Glazing contractor: Sandpebble Builders Inc. in Southampton, N.Y.
Supplier(s): Kolbe & Kolbe Millwork Co. Inc. in Wausau, Wis.; Cardinal Corp. in Eden Prairie, Minn.

How Glass Makes It Green:
The architect chose 8-foot-high, oversized windows mimicking traditional, cottage-style, double-hung windows to overlook the 1,800-square-foot reading garden on the south side of the library, maximizing daylighting. According to the architect, the high energy performance of the windows helps the new library to reduce energy costs by 35-percent below the ASHRAE 90.1 baseline building model.

Consol Energy Center
Pittsburgh

Architect: Populous in Kansas City, Mo.; Astorino in Pittsburgh
Glazing contractor: D-M Products Inc. in Bethel Park, Pa.; Universal Glass & Metals Inc. in Detroit
Supplier(s): Kawneer in Norcross, Ga.

How Glass Makes It Green: Creating a feeling of openness throughout the facility was a key design element, bolstered by the curtainwall, which comprises the entire downtown-facing west side of the facility. Besides provid-
ing views of the city, the serpentine-like glass façade allows daylight to reach deep into the building. The curtain-wall’s framing was selected specifically to help enhance thermal performance and energy efficiency. In addition, sunshades were used on the exterior of the facility to help reduce solar heat gain; the 30-inch projections help shade interiors and conserve energy.

**Lindsey-Flanigan Courthouse Denver**

**Architect:** Klipp, Ricci Greene Associates in Denver and Harold Massop Associates Architects in Denver  
**Glazing contractor:** Trainor Glass in Alsip, Ill.  
**Supplier(s):** Kawneer in Norcross, Ga.; Skyline Skylight in Colorado Springs, Colo.  
**How Glass Makes It Green:** The east curtainwall, which uses recycled billet, hangs 12 feet above the walking path. The connecting soffit is a series of vent windows that are powered by motors to open inward and upward. These windows are wired into the HVAC system and programmed to open automatically when the conditions are right, flooding the atrium with fresh air. In addition, the curtainwall was fabricated and glazed less than 500 miles from the jobsite, helping contribute additional LEED® certification points. The project’s LEED® Gold rating is currently pending.

**Le Bonheur Children’s Medical Center Memphis, Tenn.**  
**Architect:** HKS Architects in Dallas, Texas  
**Glazing contractor:** BHN Corp. in Memphis, Tenn.  
**Supplier(s):** Vitro America in Memphis, Tenn.; Guardian Glass in Auburn Hills, Mich.  
**How Glass Makes It Green:** The medical center features nearly 90,000 square feet of high-performance insulating glass that contributes to the buildings goal of saving 25 to 30 percent on overall energy costs. The high-performance, low-E insulating glass was made due to the hot climate that Memphis can bring. With a 0.23 solar heat gain coefficient, the glass works in combination with the building’s other sustainable features to meet the design team’s stated energy goals, and to provide a sharp and crisp look.
How Glass Makes It Green: The 8,000-seat arena, which opened in October 2009, uses an energy-efficient combination of low-E in the glass units for the approximately 25,000-square-foot exterior façade. The low-E glass provides substantial energy savings and significantly reduces demand on regulated energy systems. The combination used provides good insulation as well as solar control benefits: it reduces the solar heat gain, reflectivity and provides glare control for the Center. Glass also was used for interior stair wells, balustrades and boxes to give spectators the clearest possible view of the action taking place in the main hall.

Cyan Apartment Building Portland, Ore.

Supplier(s): Pilkington in Toledo, Ohio; Oldcastle BuildingEnvelope™ in Santa Monica, Calif.

Architect: THA Architecture Inc. in Portland, Ore.

Glazing contractor: Toro Aluminum Ltd. in Portland, Ore.

Supplier(s): Guardian Glass in Auburn Hills, Mich.; Protemp Glass Inc. in Concord, Ontario

How Glass Makes It Green: The community-focused apartment building features community indoor and outdoor spaces, a green-roof and convenient interior recycling collection—as well as high-performance glass to reduce solar heat gain and provide a neutral appearance. Additional sustainable elements include energy-efficient speed chillers and fan coil units for heating and cooling. Overall energy savings are approximately 20 percent better than code, saving $42,000 a year in energy costs.

Pacific Design Center RED Building Los Angeles

Architect: Pelli Clarke Pelli in New Haven, Conn., Gruen Associates in Los Angeles

Glazing contractor: Permaeteilisa in Windsor, Conn.

Supplier(s): SYP Glass in Shanghai; Ferro Corp. in Cleveland, Ohio

How Glass Makes It Green: The building features high-efficiency double glazed windows with a “no-lead” red ceramic frit.

Manassas Park Elementary School Manassas, Va.


Glazing contractor: Del-Ray Glass Co. Inc. in Alexandria, Va.

Supplier(s): PPG Industries in Pittsburgh

How Glass Makes It Green: The elementary school is designed as a group of three houses, each with plenty of natural daylighting. Classrooms in each house are oriented to face north or south, and are situated around courtyards that maximize the ability of students to connect to the outdoors. As a result of this design, the installed interior lighting power for the school falls 38 percent below ASHRAE 90.1 requirements. Low-E glass contributes high light transmission and exceptional solar control characteristics as part of a high-performance envelope that incorporates tubular skylight, solar-selective glazing and other technologies. The school also makes use of projecting shade devices that control sunlight transmitted through south-facing exposures, reflecting light louvers that maximize daylighting from select window panes and sloped classroom ceilings that optimize natural light penetration.

Watsonville Water Resources Center Watsonville, Calif.

Architect: WRNS Studio in San Francisco

Glazing contractor: Pacific Glazing Contractors in Morgan Hill, Calif.

Supplier(s): PPG Industries in Pittsburgh; Lane-Aire in Carson, Calif.; Kawneer in Norcross, Ga.; NanaWall in Mill Valley, Calif.

How Glass Makes It Green: An east-west site orientation takes maximum advantage of northern California’s abundant sunlight, while numerous interior elements were planned to give occupants a direct visual and tactile connection to the outdoors. Examples include a line of skylights that bathe the building’s main central corridor in sunlight and private offices that are equipped with glass sidelites and operable clerestory windows. These features, together with automatic daylight control and daylight harvesting systems, create constant interplay with the outdoors, not just through the views, but also by providing occupants with the means to naturally (and energy-efficiently) manage ambient light, temperature, air quality and ventilation. Barriers between the indoors and outdoors are further reduced by large windows at the end of each corridor and other strategically located skylights that further minimize artificial lighting demands.

Green Design Awards

Continued from page 23

Photograph © 2010 Bruce Damonte

24 USGlass, Metal & Glazing | November 2010

www.usglassmag.com
Manitoba Hydro Place
Winnipeg, Manitoba, Canada

Manitoba Hydro Place integrates a variety of sustainable technologies to create a “living building” that dynamically responds to the local climate. A biodynamic double façade is the building’s public face and also one of its most vital sustainable components.

Architect: Kuwabara Payne McKenna Blumberg Architect in Toronto; Smith Carter Architects & Engineers in Winnipeg, Manitoba
Glazing contractor: Ferguson Neudorf Glass Inc. in St. Catharines, Ontario; Border Glass & Aluminum in Winnipeg, Manitoba
Supplier(s): Viracon in Owatonna, Minn.; PPG Industries in Pittsburgh

How Glass Makes It Green: The building’s unique, double façade curtainwall system is comprised of an insulating glass outer wall with a monolithic inner wall, separated by a three-foot buffer zone. A low-iron glass substrate with a low-E coating offers both high light transmission and powerful solar energy control, with a visible light transmittance of 80 percent that allows daylight to penetrate the floor-to-ceiling glazing and reach deep into the building’s core. Its low U-values reduce radiant heat transfer and improve the building’s overall energy performance. Automated exterior wall vents in the outer curtainwall (controlled by the building management system) allow fresh air into the building, year-round. Manually operated windows on the interior curtainwall allow employees to control their individual environment, which studies have shown enhances employee well-being and productivity while reducing absenteeism. Even in a city known for its extreme climate, the 695,000-square-foot tower uses less than one-quarter of the energy used by a typical large-scale North American office tower located in a more temperate climate.

Hunters Point Shipyard Community Center
San Francisco

Glazing contractor: Ahlborn Structural Steel in Santa Rosa, Calif.
Supplier(s): YKK AP in Dublin, Ga.; PPG Industries in Pittsburgh

How Glass Makes It Green: The Center is expected to use 30 percent less energy than required by California Title 24 Energy Code. This feat is achieved through multiple design strategies, including high-performance glazing and shading, as well as the addition of photovoltaics. The large amount of vision area with high-performance low-E glass on the north faces of the building, along with the high clerestory windows, promote daylighting while minimizing heat gain. The building is predicted to require 83 percent less heating, 55 percent less cooling and 54 percent less lighting energy than a typical building located within the state.

1 Bank of America Center
Charlotte, N.C.
Architect: Perkins + Will in Chicago
Glazing contractor: Trainor Glass in Alsip, Ill.
Supplier(s): PPG Industries in Pittsburgh

How Glass Makes It Green: Among the architect’s requirements was a glass with high visible light transmission for the indoors vegetation, as well as the aesthetics. The prevalent use of glass allows for lush interior forestry, most evident in the “Urban Garden,” a soaring six-story atrium that serves as an informal gathering spot for tenants and visitors to downtown Charlotte.

Michael J. Homer Science & Student Life Center
Atherton, Calif.
Architect: Leddy Maytum Stacy Architects in San Francisco
Supplier(s): PPG Industries in Pittsburgh

How Glass Makes It Green: Low-E glass is part of a high-performance building envelope that is oriented to maximize daylighting and reduce the need for artificial, heating, cooling and lighting. Ninety-eight percent of occupied spaces in the building have views of the outdoors and 55 percent of all building spaces use daylight as the primary light source. In addition, the building uses building integrated photovoltaics to generate electricity on-site.
Protective Glazing Manual
2010 Edition

A new tool for fabricators, installers and specifiers of protective glazing applications.

Created by the leading minds in the industry.

Available now.

Order today at
www.glasswebsite.com

GANA
GLASS ASSOCIATION OF NORTH AMERICA
The Voice of the Glazing Industry

PGC
International
The Glass Association of North America (GANA) and its volunteers work continually on changing the industry for the better. In 2010, the association made several significant strides in providing education on glass to a variety of audiences, including architects, the solar industry, code officials and, of course, professionals in the glass industry. Below are a few of the ways in which GANA has aims to make a difference.

Presentations
• Received accreditation through the American Institute of Architects for two educational courses: Protective Glazing 101 and Introduction to Decorative Glazing; and
• Held a one-day symposium on solar glazing in conjunction with the summer meetings of ASTM Committee E44 on Solar, Geothermal and Other Alternative Energy Sources.

Publications
• Released a new technical publication, the Protective Glazing Manual, a joint effort with the Protective Glazing Council International; and
• Re-released an updated version of the Guide to Architectural Glass, formerly known as the Specifiers Guide to Architectural Glass.

Technical
• Published/re-published three new glass informational bulletins:
  ❯ Detention Facility Glazing,
  ❯ LEED® Recycled Content for Glass, and
  ❯ Emergency Egress Through Laminated Glazing Materials; and
• Released two white papers on LEED® and its relevance to the glazing industry, specific to decorative glazing and mirrors.

Advocacy
• Reformed the Glazing Industry Code Committee under the GANA Association umbrella;
• Successfully appealed restrictive changes to ASHRAE’s 90.1 standard (see page 10); and
• Co-sponsored High Performance Building Congressional Caucus Coalition Briefing on Building STAR.
Glazing Industry Leaders Recognized
GANAPerspectives

by William Yanek

The Glass Association of North America’s (GANA) leaders are invaluable to all that GANA does. In recognition of that strong commitment to the association and industry, GANA staff and elected leadership would like to thank our volunteers.

During 2010, GANA members produced glass informational bulletins on a variety of subjects, updated the *Guide to Architectural Glass* (formerly the *Specifiers Guide to Architectural Glass*), published white papers regarding LEED® and produced a new *Protective Glazing Manual* in a joint effort with the Protective Glazing Council International.

Additionally, GANA volunteer leaders aggressively advocated on behalf of the glass and glazing industry at international, national and state level forums.

I ask that everyone join me in expressing your appreciation to GANAs volunteer leaders at the next opportunity you have. Our industry significantly benefits from their dedication and hard work.

GANAs Volunteer Leaders:

**GANA Board of Directors**
- Tom Crawford, Donisi Mirror Co. - GANA president
- Scott Surma, DecoTherm - GANA vice president
- Jon Johnson, Arch Deco - GANA treasurer
- Jay Phillips, Guardian Industries Corp. - GANA secretary
- Henry Taylor, Kawneer Co. Inc. – Building Envelope Contractors Division chair
- Kris Vockler, ICD High Performance Coatings – Decorative Division chair
- Jon Hughes, AGC – Flat Glass Manufacturing Division chair
- Tracy Rogers, Edgetech IG - Insulating Division chair
- Jim Ventre, Vitro America Inc. - Mirror Division chair
- Rick Wright, Oldcastle BuildingEnvelope - Tempering Division chair
- Michael Ondrus, GlassTech Inc. - GANA immediate past president

**Building Envelope Contractors (BEC) Division**
- Jon Kimberlain, Dow Corning Corp. - Proper Procedures for Deglazing task group chair
- Bill Sullivan, Heartland Glass Co. - BEC Scholarship Committee chair
- Doug Penn, United Glass Corp. - Technical Committee chair

**Decorative Division**
- Jeff Nixon, Glass Coatings and Concepts LLC - Product Color and Durability Subcommittee chair
- Joseph Ryan, Ferro Corp. - Glazing Materials Compatibility Testing task group chair
- Cathie Saroka, Goldray Industries - Membership Committee Chair, Website Committee chair
- Greg Saroka, Goldray Industries - Technical Committee chair
- Matthew Tangeman, Custom Glass Machinery - Education Committee chair, Digital Printing on Glass task group chair
- Geoff Weinstock, Schilling Graphics Inc. - Printing on Glass task group chair

**Flat Glass Manufacturing Division**
- Mitch Edwards, Guardian Industries Corp. - Technical Committee chair
- Steve Farrar, Guardian Industries Corp. - Educational Committee chair
- Pam Rygalski, Pilkinson North America Inc. - Climate Change Committee chair

**Insulating Division**
- Joe Erb, Edgetech IG - Website Committee chair
- Randi Ernst, FDR Design Inc. - IGU with Gas Content task group chair
- Cliff Monroe, Arch Aluminum and Glass Co. - Edge Seals for IG Units task group chair
- Jon Kimberlain, Dow Corning Corp. - Education Subcommittee chair
- Tracy Rogers, Edgetech IG - Membership Committee Chair, Capillary Tubes task group chair
- Aaron Thompson, Apogee (Viracon) - Technical Committee chair

**Laminating Division**
- Valerie Block, DuPont - Education Committee Chair, Membership Committee chair, Laminated Glass Railing System GIB task group chair
- Dan Laporte, Solutia Inc. - Technical Committee Chair, Education Subcommittee chair
- Fred Millet, Pleotint - Laminated Glass in Dynamic Glazing task group chair
- Cliff Monroe, Arch Aluminum and Glass Co. - Considerations for Cleaning Laminated Glass task group chair
- Julie Schimmelpennigh, Solutia Inc. - Ball-Drop Task Group Chair, Laminated Glazing Reference Manual task group chair, Laminated Glass Weight task group chair, Nominating Committee chair, ASTM C 1172 Review task group chair, Glass Furniture GIB task group chair

**Mirror Division**
- Randy Brooks, Gardner Glass Co. -
WARM-LIGHT®

Universal No-Tape™ 304
structural thermal barrier polymer

By Azon

Lowering energy costs, while reducing greenhouse gases, is possible in commercial buildings when manufacturers of fenestration products use the Azon thermal barrier method for aluminum windows and Warm-Light® warm-edge spacer for insulating glass.

Modern daylighting systems produced with both Azon structural thermal barrier technologies will yield a fenestration system capable of upholding the highest efficiency and sustainability standard.

Contact us to learn about the role of Azon thermal barriers in energy conservation.

AZON SAVES ENERGY

1-800-788-5942 | azonintl.com

SEE US AT GREENBUILD

Ltd. - LEED Subcommittee chair
• Steve Farrar, Guardian Industries Corp. - Life-Cycle Cost Analysis task group chair
• Bret Penrod, Pilkington North America Inc. - Fire-Rated Glazing Council Education Committee chair
• Jeff Razwick, Technical Glass Products - Fire-Rated Glazing Council chair
• Tracy Rogers, Edgetech IG - Energy Publications Subcommittee chair
• Helen Sanders, SAGE Electrochromics - Energy Committee chair, ASHRAE Subcommittee chair

• Christine Shaffer, Apogee (Viracon) - Marketing Committee chair
• Nathalie Thibault, Preco Inc. - Solar Products and Applications Subcommittee chair

the author

William Yanek is executive vice president of GANA. Mr. Yanek’s opinions are solely his own and not necessarily those of this magazine.

Concentrated Solar Power task group chair
• Sylvain Denis, Walker Glass Co. Ltd. - Technical Committee chair
• Marc Deschamps, Walker Glass Co. Ltd. - LEED Task Group Chair
• Mandy Marxen, Gardner Glass Co. - Mirrors: Handle with Extreme Care task group chair, Website Committee chair

TEMPERING DIVISION
• Ren Bartoe, Vesuvius USA - Membership Committee chair, Optical Distortion Subcommittee chair
• John Colapietro, Oldcastle BuildingEnvelope - Construction Subcommittee chair
• Ed Dean, Vesuvius USA - Education Committee chair
• Cliff Monroe, Arch Aluminum & Glass Co. Inc. - Glass Fab Tempering Session chair
• Jeff Nixon, Glass Coatings and Concepts LLC - Engineering Standards Manual Subcommittee chair
• Kevin Olah, Guardian Industries Corp. - Vehicular Subcommittee chair
• Doug Penn, United Glass Corp. - Fully Tempered Heavy Glass Door task group chair
• Mike Rupert, PPG Industries Inc. - Technical Committee Chair, IWCA Communications task group chair
• Chuck Wenc, Apogee (Viracon) - Roll Wave task group chair
• Scott White, Glaston - ASTM C 1048 Review task group chair

ASSOCIATION WIDE
• Valerie Block, DuPont - Protective Glazing Committee chair, Glazing Industry Code Committee chair
• Marc Deschamps, Walker Glass Co.
APPLICATION FOR GANA MEMBERSHIP

MEMBERSHIP QUALIFICATIONS: Membership in the Association is available to any foreign or domestic corporation, individual, or partnership engaged in owning or selling equipment; purchasing or processing glass direct from the factory; manufacturing primary or fabricated glass direct from the factory; manufacturing primary or fabricated glass and metal products for commercial distribution; distributing or installing fabricated and/or automotive glass; manufacturing materials, supplies or equipment used in the production of fabricated or automotive glass; or ancillary professions involving the design, specification, use or testing of glass products.

Application is hereby made for membership in the Glass Association of North America. If approved for membership, applicant agrees to abide by the Bylaws of the Association, and in consideration of the contributions made by present members, applicant also agrees to pay dues and assessments as established by the Board of Directors of GANA in accordance with its Bylaws.

COMPANY ________________________________________________________________
ADDRESS ________________________________________________________________
CITY, STATE ___________________________ ZIP______________________________
PHONE _________________________ FAX ________________________________
EMAIL ___________________________ WEBSITE ____________________________

*The Official GANA Representative (voting member) or Individual Affiliate Member (non-voting member) will be:
NAME ___________________________ TITLE ___________________________
SIGNATURE ______________________ DATE ____________________________

DUES: Please indicate your sales volume. Sales volume is for the sole purpose of calculating dues and will remain confidential. (not applicable to Affiliate Membership Dues)

<table>
<thead>
<tr>
<th>Sales Volume</th>
<th>Dues</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Million - 500,000</td>
<td>745</td>
</tr>
<tr>
<td>500,000 - 1.0 Million</td>
<td>870</td>
</tr>
<tr>
<td>1.0 Million - 1.5 Million</td>
<td>990</td>
</tr>
<tr>
<td>1.5 Million - 2.0 Million</td>
<td>1,110</td>
</tr>
<tr>
<td>2.0 Million - 2.5 Million</td>
<td>1,365</td>
</tr>
<tr>
<td>2.5 Million - 3.0 Million</td>
<td>1,605</td>
</tr>
<tr>
<td>3.0 Million - 5.0 Million</td>
<td>2,100</td>
</tr>
<tr>
<td>5.0 Million - 10.0 Million</td>
<td>2,220</td>
</tr>
<tr>
<td>10.0 Million - 15.0 Million</td>
<td>2,345</td>
</tr>
<tr>
<td>15.0 Million - 25.0 Million</td>
<td>3,090</td>
</tr>
<tr>
<td>25.0 Million - 50.0 Million</td>
<td>3,705</td>
</tr>
<tr>
<td>50.0 Million - 100 Million</td>
<td>5,805</td>
</tr>
<tr>
<td>100 Million - Over 8,665</td>
<td>7,290</td>
</tr>
</tbody>
</table>

Dues Surcharge of $1,270.00 is applicable to companies that are qualified by their regular business activity to belong to more than one Division. Please indicate the Division(s) or the Affiliate Membership Category for which you are qualified and wish to participate in:

- Building Envelope Contractors
- Decorative
- Flat Glass Manufacturing
- Insulating
- Laminating
- Mirror
- Tempering
- Affiliate Membership: $190.00 per individual (Architects, Consultants, Engineers, Specifiers, Test Laboratories)

Mail this form with check payable to:
GANA
800 SW Jackson Street, Suite 1500
Topeka, KS 66612
or apply online at www.glasswebsite.com

Total annual dues
(including $1,270 surcharge if applicable): $_________
Affiliate Membership Dues
($190.00 per individual): $_________
“Oldcastle BuildingEnvelope™ worked closely with our team to custom-engineer a complex curtain wall and the largest retractable glass doors in the world.”

— Mark Williams
AIA, LEED AP, Principal, HKS Sports & Entertainment Group

When the owners of the Dallas Cowboys decided to build a new stadium for their team, they called on HKS, Inc. This internationally acclaimed firm has decades of experience designing world-class sports venues. “When you are designing the largest and most advanced NFL venue ever built, you need to work with trusted partners. Oldcastle BuildingEnvelope™ played a critical role in custom-engineering a complex curtain wall system and unprecedented glass end zone doors for Cowboys Stadium,” said Mark Williams of HKS, Inc. For more information, call 1-866-OLDCASTLE (653-2278) or visit us online at oldcastlebe.com. See us at GreenBuild Conference, booth #601.
Great Products from GANA’s Members
Glass Association of North America Members Share New and Notable Products

The Glass Association of North America's (GANA) member companies are responsible for shaping the industry both through their work in the association and through supplying safe, sustainable and striking products for the construction of new buildings. Read over the next 10 pages for a sample of the latest products produced by GANAs members.

Agc's U4 Coating Delivers R5 Performance in an IGU

AGC Flat Glass North America in Alpharetta, Ga., has introduced U4 4th Surface Technology™, which it says allows double-glazed units to achieve the same levels of efficiency as costlier triple-glazed units. The U4 4th Surface Technology system incorporates a patent-pending pyrolytic low-E hard coating that can be installed on the fourth surface of the insulating glass unit (IGU). This coating technology enables manufacturers to use two low-E coatings in one IGU, resulting in an R5-rated glass package in a double-glazed unit.

The company reports that adding U4 coating to a double-glazed IGU reduces the center of glass U-factor by as much as 20 percent compared to standard IGU configurations with one low-E coating. The U-factor reduction gained with the coating improves the whole window performance by 16 percent when compared to a standard glass package. With the addition of the new coating to the room-surface of the inner pane (surface #4), the window is able to reflect energy to the inside as well as to the outside. This reduction improves the overall insulating properties by as much as 15 to 20 percent over conventional IGUs.

Pilkington’s Solar-E™ is Now Available in More Colors

Pilkington in Toledo, Ohio, is expanding its architectural line of energy-efficient solar control low-E products. The Solar-E™ coating, with its low solar heat gain coefficients and low reflectivity, is now available on a palette of natural colors—Arctic blue, blue-green and grey—to complement Solar-E on clear and other lines of pyrolytic low-E products.

The Solar-E family of products provides a combination of aesthetics and performance values with the same benefits of the on-line hard coat technology. It can be bent, insulated, laminated and tempered, and edge deletion is not required. It also can have a ceramic or frit applied to the coated surface for spandrels or a silkscreen pattern can be applied for the vision lites. It has an unlimited shelf life, and will not oxidize or change color over time.

Pilkington in Toledo, Ohio, is expanding its architectural line of energy-efficient solar control low-E products. The Solar-E™ coating, with its low solar heat gain coefficients and low reflectivity, is now available on a palette of natural colors—Arctic blue, blue-green and grey—to complement Solar-E on clear and other lines of pyrolytic low-E products.

Clearwall™ Delivers Monolithic Look for Low-Rise Applications

To provide a monolithic look for low-rise applications, Kawneer Co. Inc. in Norcross, Ga., has introduced its Clearwall™ curtainwall. The four-sided toggle glazed (TG) system features a breakthrough glass retaining mechanism. The company says its new curtainwall is a cost-effective alternative to four-sided systems, and its unique toggle mechanism reduces installation labor, simplifies onsite logistics and enhances safety while providing superior aesthetics.

The toggle mechanically captures the inboard lite of the IGU and is designed to rotate in place and automatically lock when the fastener is installed. Each toggle captures an edge of adjacent lites, increasing the efficiency of installation. Screw spline construction and straight cuts without any notching simplifies fabrication. Clearwall curtainwall features two millon depth for design flexibility.

Clearwall is offered in two other glazing options, each accommodating 1-inch insulating glass and using the toggle system. Options incorporate an attached interface to the glass with structural silicone or 3M™ VHB™ structural glazing tape.

PPG Introduces Transparent-Reflective SOLARBAN R100

Pittsburgh-based PPG Industries reports that its Solarban R100 glass, a transparent-reflective, solar control, low-E glass, offers better performance than competing products in the same architectural glass category.

Because it is based on the same coating technology as Solarban 70XL glass, Solarban R100 glass delivers outstanding solar performance with color-neutral exterior reflectance of 32 percent. Interior reflectance for Solarban R100 glass is 14 percent.

Solarban R100 glass has visible light transmittance of 42 percent and a solar heat gain coefficient of 0.23 that helps architects and building owners meet stringent building codes.

The glass’ 1.79 light-to-solar gain ratio is up to 29 percent greater than that of competing transparent-reflective, solar control, low-E glasses.

PPG has made Solarban R100 available in 24 standard colors as well as passing the test for light fastness as a naturally durable architectural coating.

Clearwater and Piezotech are registered trademarks of PPG Industries Inc.

Pilkington in Toledo, Ohio, is expanding its architectural line of energy-efficient solar control low-E products. The Solar-E™ coating, with its low solar heat gain coefficients and low reflectivity, is now available on a palette of natural colors—Arctic blue, blue-green and grey—to complement Solar-E on clear and other lines of pyrolytic low-E products.

The Solar-E family of products provides a combination of aesthetics and performance values with the same benefits of the on-line hard coat technology. It can be bent, insulated, laminated and tempered, and edge deletion is not required. It also can have a ceramic or frit applied to the coated surface for spandrels or a silkscreen pattern can be applied for the vision lites. It has an unlimited shelf life, and will not oxidize or change color over time.

The company says its new curtainwall is a cost-effective alternative to four-sided systems, and its unique toggle mechanism reduces installation labor, simplifies onsite logistics and enhances safety while providing superior aesthetics.

Clearwall is offered in two other glazing options, each accommodating 1-inch insulating glass and using the toggle system. Options incorporate an attached interface to the glass with structural silicone or 3M™ VHB™ structural glazing tape.

continued on page 34
IT STARTED OUT GREEN, BUT ENDED UP PLATINUM.

The Bank of America building in Midtown, Manhattan is the first skyscraper designed to achieve a LEED® Platinum rating and is billed as the greenest skyscraper in the country. One reason is the building’s floor-to-ceiling glass curtain wall made from Viracon’s high-performance, low-e coating on low iron glass with a custom silk-screen. Viracon worked with the architects and contractors to provide glazing options that met strict LEED Platinum guidelines. But that’s nothing new at Viracon. For over 40 years, our customers have trusted us to provide proven sustainable architectural glass expertise without compromising aesthetics or energy efficiencies. To get our thinking on your thinking call 800.533.2080, e-mail glass@viracon.com or visit viracon.com.

©2010 Viracon. All rights reserved.
DuPont™ Structural Safety Glass Interlayer Stands Guard

SentryGlas® ionoplast interlayers from Wilmington, Del.-based DuPont™ are designed to help create light, safe, strong glazing that stands up to greater loads and higher threat levels. The interlayer’s rigidity and toughness are well-suited to structural glass in applications such as floors, stairs, balcony rails and minimally-supported facades and canopies.

Up to 100 times stiffer and 5 times tougher than traditional PVB interlayers, SentryGlas® also is noted for clarity, edge durability and an ability to bring more natural daylight into larger spaces. The interlayers are available in a range of thicknesses.

Vanceva® Creates Color Options

The Vanceva® color system by Saflex®, a part of Solutia Inc. in St. Louis, gives architects and designers the ability to create more than 3,000 colors for architectural laminated safety glass. Glass fabricators can leverage the color system to reduce traditional lead times for custom colored glass simply by stocking nine layers of Vanceva PVB and combining them in up to four layer configurations to achieve the architect’s desired color.

Based on a CMYK...
Pilkington Solar-E™ Glass

Introducing Pilkington Solar-E™ Glass...the world’s first color-neutral pyrolytic solar control low-e glass.

Pilkington is introducing another breakthrough in pyrolytic solar control technology with a new Pilkington Solar-E™ family of products. In response to the demand for lower solar heat gain, lower reflectivity and glare control, Pilkington has added Pilkington Solar-E™ on a palette of natural colors - Arctic Blue, Blue-Green, EverGreen and Grey to accompany Pilkington Solar-E™ on Clear and other Pilkington Low-E pyrolytic products.

For more information please contact us at BuildingProducts.PNA@nsg.com or call 800 221 0444 or visit www.pilkington.com/na
color model, the Vanceva color system consists of pink, blue, yellow and grey interlayers in two light transmissions. In addition, Solutia publishes color forecasts each year for the Americas, Europe and Asia Pacific to assist fabricators and designers in understanding color trends around the world.

www.vanceva.com

decorative glass

Dreamwalls Color Glass Introduces Glass Tile Program

Dreamwalls Color Glass by Gardner Glass Products in North Wilkesboro, N.C., has introduced a line of versatile glass tiles. The tiles are available in sizes from 4 by 4 inches to 24 by 24 inches and can be specified in rectangular sizes as well. Designers and specifiers can match the glass to any color they choose: Pantone®, Benjamin Moore®, RAL® or other color specifying guides can be used.

The tiles are opaque, making them easy to install because there is no danger of seeing the adhesive or trowel marks behind the glass. The tiles feature a flat polished and arras edge for further ease of installation.

www.dreamwallsglass.com

continued on page 38
R5 performance.
Now available in a double-glazed unit.

**Introducing U4 - 4th Surface Technology.**
A revolution in glass technology, U4 is a patent-pending, pyrolytic-coated glass that can be used on surface #4 of an IGU. Adding U4 can improve overall energy performance by 15% or more. All AGC Comfort Ti Low-E coatings, when combined with U4, allow you to offer R5 center-of-glass (COG) performance (0.20). The proven hard-coat technology in U4 allows for seamless integration into your manufacturing process.

Flexibility, productivity, and performance.
Get triple-pane performance without the cost.

What can U4 do for 4 U?

Call 1-888-234-8380 or visit www.U4glass.com to learn more.
Great Products

continued from page 36

solar glazing

Hecker® Brings Its Glass to the Solar Industry

Hecker® Glastechnik in Dortmund, Germany, offers its heat-resistant glass worldwide, and now offers those products to the solar glazing industry. Among its products are EnergyVision, a highly transparent glass for solar collectors, and BoroVision, a borosilicate glass for thin film solar modules, among other applications.

www.glas.hecker.de

sealant and adhesive

Dow Corning Sealants Now on GSA Federal Supply Schedules

Dow Corning in Midland, Mich., has announced that its silicone products for the construction industry, including its structural glazing sealants, are now available through the GSA Federal Supply Schedule.

The company reports that its silicone-based sealants provide building designers and contractors with resistance under temperature and weather extremes; superior flexibil-

continued on page 40

Tem-Pace Offers Sculpted Possibilities

Tem-Pace Inc. in Niles, Mich., has developed a unique product for the decorative glass market called SculpturLite. A single lite of the temperable formed glass becomes 3-dimensional with folds and valleys, multiple textures and colors to bring out a special and unique appearance. While maintaining a flat edge around the perimeter, SculpturLite glass can be used in numerous applications.

www.tempace.com

IMAGINE.

DAYLIGHT WHERE YOU WANT IT
AND REAL SOLUTIONS TO GET IT THERE.

See over 20 standard systems or get a project-specific design. Isn’t it time to get what you really want?
Flawless.

That describes every Cardinal glass product in a word. Anything less is out of the question. From clear float glass to high-performance IG units, you can count on product performance and appearance to be perfect. Our Intelligent Quality Assurance Program, I.Q. for short, makes sure of that. We employ our own patented inspection systems, systems that rely on carefully calibrated scientific instrumentation. So results are objective, not subject to human interpretation. This objectivity also assures product uniformity plant-to-plant as well as time-after-time. Float, tempered, coated and laminated glass as well as IG units— all have passed our I.Q. tests with flying colors. Visit cardinalcorp.com for more information.
ity and adhesion to a wide variety of building substrates; and building protection that lasts up to three times longer than organic materials used for the same application.

www.dowcorning.com/GSA

components

Saint-Gobain Offers Warm-Edge Spacer

SGG SWISSPACER from Saint-Gobain Glass Exprover N.A. in Scottsdale, Ariz., is a thermally optimized spacer bar made from a highly insulating composite material. It features thin metal membranes for air and gas tightness, as well as an excellent adhesion for all IG sealing compounds. Swisspacer matches the shape and dimensions of aluminum spacers, and being rigid and self-supporting it handles in a similar way. Swisspacer can be used in all types of insulating glazing units, and also is suitable for use in roof glazing or curtain wall facades where it is exposed to high thermal and mechanical loads. The spacer is available in 17 colors.

www.swisspacer.com

Great Products

continued from page 38

tools

EdgeTech Adds to Gas-Fill Capabilities

Cambridge, Ohio-based Edgetech I.G. has expanded its capabilities to service Gasglass argon gas detectors and Spyglass glass analyzers.

Gasglass is a non-invasive method for measuring insulation gas fill levels. It allows freedom of movement and quality control for doors and windows. The portable, user-friendly design allows for more suitable measurements at lower fill levels ranging up from 50 percent argon fill with high precision.

Spyglass is a laser-based gauge for measuring and detecting glass types, structure, coatings and thicknesses. With the product, users can measure the characteristics of installed insulating glass units and order the type.

In addition, the company has partnered with UK-based Inagas, a provider of gas-fill machinery. Under the agreement, Edgetech will be the exclusive distributor of Inagas products in North America and Central America, and also will distribute the products in Germany, France, Switzerland and Austria. According to the company, Inagas gas-fill solutions use the latest in oxygen sensor technology with auto-calibration functionality upon startup. This patent-pending
SmartStart capability ensures accuracy and reliability for improved production flow and quality control. Edgetech will offer the full range of Inagas products, including gas fillers, accessories and test equipment.

machinery and equipment

Vesuvius Continues to Keep Things Hot

The experts at Vesuvius continuously are designing and developing fused silica products to meet the solar, glass fabricating, glass forming and foundry industries. Among those is the ZYAFoAM® fused silica insulating products, engineered to create a low-dust, fiber-free insulating product for lining heated chambers. The products are fully machineable and have capabilities to 1,832 degrees Fahrenheit.

The company’s new SMARTLY DRIVEN® all mechanical end cap attachment design was developed to eliminate the high temperature adhesive attachment design. It also offers performance enhancement of withstanding temperatures to 662 degrees Fahrenheit, instead of 302 degrees Fahrenheit, with the adhesive design.

fire-rated glazing

SuperLite Meets Super Safe Requirements

SAFTI FIRST in San Francisco says that its SuperLite X-90 is the most affordable tint-free, non-wired, clear glazing available that meets all the fire and safety requirements for 90-minute temperature rise doors. SuperLite X-90 can be provided with a vision kit or used in any listed 90-minute vision lite frame. It comes with a lifetime warranty and is manufactured in the United States for fast lead times and competitive pricing.

The vision kits are available in 5 by 35, 6 by 27, 7 by 22 and 12 by 12, in a bronze or primed finish. Other sizes and finishes are available upon request.
Donald Trump recently placed a large window order from an unknown Chinese window producer for one of his projects, according to an interview with CNBC. Why? He says he couldn’t find a U.S. producer.

“I ordered windows, thousands of windows the other day; they’re made in China,” he told CNBC in the September 10 interview. “I don’t want to buy them, but it’s hard to get them anywhere else.”

Not surprisingly, Trump’s offhand comment drew a great deal of attention from U.S.-based commercial window manufacturers.

Buy American?
U.S. manufacturers were quick to disagree on the real estate mogul’s assessment of the availability of domestic windows, pointing out that U.S. manufacturers offer high-quality custom products—and are seeking work. In a recent interview with USGlass on ensuring quality in imported aluminum materials, Dave Hewitt, director of marketing for EFCO, a Pella Co., in Monett, Mo., points out, “There are a lot of hard-working people [in the aluminum window/curtainwall industry] in the United States who need work and we have a lot of capacity, which makes us competitive.”

“We did not have the opportunity to review the specifications for Mr. Trump’s recent large Chinese window purchase. However, I find it impossible to believe that American manufacturers could not have produced equal products better, quicker and more cost effectively,” Ray VanNess, president of Shreveport, La.-based Seal Craft, tells USGlass. “I have grown weary of this kind of news while having to lay-off good employees while struggling to outlast this recession. Buy American!”

Tom Harris, executive vice president of United States Aluminum in Waxahachie, Texas, had a similar take. “All suppliers I know are desperate and have seen the dip coming for a while, so I believe they would have pursued aggressively,” he says.

“What is so special about these windows?” asks Ted Wantuck with State Corp. in Rochester Hills, Mich. “Having represented window manufacturers for years and being aware of the great variety of window manufacturers in this country, I am skeptical about the inability of Mr. Trump to find his product in the United States.”

Courtney N. Little, president and general counsel of Ace Glass in Little Rock, Ark., says perhaps it comes back to the industry needing to do more to educate potential buyers.

“Maybe the truth is that we are not doing enough as an industry to promote all that we have to offer. Maybe Trump doesn’t know that you can’t throw a rock in Wisconsin without hitting a window company. We need to make sure that we do our part to educate potential buyers that we have the products they need.”

Buying from China
According to U.S. Census Bureau figures, yes, Chinese imports of aluminum and bauxite products have increased in recent years. Reports show that such imports were valued at $464,188,000 in 2005; in 2009 the value was reported as $599,932,000 (down some compared to 2008, which was listed as $617,672,000).

Just recently the U.S. Department of Commerce ruled that aluminum extrusions imported from China are benefitting from various subsidies that are counteravailable under the law. Based on the preliminary determination, imports of aluminum extrusions from China will be subject to cash deposits or bonds ranging from 6.18 percent to 137.65 percent of the entered value of the merchandise (see “Department of Commerce Finds Chinese Aluminum Extrusion Imports Are Being Subsidized Significantly” at right).

“Mr. Trump’s purchase of ‘thousands of windows’ in China because they were cheaper than those made in the U.S. shows that Chinese manufacturers have already found a loophole around the anti-dumping tariff on aluminum extrusions whose ink is hardly dry,” comments Bob Pecorella of Northern Building Products in Teterboro, N.J. “Instead of shipping just aluminum lineals, where post-tariff prices would be more comparable to those of U.S. manufacturers, the Chinese are doing the entire assembly process to circumvent the intent of the U.S. International Trade Commission.

“Ironically, Mr. Trump may have done us a favor by bringing this issue up so that the industry can push for appropriate protective action,” Pecorella adds.

Chuck Knickerbocker, curtainwall manager with Technical Glass Products in Snoqualmie, Wash., wonders if Trump is only telling part of the story, noting there are possibly several scenarios in play.

“One, he couldn’t find a U.S. producer who would do it as cheaply as the Chinese were willing to do it. Two, he wasn’t willing to pay for the quality he’ll get in a U.S. product over the money he thinks he’s saving in buying from the Chinese. And three, in the long run, he’ll pay for it.
Department of Commerce Finds Chinese Aluminum Extrusion Imports are Being Subsidized Significantly

The U.S. Department of Commerce (DOC) has announced its affirmative, preliminary determination that imports from China are benefiting from various subsidies that are countervailable under the law. The determination follows the filing of a petition earlier this year from the U.S. Aluminum Extrusion Fair Trade Committee, a coalition of U.S. extruders, with the U.S. International Trade Commission (ITC) and the U.S. Department of Commerce (DOC) for redress from alleged unfair trade practices involving aluminum extrusions imported from China. As a result of this decision, countervailing duties may be applied to imports to offset these subsidies and remedy the unfair trade. Based on this preliminary determination, imports of aluminum extrusions from China will be subject to cash deposits or bonds ranging from 6.18 percent to 137.65 percent of the entered value of the merchandise. If the case ultimately is successful and a countervailing duty order is imposed, imports after this preliminary determination will be subject to countervailing duties. Likewise, importers also could be liable for countervailing duties on imports of aluminum extrusions from China.

Brent Slaton is the national sales coordinator for Keymark Corp., an aluminum extrusion company, and is also actively involved with the American Architectural Manufacturers Association’s Aluminum Material Council. He says the U.S. available aluminum capacity currently is running at about 60 percent. “It’s a 3 billion pound market a year,” Slaton says. “Last year China exported extrusions of 192,000 tons into the United States. That equates to close to 500 million pounds.”

With the DOC’s recent determination, the bonds on exports coming into the United States can be viewed as a positive step forward. Slaton points out that in the United States building construction materials make up the largest portion of those 3 billion pounds and about 1.3 billion of that is estimated to be doors, windows and curtainwall.

“With this change in effect, domestic producers won’t have to compete with subsidized metal and it will allow them to be more price competitive and profitable,” Slaton says. “It will also help create jobs and some of the presses that have been idle will hopefully start back up.”

“All our industry wants is for the rules to be enforced and to compete on a level playing field,” adds Duncan Crowdis, chairman of the committee and president of Bonnell Aluminum. “The Commerce Department’s preliminary determination shows the extent to which the Chinese industry is receiving unfair government subsidies. U.S. producers cannot compete under these unfair conditions, and we need Commerce to apply duties to ensure that additional business and jobs are not lost due to unfair competition.”

Rand Baldwin, president of the Aluminum Extruders Council (AEC) agrees, “The determination by the Commerce Department is a welcome leveling of the playing field. It will benefit our entire industry and all our customers. Bringing a fair trade case is always a risk. AEC salutes the U.S. Fair Trade Committee. This preliminary order vindicates, in a big way, the risk taken by the Committee. It also lends evidence to just how difficult an environment it had been for U.S. extruders.”

Based on this preliminary determination, the DOC will instruct Customs to suspend liquidation of imports of aluminum extrusions, and importers will be required to post a bond or deposit cash in the amount of the estimated duties. The DOC will continue its investigation, conduct on-site verifications in China, and make final determinations.

In a separate investigation, the DOC is investigating whether imports are being sold at prices that are less than fair value (i.e., dumped). Following Commerce’s preliminary determinations, the U.S. International Trade Commission will conduct a final investigation and determine whether the industry is injured or threatened with injury. If the DOC’s and the ITC’s final determinations both are affirmative, antidumping and countervailing duty orders will be imposed, and imports will be subject to antidumping and countervailing duties. The anticipated timing of the impositions of antidumping and countervailing duty orders is spring 2011.

through the nose, as he has no guarantees that he’ll get anything close to the warranty coverage he’d get if it were from a U.S. manufacturer. Also the Chinese, as of this date, won’t provide the quality of goods and services he’d get with a U.S. manufacturer. Granted, it’s changing, but it is not there yet. The Chinese have not been doing it that long and don’t have the depth and breadth of experience the U.S. producers have.”

Knickerbocker adds, “Like all things, you get what you paid for. In the end, you’re probably getting top-end, Class A prices while providing a Class C space and amenities.”

Trump Responds

The glass industry reaction on this comment was so strong, in fact, that it brought forth a reaction from Trump himself. On October 4, USGlass received a copy of our report with a handwritten note, confirmed to be from Trump, saying, “China’s artificially low currency make it hard for U.S. companies to compete—I would much rather buy U.S.—and do much business with Pella—and others). The U.S. product is better.”

Still, that note did not come with a confirmation that Trump would be looking at the available products produced in the United States.

the author

Ellen Rogers is a contributing editor for USGlass.
though the themes may have been familiar—a challenging economy; a focus on energy-efficiency; and new products for retrofit and government projects—this year’s GlassBuild America, held September 14-16 in Las Vegas, did, in fact, offer a number of new solutions to attendees. A wide range of new product introductions and enhancements were presented to attendees looking for new ways to differentiate themselves from their competitors.

**Glass and Metal**

A handful of glass, metal and commercial window companies were on the show floor this year. Among them, Vitro America showcased its Classic Line™ architectural aluminum at the show. “We received some very good sales leads and valuable feedback from customers on our products,” commented Alice Dickerson, director of sales and marketing. Those products included architectural aluminum entrances and framing systems designed to improve fabrication time and ease of installation. Standard finishes include clear and bronze anodized, with others available upon request or custom order.

Boyd Aluminum Manufacturing offered an array of window products in its booth geared toward the historic restoration market, as well as blast- and impact-resistant products. “What we’re really touting in blast and impact [products] is quick delivery,” said Brad Squires. “Blast is fueling the market,” added Boyd’s Michael Castleberry. According to Castleberry, “Blast is where impact was 12 years ago—it’s still in its infancy.”

Castleberry says that Boyd has stayed on top of this market in part because of involvement in the American Architectural Manufacturers Association (AAMA), for which he is assisting in putting together an advanced blast course geared toward helping educate architects on how to spec blast products. He says being involved in the association has helped them see what’s coming in the industry.

U.S. Aluminum also was promoting the blast mitigation properties of its new product; the company had expanded its Defender Series with the addition of the BW8000 single-hung window. The high-performance window system was engineered to work with the company’s Defender Series blast mitigation storefront and curtainwall systems, with corresponding sight lines and glazing specifications. The window features a 4 ½-inch-deep frame designed to match typical...
More Products and More GlassBuild Coverage

The year’s big show had a number of additional highlights, too big for one review. For more information, look for the following features.

• **Solar Watch:** visit the Only Online section of www.usglassmag.com for a report on the solar seminar, focusing on building integrated photovoltaics, presented during the event.

• **Decorative Delights:** Look for the special Decorative Glass section in next month’s USGlass for a rundown of the unique and eye-catching decorative glass displays on the GlassBuild floor.

• **See for Yourself:** See show highlights for yourself by visiting www.usglassmag.com/studio. There you can view videos on material handling and transportation products, energy-efficiency highlights, new software products and attendee observations straight from the trade show floor.

• **Showcase Spotlight:** Check out the Showcase department in this (page 18) and future issues of USGlass for lots more new product information.

You can also mark your calendars for the next GlassBuild America, scheduled for September 7-9, 2011, in Atlanta at the Georgia World Congress Center.
building conditions, and a pour and debridge thermally insulating frame that accepts glazing infills from 1 to 1 1/8 inches, with convenient extruded pulls at the interlock and bottom rail.

EFCO Corp. focused on energy efficiency, with four new product launches in its XTherm™ line. “We got a lot of attention over our new hung window, which we call HX45,” said Dave Hewitt, director of sales and marketing for EFCO. “That has a 0.27 U-factor. It’s two-finish capable inside and out.” Hewitt noted, “We’re bidding a lot of that throughout the country right now and we just launched it a few weeks ago; because of that U-factor it’s getting a lot of traction, which we hoped it would because of the scenario with retrofit right now.” That scenario being the continued strength of the retrofit market, according to the bidding being seen by EFCO.

Also generating interest in the EFCO booth was the new Duracast® curtain-wall pressure plate for its 5600 series. “In most of the pressure wall systems you’ve got to snap in a thermal isolator and then you put your glass in and bolt your pressure plate to hold the glass into the opening. This doesn’t do that—the pressure plate itself is the thermal break. It’s one less step to do, so all the customers seem to gravitate towards that,” Hewitt said.

Manufacturers wanting to save on glass costs due to damage in the plant or in the field were interested in Glas-Weld’s improved version of its scratch removal system—Gforce™. The updated version includes a center water feed, which offers more control when performing scratch removal. The company introduced two polishing compounds and a new cleaning compound, “to get out more difficult damage.” Users may add on modules, such as one for abrading and graffiti.

“Customers have been very interested in the product,” said the company’s Lori Patch. “It’s still a very simple process.”

**Alternative Strategies**

According to Hewitt, advances in energy performance remains among the top innovations being introduced to the industry currently.

“For fenestration companies like ours, the new things [we see] are taking aluminum to where it’s never been before by using exotic struts, T shapes, forms that are in foam . . . things where you’re still getting the benefit of the aluminum for the look of the grid and the historical [projects], but you’ve got all the internal components that are there to get you the numbers that are down there with wood and vinyl,” Hewitt said.

In some cases, commercial projects are achieving those numbers through alternate products such as PVC.
Customer using it and the feedback has been fantastic.”

Royal showed its EcoWindow, a complete R5 window system that combines sustainability with high energy performance, high condensation resistance and other factors. The company’s John Vucanovich reported that the system recently was tested to commercial standards so it too can be used in those applications.

“Cool” New Products

Other out-of-the-ordinary solutions were present on the show floor in response to continued interest in energy-efficiency.

Brent Slaton, national sales coordinator for Keymark Corp., was pointing fellow attendees toward Akzo Nobel’s Cool Chemistry products. These extrusion coatings contain infrared reflective pigments that increase solar reflectivity. Slaton pointed out that it was an inter-

Show Reaction Varies Widely

Attendees’ reactions at GlassBuild were mixed. Visitors looking to be surprised by new developments from smaller companies seemed fairly pleased, while those planning to network with their large suppliers, in some cases, were disappointed.

“It’s a pretty good show,” found Greg Stowell of Clinton Glass Co. as he walked the floor. “It’s worth it if you own a glass business; there’s always something to find and you’re surprised every year by something, so it was worth it.”

However, Dave Schneider of Fusion Ceramics, pointed out that only a few of the larger national suppliers exhibited. “Occasionally there’s some type of a big buyer, and there are a few [here], but that’s been a bit of a disappointment,” he said.

“There’s always something new, you’ve just got to find it out. Usually it’s the smaller booths where you find the new stuff,” commented Curtis Smith of Royal-Tech Windows.

“And,” Smith added, “it’s a good chance to see everyone else in the industry that you only see once a year.”
esting idea for making a window frame reflect heat, same as the glass, and pro-
vide an efficient whole product.

Bridgestone had something cool on display, as well: its new COOLSAFE solar control interlayer film for laminated glass. The new adhesive interlayer is made up of two layers of an EVA-based adhesive layer around a PET-based sunlight control layer with a special coating. Company representatives were quick to note that the product offers safety properties typical of laminated glass, as well as solar control, without limiting daylighting or the use of cell phones. The product can be used to laminate glass without an autoclave.

Bridgestone also showcased its EVASAFE line; representatives say the clear adhesive film features extremely high transparency; heat, humidity and UV durability; and has excellent sound insulating properties in the high frequency range.

For attendees looking for something a little “hotter,” Radiant Glass Industries had on display its new Power*e® Glass. The product on display demonstrated how the IGU conducts an electrical current across the low-E coating on the interior lite in order to produce radiant heat—with no visible wires. According to the company, the window can be washed and treated like any ordinary window, while the heat can be controlled by conventional thermostats. Company representatives reported that they received a great reception as they promoted the new product at the show.

On a related note, Saf-Glass was promoting its brand new Energy Glass for fenestration. The small PV display was using the convention center lights to power a strip of LEDs. “PV can’t work with indirect light like this does,” said Art Marino.

Although the first-generation technology at GlassBuild had a slight haze to it, Marino noted that the second generation product, being introduced at a subsequent solar show, would be fully transparent.

Shower Doors and Door Hardware Introductions

A number of new shower door products on the show floor provided new options for fabricators.

Glen Miner was pleased to show off PPG’s new Clarvista shower glass product. On display in the booth were test samples of Clarvista compared to uncoated glass products after being exposed to long-term humidity. Miner said that although it’s early yet, the product has been getting a good reception from shower door fabricators.

In addition, he said the company’s SOLARBAN® R100 glass low-E glass “met with exceptional success.” The transparent-reflective, solar control, low-E glass features a proprietary hybrid coating technology and achieves a visible light transmittance of 42 percent and a solar heat gain coefficient of 0.23.

When asked “What’s new?” the representatives at Alumax were quick to respond “What isn’t?” Among the shower
Glass handling tools and machinery were especially prevalent on this year’s trade show floor.

Europe for some time now. It includes the Chalet PT system, designed for swinging doors, opening in both directions, in living areas and less frequented office spaces. It features a self-closing function and is available in three options: without stops in the open position, stop in the open position at 90 degrees and stop in the open position at 85 degrees. The inconspicuous Icetec® is a sliding door system made of stainless steel for indoor use, and designed for easy installation.

For attendees who looked closely, Doralco Architectural Metal Solutions had on display what it is calling the world’s smallest glass door lock. The Slimline center lock and strike housing is 75 percent smaller than standard glass door center lock. No holes are needed in the glass for installation, and company representatives report that it is easy to install with or without sidelite rails.

Tools of the Trade

A number of machinery manufacturers brought new products to the show. Among them, Lisec America displayed a new flexible spacer applicator for processing asymmetrical triple units. The automated VSA-D1 is able to change spacer widths for triple-glazed units on the fly. Because the applicator features dual material supply, it’s able to change between two spacer widths within seconds, a feature that will allow fabricators to produce asymmetrical triple units in the shortest possible cycle time. According to Lisec president Bob Quast, the focus for the new machine was on made-to-order products.

Dan Thompson of Glaston said that the company had been “pleasantly surprised” by traffic at the show. The company was quietly introducing its new products on the heat treatment side of its business in video form, with plans for a louder launch at glasstec, the biannual German trade show that took place on the heels of GlassBuild (look for the December 2010 USGlass for more on glasstec). Other machinery manufacturers followed that same lead; Jeff Giles, sales director, glass processing machinery, for Benteler, noted that the company would be launching a new PV sealer at the later trade show, but was content to simply maintain a presence at the Las Vegas event.

Although the machinery section of the floor was largely quiet, a number of companies offering handling tools found interest from attendees.

Edgetech IG’s Mike Burk was busy at the company’s booth showing a variety of tools for manufacturers. The company announced a new partnership with United Kingdom-based Inagas, a supplier of gas-fill machinery. Under the agreement, Edgetech will be the exclusive distributor of Inagas products in North America and Central America, and also will distribute the company’s products in Germany, France, Switzerland and Austria.

Edgetech also serves as the exclusive distributor of Sparklike’s Gasglass argon and krypton gas detector and Spyglass glass analyzer in the Americas, Europe and Australia.

All of these were featured in the company’s booth, as well as portable measurement tools offered by EDTM, such as low-E coating detectors and various light measurement tools.

EDTM also exhibited at the show, featuring its Glass-Chek Pro for the first time. Mark Imbrock reported that the company has added six languages to the tool, which he said is helping with worldwide sales.

“The number-one call we get is people not being able to tell the difference between double silvers—Glass Chek Pro helps with that. It’s bailing people out,” Imbrock said. “It’s been the number-one thing people have come to our booth to see.”

The authors

Megan Headley is the editor of and Tara Taffera is a contributing editor for USGlass.

www.usglassmag.com

November 2010 | USGlass, Metal & Glazing 49
More and more developers and planners are searching for ways to restore the life, culture and excitement of cities, culminating in the revitalization and renewal of many urban areas. Consider downtown Pittsburgh. For centuries this Pennsylvania locale was known for its strong industrial ties, particularly in coal mining, steel production, aluminum and glass. And today, while manufacturing remains a big part of Pittsburgh’s economy, the city’s industrial focus has evolved into more high-tech fields.

“Cities are trying to create more diversity in the use of their downtown areas so they are not just a financial district or a business district. Developers are trying to get people living and shopping downtown and getting more 24/7 use out of their urban core,” says Ben Tranel, a project architect with San Francisco-based Gensler.

Earlier this year downtown Pittsburgh saw the completion of its first new high-rise in 20 years, when the Fairmont Hotel at 3 PNC Plaza opened its doors. Designed by Gensler, 3 PNC Plaza is a 752,000-square-foot, 23-story, mixed-use high-rise constructed to meet LEED standards. The cladding area of the building was 250,000 square feet and about 4,000 pre-glazed frames were installed.

Key Considerations

“The idea was to create a building that would be a part of the skyline in a light, bright and refreshing way,” says Tranel. “We were looking for glass products that would feel light and airy. We also wanted a glass that would have some coloration and warmth so on those cold, gray, winter days the building would still have warmth and brightness.”

Another design consideration was the fact that the tower would be a mixed-use building, having a hotel, condo and office portion, as well as different aspects in the base, such as a retail component.

“We were looking to break down the mass of the building so it would not feel too big and massive and we wanted to articulate the different programs inside the building, both formally, but also through the type of glass,” says Tranel.

Glass Selection

“There was a desire to, if at all possible, work with PPG because its headquarters are a block and a half away,” says Tranel. “The company provided us with a new coating that had not been used extensively before; it wasn’t brand new and it wasn’t the first time it was used, but it was something relatively new for them.”

The majority of 3 PNC Plaza features PPG’s Re-Birth Glass.
70XL, as well as a green body tinted glass.

Trulite Industries in Mississauga, Ontario, fabricated the insulating glass (IG) for the project.

Oldcastle BuildingEnvelope™ (which acquired contract glazier Antamex in 2006) handled the glazing portion of the project. R. (Rocco) Parzanese, vice president of contracts, said they were brought on to the job by P.J. Dick, the general contractor.

“We were pretty well involved beginning with the design-assist stage of the project. There were architectural drawings available when we came on board, but a lot of the architectural details were not developed yet,” says Parzanese. “We went through all of the development details and conditions with the architects, which involved several meetings and a lot of conference calls.”

He adds, “The architects wanted to work with one entity as much as possible and we took on that role,” says Parzanese. “They already had in mind what the glass and colors and finishes were going to be. We were on board to make sure it would all work properly.”

Form and Function

For a project so heavily focused on the glazing element, both performance and aesthetics were critical. Tranel says one of the challenges with which they were faced involved making sure the color of the glass was exactly right.

“It was tough to get the right combination of substrate and low-E coating to get the color we wanted,” he says. “While it was a challenge to get the right color and balance with environmental performance, in the end we were happy with the way it turned out.”

Working with large glass lites also posed challenges.

“There were some very large pieces of glass, especially in the storefront of the hotel lobby. So it was a bit of a challenge to get some of those made because they were 7-feet, 6 inches wide—quite big insulating, low-E coated units,” says Tranel.

Parzanese adds that his team spent a lot of time at the main entrance of the hotel because of the large glass lites.

“It took quite a bit of planning and logistics to make sure they would work,” he says. Speaking of the project in its entirety, he adds, “[The glass work] was quite intricate in the sense of some of the interfacing details, especially at the terrace areas and the softest areas where we had to integrate with the curb and roof conditions.”

The design and construction of 3 PNC Plaza was about urban renewal and bringing new life to downtown Pittsburgh.

In It Together

According to Parzanese, one thing about this project that made it different compared to others was the fact that Gensler, the design architect, and the local architect, Astorino of Pittsburgh, were on two different coasts.

“So [working around] the time difference could sometimes lengthen the time to communicate between all the parties,” Parzanese says.

However, he points out that despite the logistical considerations, everyone involved was able to work well together.

“We had a number of face-to-face, on-site meetings [which had to be coordinated when Gensler architects were in town] and we also had weekly conference calls and those conversations took place [from the beginning],” says Parzanese. “It wasn’t a case of coming to a certain point in time and saying, ‘OK, I guess we better ask some questions.’ The questions [were asked] continually and we worked through them every week with the architects and contractor.”

Tranel agrees.

“It was a very positive experience,” he says, adding that this project, like many others, provided a learning opportunity and lessons that will be valuable on future jobs. “You always learn about how products go together and it’s enlightening to experience the differences in how a material appears from a 12 x 12 standpoint to a mock up to the actual site,” he says. “And that’s also an experience that you accumulate and take with you to the next project.”

Ellen Rogers is the editor of the Architects’ Guide to Glass & Metal magazine.
**NewsMakers**

**new hires**

**Sjöberg is New Manager of Quality for Kawneer**

Sara Sjöberg has been named the new manager of quality for Kawneer North America in Norcross, Ga. Sjöberg brings 15 years of experience in quality management from various fields. In her new position, Sjöberg is responsible for providing leadership and coordinating strategic quality initiatives across the company’s manufacturing locations and service centers throughout the United States and Canada.

Sara Sjöberg

Sjöberg is a member of the American Society for Quality where she is certified as a quality manager, quality engineer, quality auditor and quality technician.

**Many Changes at Glaston**

Tapio Engrström has taken over as chief financial officer (CFO) for Finland-based Glaston. Engrström replaces Kimmo Lautanen, who announced his resignation in May. Engrström comes to the company from CPS Color Holding Oy, where he has worked since 2009 as CFO. Before that he served as CFO at Aspocomp Group Oyj.

Pekka Huuhka is the new senior vice president of the supply chain. Huuhka joins Glaston from Oy SWOT Consulting Finland Ltd., where he has worked since 1998 as managing partner. Topi Saarenhovi continues as senior vice president.

Sasu Koivumäki has been appointed as vice president of sales and services for North America. Koivumäki joined Glaston in 2002 and has held various financial and management positions during the years.

Tapani Lankinen has been appointed the company’s senior vice president of human resources, replacing Manne Tiensuu. Lankinen will be a member of the company’s executive management group. He joins the company from Cargotec Corp., where he has worked since 2008, most recently as vice president and regional HR head for Europe, Middle East and Africa.

In addition, Glaston’s executive management group has named Frank Chengdong Zhang, general manager for the Asian region, a member of the executive management group.

**promotions**

**Grenzebach Corporation Appoints New Management Team**

Grenzebach Corp. has announced a restructuring of its management team in Newnan, Ga. As part of these changes, Joe Chuhran will now share the executive duties as president.

John Fluker, who previously served as vice president of marketing and sales, will also serve as chief sales officer. He has been with the company since 2006.

Chuhran also has been named chief technical officer. He remains a managing partner of Millennium Control Systems, with which Grenzebach has had a business arrangement since 2003; in 2008 Grenzebach acquired an ownership in Millennium and opened a subsidiary of the company in its Newnan facility.

Claudia Wurll will continue to serve as vice president of administration and work closely with both Fluker and Chuhran.

**Wausau Window and Wall Promotes Two**

Wausau Window and Wall Systems has named Peter Fuchs as the Advantage by Wausau wall products manager. He will be responsible for enhancing the wall products offering and anticipating customers’ future needs. During his eight years with Wausau, his previous roles have included project management, technical and administrative roles; he served most recently as a process improvement manager.

Corey Roland, who has 30 years of experience with Wausau Window and Wall Systems, now serves as the company’s architectural sales representative for Florida and Georgia. Most recently, he worked as an estimating technical specialist responsible for quotation and order processes. His previous roles at Wausau include production planning and scheduling, estimating management,
enterprise resource planning and other business process implementation.

YKK AP Promotes Greg Taylor to National Sales Manager

YKK AP America announced the promotion of Greg Taylor to national sales manager. Taylor, who previously served as regional sales manager, is now responsible for the development and overall performance of the company’s commercial products sales force throughout the United States.

Taylor brings more than 25 years of experience in architectural aluminum products to his current position. Prior to YKK AP, Taylor served as vice president for a major contracting firm in Texas.

Viracon Names Doug Zirngible Director of Maintenance and Engineering

Viracon has named Douglas Zirngible director of maintenance and engineering. In his new role, Zirngible will oversee all aspects of the maintenance and engineering departments and be based in the company’s Owatonna, Minn., headquarters.

Prior to become director of maintenance and engineering, Zirngible served as the production manager for the company’s tempering and insulating operations. He has worked in operations, engineering and maintenance capacities for more than 25 years and has completed the Six Sigma Green Belt and Black Belt training.

AAMA Hires Southeast Region Codes Consultant

The American Architectural Manufacturers Association (AAMA) announced that Dwight Wilkes will be working as its consultant on codes issues pertaining to the Southeast region of the United States. As a part of this consultant role, Wilkes will utilize his existing relationships with key staff and officials in the Florida Building Commission and Southeast region state and local building and energy code organizations to help keep AAMA’s members informed about code changes affecting this region. He will analyze the effects of proposed state code changes in order to determine the impact on the industry. Wilkes additionally will advocate recommended Southeast Region code change proposals and public comments within the appropriate state code arenas as well as reporting the results of code hearings to AAMA members.

Wilkes is a former building official in St. John’s County, Fla., and comes to this consulting role with extensive experience as a plans examiner as well.
Mark Your Calendar for Glass Expo Northeast™

Glass Expo Northeast™ will be returning to Long Island, March 17-18, 2011. Dedicated to providing educational seminars on architectural glass and general business management, the two-day event includes, in addition to the sessions, a trade show full of industry suppliers and lots of local networking opportunities, including a St. Patty’s Day Cocktail Party.

Glass Expo Northeast will be held at Hyatt Regency Long Island at Wind Watch Hotel & Golf Club in Long Island (Hauppauge), N.Y., and is co-sponsored by the Long Island Glass Association and USGlass magazine. The hotel will host attendees and exhibitors for a reduced rate; call 800/233-1234 for room reservations and mention Glass Expo Northeast 2011.

Though still many months away, industry companies have already signed on to exhibit including United Glass Corp.; McGrory Glass Co. Inc.; New York Window Film Co.; Oldcastle BuildingEnvelope™; C.R. Laurence Co. Inc.; GTS; JLM Wholesale (also a sponsor of an event coffee break); J.E. Berkowitz LP; Mayflower Sales Co. Inc.; REBCO Inc; and more.

Registration is now available online.

www.usglassmag.com/gene

GPD India, Glasspex India to Co-Locate

Messe Düsseldorf, organizer of GLASSPEX INDIA, has formed a cooperation with Glass Performance Days (GPD) to co-locate the two events for the Indian glass industry at the Bombay Exhibition Center in Mumbai, with GPD India taking place January 11-12, 2011, and GLASSPEX INDIA taking place January 12-14, 2011.

This second edition of GPD India will focus on Innovations in Architectural and Solar Glass Technologies. In addition to GPD, GLASSPEX INDIA 2011 will feature two other ancillary events: The All India Glass Manufacturers’ Federation will stage the ninth edition of its international conference on “Managing Sustainable Growth,” while Messe Düsseldorf, in conjunction with Solarpraxis AG, will organize the first Solar Industry Summit India, “Application meets Production – How to Use and Produce PV in India.”

The special show “Glass Technology Live Goes India” also will include solar technology as a main subject.


STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(This statement is published in compliance with the Act of October 23, 1962) USGlass Metal & Glazing magazine is published 12 times annually, for an annual subscription price of $45.00. Office of publication is located at 385 Garrisonville Road, Suite 116, Stafford, VA 22554; Headquarters of general business offices of the publisher is located at 385 Garrisonville Road, Suite 116, Stafford, VA 22554.

Publisher: Debra A. Levy, 385 Garrisonville Road, Suite 116, Stafford, VA 22554. Editor: Megan Headley, 385 Garrisonville Road, Suite 116, Stafford, VA 22554. Managing Editor: Erin Harris, 385 Garrisonville Road, Suite 116, Stafford, VA 22554. The owner is Key Communications Inc., 385 Garrisonville Road, Suite 116, Stafford, VA 22554. Stockholders holding one percent or more of total amount of stock: Debra A. Levy, known stockholders, mortgages, and other security holders holding one percent or more of total amount of bonds, mortgages, or other securities: None. The average number of copies of each issue during the twelve months preceding the date shown is: (A) Total number of copies: 40,522; (B) Paid and/or requested circulation: 39,056; (C) Total paid and/or requested circulation: 39,056; (D) Free distribution by mail (samples, complimentary and other free): 139; (E) Free distribution outside the mail (carriers or others means): 221; (F) Total free distribution: 579; (G) Total distribution: 39,635; (H) Copies not distributed (1) from office use, leftover, unaccounted, spoiled after printing: 858, (2) Returns from News Agents: 0; (I) Total: 40,493; (J) Percent Paid and/or requested circulation: 98.15.

I certify that the above statements made by me are correct and complete.

Debra Levy, Publisher

GPD India, Glasspex India to Co-Locate

Messe Düsseldorf, organizer of GLASSPEX INDIA, has formed a cooperation with Glass Performance Days (GPD) to co-locate the two events for the Indian glass industry at the Bombay Exhibition Center in Mumbai, with GPD India taking place January 11-12, 2011, and GLASSPEX INDIA taking place January 12-14, 2011.

This second edition of GPD India will focus on Innovations in Architectural and Solar Glass Technologies. In addition to GPD, GLASSPEX INDIA 2011 will feature two other ancillary events: The All India Glass Manufacturers’ Federation will stage the ninth edition of its international conference on “Managing Sustainable Growth,” while Messe Düsseldorf, in conjunction with Solarpraxis AG, will organize the first Solar Industry Summit India, “Application meets Production – How to Use and Produce PV in India.”

The special show “Glass Technology Live Goes India” also will include solar technology as a main subject.


Mark Your Calendar for Glass Expo Northeast™

Glass Expo Northeast™ will be returning to Long Island, March 17-18, 2011. Dedicated to providing educational seminars on architectural glass and general business management, the two-day event includes, in addition to the sessions, a trade show full of industry suppliers and lots of local networking opportunities, including a St. Patty’s Day Cocktail Party.

Glass Expo Northeast will be held at Hyatt Regency Long Island at Wind Watch Hotel & Golf Club in Long Island (Hauppauge), N.Y., and is co-sponsored by the Long Island Glass Association and USGlass magazine. The hotel will host attendees and exhibitors for a reduced rate; call 800/233-1234 for room reservations and mention Glass Expo Northeast 2011.

Though still many months away, industry companies have already signed on to exhibit including United Glass Corp.; McGrory Glass Co. Inc.; New York Window Film Co.; Oldcastle BuildingEnvelope™; C.R. Laurence Co. Inc.; GTS; JLM Wholesale (also a sponsor of an event coffee break); J.E. Berkowitz LP; Mayflower Sales Co. Inc.; REBCO Inc; and more.

Registration is now available online.

www.usglassmag.com/gene

GPD India, Glasspex India to Co- Locate

Messe Düsseldorf, organizer of GLASSPEX INDIA, has formed a cooperation with Glass Performance Days (GPD) to co-locate the two events for the Indian glass industry at the Bombay Exhibition Center in Mumbai, with GPD India taking place January 11-12, 2011, and GLASSPEX INDIA taking place January 12-14, 2011.

This second edition of GPD India will focus on Innovations in Architectural and Solar Glass Technologies. In addition to GPD, GLASSPEX INDIA 2011 will feature two other ancillary events: The All India Glass Manufacturers’ Federation will stage the ninth edition of its international conference on “Managing Sustainable Growth,” while Messe Düsseldorf, in conjunction with Solarpraxis AG, will organize the first Solar Industry Summit India, “Application meets Production – How to Use and Produce PV in India.”

The special show “Glass Technology Live Goes India” also will include solar technology as a main subject.


STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(This statement is published in compliance with the Act of October 23, 1962) USGlass Metal & Glazing magazine is published 12 times annually, for an annual subscription price of $45.00. Office of publication is located at 385 Garrisonville Road, Suite 116, Stafford, VA 22554; Headquarters of general business offices of the publisher is located at 385 Garrisonville Road, Suite 116, Stafford, VA 22554.

Publisher: Debra A. Levy, 385 Garrisonville Road, Suite 116, Stafford, VA 22554. Editor: Megan Headley, 385 Garrisonville Road, Suite 116, Stafford, VA 22554. Managing Editor: Erin Harris, 385 Garrisonville Road, Suite 116, Stafford, VA 22554. The owner is Key Communications Inc., 385 Garrisonville Road, Suite 116, Stafford, VA 22554. Stockholders holding one percent or more of total amount of stock: Debra A. Levy, known stockholders, mortgages, and other security holders holding one percent or more of total amount of bonds, mortgages, or other securities: None. The average number of copies of each issue during the twelve months preceding the date shown is: (A) Total number of copies: 40,522; (B) Paid and/or requested circulation: 39,056; (C) Total paid and/or requested circulation: 39,056; (D) Free distribution by mail (samples, complimentary and other free): 139; (E) Free distribution outside the mail (carriers or others means): 221; (F) Total free distribution: 579; (G) Total distribution: 39,635; (H) Copies not distributed (1) from office use, leftover, unaccounted, spoiled after printing: 858, (2) Returns from News Agents: 0; (I) Total: 40,493; (J) Percent Paid and/or requested circulation: 98.15.

I certify that the above statements made by me are correct and complete.

Debra Levy, Publisher

Mark Your Calendar for Glass Expo Northeast™

Glass Expo Northeast™ will be returning to Long Island, March 17-18, 2011. Dedicated to providing educational seminars on architectural glass and general business management, the two-day event includes, in addition to the sessions, a trade show full of industry suppliers and lots of local networking opportunities, including a St. Patty’s Day Cocktail Party.

Glass Expo Northeast will be held at Hyatt Regency Long Island at Wind Watch Hotel & Golf Club in Long Island (Hauppauge), N.Y., and is co-sponsored by the Long Island Glass Association and USGlass magazine. The hotel will host attendees and exhibitors for a reduced rate; call 800/233-1234 for room reservations and mention Glass Expo Northeast 2011.

Though still many months away, industry companies have already signed on to exhibit including United Glass Corp.; McGrory Glass Co. Inc.; New York Window Film Co.; Oldcastle BuildingEnvelope™; C.R. Laurence Co. Inc.; GTS; JLM Wholesale (also a sponsor of an event coffee break); J.E. Berkowitz LP; Mayflower Sales Co. Inc.; REBCO Inc; and more.

Registration is now available online.

www.usglassmag.com/gene

GPD India, Glasspex India to Co- Locate

Messe Düsseldorf, organizer of GLASSPEX INDIA, has formed a cooperation with Glass Performance Days (GPD) to co-locate the two events for the Indian glass industry at the Bombay Exhibition Center in Mumbai, with GPD India taking place January 11-12, 2011, and GLASSPEX INDIA taking place January 12-14, 2011.

This second edition of GPD India will focus on Innovations in Architectural and Solar Glass Technologies. In addition to GPD, GLASSPEX INDIA 2011 will feature two other ancillary events: The All India Glass Manufacturers’ Federation will stage the ninth edition of its international conference on “Managing Sustainable Growth,” while Messe Düsseldorf, in conjunction with Solarpraxis AG, will organize the first Solar Industry Summit India, “Application meets Production – How to Use and Produce PV in India.”

The special show “Glass Technology Live Goes India” also will include solar technology as a main subject.

**NORTH AMERICAN EVENTS**

**December 7-9, 2010**
Ecobuild America
Sponsored by the National Institute of Building Sciences.
Washington Convention Center.
Washington, D.C.
Contact: Show organizers at 800/96-3863.

**May 12-14, 2011**
AIA Convention
Sponsored by the American Institute of Architects (AIA),
Convention Center.
New Orleans.
Contact: AIA at 800/242-3837.

**June 5-8, 2011**
AAMA Summer Meeting
Sponsored by AAMA,
Convention Center.
Minneapolis.
Contact: AAMA at 847/303-5664.

**March 17-18, 2011**
Glass Expo Northeast™ 2011
Sponsored by USG
Hyatt Regency Long Island
Long Island (Hauppauge), N.Y.
Contact: USGlass at 540/720-5584.

**March 24-27, 2011**
Glass Week 2011
Sponsored by the Glass Association of North America (GANA).
Las Vegas.
Contact: GANA at 785/271-0208.

**March 28-29, 2011**
BEC Conference
Sponsored by GANA.
Las Vegas.
Contact: GANA at 785/271-0208.

**April 7-8, 2011**
Glass Expo Midwest™ 2011
Sponsored by USG
Embassy Suites Kansas City
Kansas City, Mo.
Contact: GANA at 785/271-0208.

**May 2-4, 2011**
Glass Fabrication & Glazing Educational Conference
Sponsored by GANA.
Embassy Suites Kansas City
Kansas City International Airport.
Kansas City, Mo.
Contact: GANA at 785/271-0208.

**September 14-16, 2011**
Construction Show
Sponsored by the Construction Specifications Institute.
McCormick Place.
Chicago.
Contact: Show organizers at 972/536-6429.

**September 25-28, 2011**
AAMA Fall Conference
Sponsored by AAMA,
JW Marriott Desert Springs,
Palm Springs, Calif.
Contact: AAMA at 847/303-5664.

**April 11-13, 2012**
Glass TEXpo™ 2012
Sponsored by USG
El Tropicano Holiday Inn Riverwalk.
San Antonio.
Contact: USGlass at 540/720-5584.

**INTERNATIONAL EVENTS**

**2011**

**January 20-22, 2011**
Batilux Monaco
Organized by Nurnberg Messe.
Monaco.
Contact: Show organizers at 00377 97 77 00 35.

**February 24–26, 2011**
fensterbau/frontale India 2011
Organized by Nurnberg Messe.
New Delhi, India.
Contact: Melanie Ziegler at melanie.ziegler@nuernbergmesse.de.
Hurricane-Resistant
SAFTI FIRST™ Fire Rated Glazing Solutions
325 Newhall Street
San Francisco, CA 94124-1432
Phone: 888/653-3333
Fax: 415/824-5900
sales@generalglass.com
www.generalglass.com
info@safti.com

Laminated
Oldcastle BuildingEnvelope™
50 manufacturing locations throughout
North America
Phone: 866/653-2278
www.oldcastlebe.com

Precision Glass Bending Corp.
PO Box 1970, 3811 Hwy 10 West
Greenwood, AR 72936-1970
Phone: 800/543-8796 or 479/996-8065
Fax: 800/543-8798 or 479/996-8962
www.e-bentglass.com
sales@e-bentglass.com

Vitro America
965 Ridge Lake Blvd., Suite 300
Memphis, TN 38120
Phone: 800/238-6057
www.vitroamerica.com
sales@vitroamerica.com

Ray-Bar Engineering Corp.
697 W. Foothill Blvd.
Azusa, CA 91702
Phone: 800/444-XRAY or 800/444-9729
Fax: 800/444-0240
www.xrayglass.com
sales@xrayglass.com

Screenprinted Glass
General Glass International
101 Venture Way
Secaucus, NJ 07094
Phone: 201/533-1850
Fax: 201/533-1851
www.generalglass.com
sales@generalglass.com

Tempered
Oldcastle BuildingEnvelope™
50 manufacturing locations throughout
North America
Phone: 866/653-2278
www.oldcastlebe.com

X-Ray Fluoroscopic
Amero Enterprises Inc.
150 Commerce Rd.
Boynton Beach, FL 33426
Phone: 800/237-3320
Fax: 561/737-3721
www.amero.com
claire@amerolene.com

Ray-Bar Engineering Corp.
697 W. Foothill Blvd.
Azusa, CA 91702
Phone: 800/444-XRAY or 800/444-9729
Fax: 800/444-0240
www.xrayglass.com
sales@xrayglass.com

X-Ray Protective
Amero Enterprises Inc.
150 Commerce Rd.
Boynton Beach, FL 33426
Phone: 800/237-3320
Fax: 561/737-3721
www.amero.com
claire@amerolene.com

Ray-Bar Engineering Corp.
697 W. Foothill Blvd.
Azusa, CA 91702
Phone: 800/444-XRAY or 800/444-9729
Fax: 800/444-0240
www.xrayglass.com
sales@xrayglass.com

ARCHITECTURAL METAL
Dyes/Custom Metal
EFCO Corporation
1000 County Road
Monett, MO 65708
Phone: 800/221-4169
Fax: 417/235-7313

Metals, General

Vitro America
965 Ridge Lake Blvd., Suite 300
Memphis, TN 38120
Phone: 800/238-6057
www.vitroamerica.com
sales@vitroamerica.com

BATHROOM SPECIALTIES

Vitro America
965 Ridge Lake Blvd., Suite 300
Memphis, TN 38120
Phone: 800/238-6057
www.vitroamerica.com
sales@vitroamerica.com

Shower Door Hardware
C.R. Laurence Co. Inc.
2503 E Vernon Ave.
Los Angeles, CA 90058
Phone: 800/421-6144
Fax: 800/262-3299
www.claurance.com

US Horizon Mfg., Inc.
2857 Industry Dr.
Valencia, CA 91355
Phone: 877/728-3874
Fax: 888/440-9567
www.ushorizon.com

DECORATIVE GLASS

Decorative Glass, General
Oldcastle BuildingEnvelope™
50 manufacturing locations throughout
North America
Phone: 866/653-2278
www.oldcastlebe.com

Virginia Glass Products Corp.
P.O. Box 5431
Martinsville, VA 24115
Phone: 800/368-3011
Fax: 276/956-3020
www.va-glass.com
info@va-glass.com

Virginia Glass, Metal & Glazing

USG
DEVELOPED ESCLUSIVELY FOR THE ARCHITECTURAL GLASS INDUSTRY
© 2011 USGlass Magazine. All rights reserved. No reproduction of any type without expressed written permission.

November 2010 | USGlass, Metal & Glazing 57
**Etched Glass**
Able Glass, Inc.
2713 NW 19th St.
Pompano Beach, FL 33069
Phone: 877/303-0455
Fax: 954/978-2790
www.etchedbyable.com

Walker Glass Co. Ltd.
9551 Ray Lawson
Montreal, QC H7X 3K7 Canada
Phone: 888/320-3030
Fax: 514/351-3010
www.walkerglass.com

**Painted**
Decorative Glass Company
14647 Lull Street
Van Nuys, CA 91405-1209
Phone: 800/768-3109
Fax: 818/785-7429

**DOORS**
Bullet Resistant
Total Security Solutions, Inc.
170 National Park Drive
Fowlerville, MI 48836
Phone: 866/930-7807
www.tssbulletproof.com

United States
Bullet Proofing, Inc.
16201 Branch Court
Upper Marlboro, MD 20774
Phone: 301/218-7920
Fax: 301/218-7925
www.usbulletproofing.com

**Closers**
Access Hardware Supply
14359 Catalina Street
San Leandro, CA 94577
Phone: 800/348-2263
Fax: 510/483-4500

**DOOR HARDWARE AND RELATED PRODUCTS**
Boyle & Chase, Inc.
72 Sharp Street
Hingham, MA 02043
Phone: 800/325-2530
Fax: 800/205-3500
www.boyleandchase.com
sales@boyleandchase.com

JLM Wholesale, Inc.
3695 Mullins Court
Oxford, MI 48371
Phone: 800/522-2940
Fax: 800/782-1160
www.jlmwholesale.com
sales@jlmwholesale.com

**SAFTI FIRST™ Fire Rated Glazing Solutions**
965 Ridge Lake Blvd., Suite 300
Memphis, TN 38120
Phone: 800/238-6057
www.vitroamerica.com
sales@vitroamerica.com

**Track Caps**
Johnson Bros. Metal Forming
5520 McDermott Dr.
Berkeley, IL 60163
Phone: 708/449-7050
Fax: 708/449-0042

**GLASS FURNITURE**
Table Tops
Spancraft Ltd.
920 Railroad Ave.
Woodmere, NY 11598
Phone: 516/295-0055
Fax: 516/569-3333
www.spancraft.com
jordan@spancraft.com

**GLASS HANDLING/TRANSPORTATION**
Handling Equipment, General
Rolltech Industries
11 Dansk Court
Toronto, ON M9W 5N6 Canada
Phone: 419/337-0631
Fax: 419/337-1471

**Packaging**
Sabercraft
Interleave Materials
471 Apollo Drive, #10
Lino Lakes, MN 55014
Phone: 651/784-1414
Fax: 651/780-0432
www.sabercraft.com

**INSULATING GLASS AND COMPONENTS**
Oldcastle BuildingEnvelope™
50 manufacturing locations throughout North America
Phone: 866/653-2278
www.oldcastlebe.com

Vitro America
965 Ridge Lake Blvd., Suite 300
Memphis, TN 38120
Phone: 800/238-6057
www.vitroamerica.com
sales@vitroamerica.com

**Airspacers**
Alumet Mfg., Inc.
3803 136th St. NE
Marysville, WA 98271
Phone: 360/653-6666 or 360/653-6666
Fax: 360/653-9884
www.helimasc.com
kmadey@helimasc.com

To place your listing(s)
contact Janeen Mulligan
540/720-5584 Ext. 112
e-mail jmulligan@glass.com
Muntin Bars
Alumet Mfg., Inc.
3803 136th St. NE
Marysville, WA 98271
Phone: 360/653-6666 or 800/343-8360
Fax: 360/653-9884

Tempering Lines/Machinery, General
Trent, Inc.
201 Leverington Ave.
Philadelphia, PA 19127
Phone: 800/544-TRENT
Fax: 215/482-9389
www.trentheat.com
info@trentheat.com

Decorative

MIRROR AND MIRROR RELATED PRODUCTS
Mirror, General
Palmer Mirro-Mastics
146 St. Matthews Avenue
PO Box 7155
Louisville, KY 40257-0155
Phone: 502/893-3688 or 800/431-6151
Fax: 502/895-9253
www.mirro-mastic.com

Virginia Glass Products Corp.
P.O. Box 5431
Martinsville, VA 24115
Phone: 800/368-3011
Fax: 276/956-3020
www.va-glass.com
info@va-glass.com

Vitro America
965 Ridge Lake Blvd., Suite 300
Memphis, TN 38120
Phone: 800/238-6057
www.vitroamerica.com
sales@vitroamerica.com

Acid Etched Mirror
Walker Glass Co. Ltd.
9551 Ray Lawson
Montreal, QC H7X 3K7 Canada
Phone: 888/320-3030
Fax: 514/351-3010
www.walkerglass.com

Antique Mirror
Spancraft Ltd.
920 Railroad Ave.
Woodmere, NY 11598
Phone: 516/295-0055
Fax: 516/569-3333
www.spancraft.com
jordan@spancraft.com

Skylights
O’Keeffe’s Inc.
325 Newhall Street
San Francisco, CA 94124
Phone: 415/822-4222
Fax: 415/822-5222
www.okeeffes.com

SOFTWARE
Software, General
Albat + Wirsam
North America
1540 Coralville Rd., Suite 214
Oakville, ON L6J 7W5
Phone: 905/338-5650
Fax: 905/338-5671
www.albat-wirsam.com
moreinfo@albat-wirsam.com

PMC Software Inc.
Barrie Corner Business Park
8 Bartles Corner Rd., Suite 11
Flamborough, ON L0J 1J9
Phone: 905/806-7824
Fax: 905/806-3951
www.pmcsoftware.com

Point of Sale
Quest Software Inc.
1000 E. Sturgis St., Suite 8
St. Johns, MI 48879
Phone: 800/544-1259
Fax: 517/224-7097
www.questsoftware.com

STOREFRONT/ENTRANCES
Storefront Material, General
Oldcastle BuildingEnvelope™
50 manufacturing locations throughout North America
Phone: 866/653-2278
www.oldcastlebe.com

Pittco Architectural Metals, Inc.
1350 Landmeier Rd.
Elk Grove Village, IL 60007
Phone: 800/992-2278
Fax: 815/965-9946
info@pittcometals.com
www.pittcometals.com

continued on page 60

www.usglassmag.com

November 2010 | USGlass, Metal & Glazing 59
I want to start/continue my FREE SUBSCRIPTION to USGlass: ☐ YES ☐ NO

Name: ___________________________ Signature: ___________________________ Date: ___________________________

Company: ___________________________ Title: ___________________________ Address: ___________________________ City: ___________________________ State: ____________ Zip: ___________________________

Phone: ___________________________ Fax: ___________________________ Email: ___________________________

1. Please check the ONE category that BEST describes the business activity of your company:

☐ 1000  Fabricator ☐ 1100  Manufacturer
☐ 2000  Contract Glazier/ Glazing Subcontractor ☐ 3000  Distributor/Wholesaler
☐ 5000  Services to the field ☐ 4000  Retailer/Dealer
☐ 6000  Other (please specify): ___________________________

2. Please check ALL the products or services your company buys/sells:

☐ A  Flat/Fabricated Glass ☐ B  Architectural Metals ☐ C  Doors/Door Hardware ☐ D  Machinery & Equipment
☐ E  Windows/Window Hardware ☐ F  Doors/Door Hardware ☐ G  Machining/Cutting ☐ H  Plastics/Plastic Alternatives
☐ I  Bent, Etched, Beveled Glass ☐ J  Plastic/Glass Alternatives ☐ K  Insulating Glass ☐ L  Sealtants/Adhesives
☐ M  Storefronts/Curtainwall ☐ N  Shower Door/Tub Enclosures ☐ O  Glaziers’ Hardware, Tools ☐ P  Coating/Tinting/Film
☐ Q  Mirrors/Mirror Products ☐ Q  Other (please describe): ___________________________

3. Please check ALL the types of work your company performs:

☐ A  Commercial ☐ R  Residential ☐ B  Automotive ☐ O  Other

4. Number of employees at this location: ___________________________

5. What other publications do you receive:

☐ A  Glass Digest ☐ B  Glass Magazine ☐ C  Neither

6. Please check all the organizations that you are a member of:

☐ A  AAMA ☐ B  GANA ☐ C  NGA ☐ D  AGA ☐ E  IGMA

Subscriptions are free to all qualified recipients at U.S. addresses. Addresses outside the U.S. please add $80 per year. Digital edition is free world wide. By subscribing and signing this form, I also agree to allow publisher to contact me via fax, e-mail and/or telephone in the future.

Listings start at $350 (additional charge for logos, website and e-mail address).
Independent Sales Rep.
J.E. Berkowitz, LP is seeking independent representatives for several open territories to promote & sell large glass projects & engineered glass applications: Glass Walls, Canopies, Glass Doors, Handrails, & Specialty Laminating. Send Resume with line card for consideration to Mike Nicklas to J.E. Berkowitz, One Gateway Blvd., Pedricktown, NJ 08067, P: 800/257-7827 x214 F: 856/299-4344 or email mnicklas@jeberkowitz.com

Architectural Salespeople Needed
Do you have a desire to be a part of focused and winning team? Growing & successful glass & aluminum fabricator is looking for talented & hungry architectural salespeople. Must have good chemistry with Architects & Designers & experience giving AIA CEU presentations. Ideal candidates must have strong knowledge of glass & aluminum systems & a willingness to travel. Competitive salary & full benefit package offered as well as relocation coverage. Please submit resume & salary history to jmulligan@glass.com, Reference Drawer 4900.

Tech Savvy Project Manager
High energy person with great enthusiasm and work ethics. You must bring us best practice in this industry. Our company is busting at the seam and ready to rocket to the sky. We need an expert who can fit right in and start performing immediately. High speed and tech savvy attitude is the winning combo for this job. If you have the right attitude and you can go above and beyond every day, we want you on our team.

Primary Duties:
• Implement best practices with special details on the operational functions of each project.
• Executing daily work flow tasks including phone work, mailing packages, research, creating procedures and policy along with other daily detailed functions.
• Help to meet construction budgets by monitoring project expenditures; identifying variances; implementing corrective actions and being pro-active to ensure projects are completed accurately, maximized efficiencies and must meet all deadlines.
• Maintains safe, secure, and healthy work environment by following & enforcing standards & procedures; complying with legal regulations
• Customer satisfaction and realizing the expected profitability are one of the many ultimate responsibilities

Skills/Qualifications:
Familiarity with Construction (prefer glass glazing Industry) and standard construction practices. A must! Attention to Detail, Quality Control Capabilities and timeline planning Mandatory - Must be tech savvy with proficiency in Microsoft Office 2010 and project management software.

Website: www.avantisystemsusa.com

Please email resumes & salary requirements to matthew@avantisystemsusa.com

continued on page 62
Industry Services

Bieber Consulting Group, LLC
is a group of retired glass industry executives with the ability to solve your problems, grow your business and add to your revenue stream. With over 40 years of expertise managing sales and profits, we know cost reduction, sales & marketing, finance, glass fabrication, safety, purchasing, labor relations and more. To explore how we can be of benefit to you, call Paul Bieber at 603/242-3521 or e-mail paulbaseball@msn.com.

Shop Drawings
Architectural Communication & Design, serving the U.S. since 1979 with thousands of completed projects behind us. We have our own custom software, capable of drawing any commercial system. One to two week turn around on most projects. Call for a free brochure, 800/658-8780.

Businesses for Sale

Glass Shop for Sale
27 yr. established full line glass shop West central OK. Last 5 yrs. sales $3.3m. Large trade area, good vehicle fleet. Owner ready to retire. $800k. Building for lease. glass4sale@live.com

Glass Shop for Sale - 50 yrs
Los Angeles, CA - $385,000
Sales - $800,000 - Good shop
Good clientele - Good staff
Good equipment - Easy to grow
Accorp Inc. - 310/410-4443
tedfolkert@accorpinc.com

Products for Sale

Curved China Cabinet Glass
Standard curves fit most cabinets - one day service. Most sizes $90, $95, $98 and each piece is delivered. Call 512/237-3600, Peco Glass Bending, PO Box 777, Smithville, TX 78957.

Classifieds also go online every day!
To place a classified listing, please call Janeen Mulligan at 540/720-5584, ext. 112, or e-mail jmulligan@glass.com. Don’t miss this opportunity to get your company noticed!

theBusiness
continued from page 64

people really understand the long range implications of what we currently call the global economy. You see, our competitors in this global economy thing operate in countries that don’t have minimum wages, workers compensation, unionization, as many lawyers as doctors, OSHA, EPA or high taxation. You want to be part of the global economy … you play by their rules … not yours.

I’m not going to pretend to have any of the answers to all of this. I’m not even sure I know all of the questions, but I think I know some of them and I am personally bothered by this Toledo dilemma almost as much as I was by the Freedom Tower matter.

Once, in the early 1900s, Toledo was considered a leader in world glass production and had more than 100 glassmakers of every possible ilk producing anything and everything related to glass. Today, the entire United States allegedly has 33 active glass float lines in production. According to The Wall Street Journal Report, two of these float lines are in Toledo, but are run by the Japanese Nippon Sheet’s Pilkington unit. Reportedly, by the way, the Chinese city of Shahe alone has 44 float lines of its own.

Interestingly, Edward Drummond Libbey … as in Libbey-Owens-Ford … was the man who originally endowed the Toledo Museum of Art. I have no doubt that the money provided was from the profits derived from those glass production facilities in Ohio that were under his control. Mr. Libbey passed away some time ago but I can’t help but wonder what he might have had to say about all of this if we were still alive. My guess … Holy Toledo!
<table>
<thead>
<tr>
<th>Page</th>
<th>Company</th>
<th>Phone</th>
<th>Fax</th>
<th>Web Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Access Hardware</td>
<td>800/348-2263</td>
<td>800/435-8233</td>
<td><a href="http://www.accesshardware.com">www.accesshardware.com</a></td>
</tr>
<tr>
<td>37</td>
<td>AGC Flat Glass North America</td>
<td>888/234-8380</td>
<td>404/446-4221</td>
<td><a href="http://www.u4glass.com">www.u4glass.com</a></td>
</tr>
<tr>
<td>29</td>
<td>Azon Systems Inc.</td>
<td>800/788-5942</td>
<td>269/373-9295</td>
<td><a href="http://www.azonintl.com">www.azonintl.com</a></td>
</tr>
<tr>
<td>55</td>
<td>Bohle America Inc.</td>
<td>877/678-2021</td>
<td>704/887-3456</td>
<td><a href="http://www.bohle-america.com">www.bohle-america.com</a></td>
</tr>
<tr>
<td>41</td>
<td>California Glass Bending</td>
<td>800/223-6594</td>
<td>310/549-5398</td>
<td><a href="http://www.calglassbending.com">www.calglassbending.com</a></td>
</tr>
<tr>
<td>39</td>
<td>Cardinal Industries</td>
<td>952/935-1722</td>
<td>952/935-5538</td>
<td><a href="http://www.cardinalbending.com">www.cardinalbending.com</a></td>
</tr>
<tr>
<td>3</td>
<td>Edgetech IG Inc.</td>
<td>800/233-4383</td>
<td>740/439-0121</td>
<td><a href="http://www.superspacer.com">www.superspacer.com</a></td>
</tr>
<tr>
<td>7</td>
<td>Erdman Automation</td>
<td>763/389-9475</td>
<td>763/389-9757</td>
<td><a href="http://www.erdmanautomation.com">www.erdmanautomation.com</a></td>
</tr>
<tr>
<td>26,34,40</td>
<td>Glass Association of North America</td>
<td>785/271-0208</td>
<td>785/271-0166</td>
<td><a href="http://www.glasswebsite.com">www.glasswebsite.com</a></td>
</tr>
<tr>
<td>11</td>
<td>GlasWeld</td>
<td>800/321-2597</td>
<td>541/388-1157</td>
<td><a href="http://www.glasweld.com">www.glasweld.com</a></td>
</tr>
<tr>
<td>13</td>
<td>JLM Wholesale</td>
<td>800/522-2940</td>
<td>248/628-6733</td>
<td><a href="http://www.jlmwholesale.com">www.jlmwholesale.com</a></td>
</tr>
<tr>
<td>38</td>
<td>LinEl Signature</td>
<td>317/831-5314</td>
<td>317/831-9260</td>
<td><a href="http://www.linelsignature.com">www.linelsignature.com</a></td>
</tr>
<tr>
<td>11</td>
<td>MyGlassTruck.com</td>
<td>800/254-3643</td>
<td>856/863-6704</td>
<td><a href="http://www.myglasstruck.com">www.myglasstruck.com</a></td>
</tr>
<tr>
<td>31</td>
<td>Oldcastle BuildingEnvelope™</td>
<td>866/653-2278</td>
<td>770/497-3656</td>
<td><a href="http://www.oldcastlebe.com">www.oldcastlebe.com</a></td>
</tr>
<tr>
<td>35</td>
<td>Pilkington</td>
<td>800/221-0444</td>
<td>419/247-4517</td>
<td><a href="http://www.pilkington.com">www.pilkington.com</a></td>
</tr>
<tr>
<td>66</td>
<td>PPG Industries Inc.</td>
<td>888/774-4332</td>
<td>412/826-2299</td>
<td><a href="http://www.ppgideascapes.com">www.ppgideascapes.com</a></td>
</tr>
<tr>
<td>36</td>
<td>Precision Glass Bending</td>
<td>800/543-8796</td>
<td>800/543-8798</td>
<td><a href="http://www.e-bentglass.com">www.e-bentglass.com</a></td>
</tr>
<tr>
<td>41</td>
<td>Pulp Studio</td>
<td>310/815-4999</td>
<td>310/815-4990</td>
<td><a href="http://www.switchlite.com">www.switchlite.com</a></td>
</tr>
<tr>
<td>9</td>
<td>Q-Railing USA</td>
<td>714/259-1372</td>
<td>714/259-1720</td>
<td><a href="http://www.q-railingusa.com">www.q-railingusa.com</a></td>
</tr>
<tr>
<td>15</td>
<td>Soft Tech America</td>
<td>954/568-3198</td>
<td>954/563-6116</td>
<td><a href="http://www.softtechnz.com">www.softtechnz.com</a></td>
</tr>
<tr>
<td>5</td>
<td>Sunflex Wall Systems</td>
<td>800/606-0756</td>
<td>239/495-2890</td>
<td><a href="http://www.sunflex-wall.com">www.sunflex-wall.com</a></td>
</tr>
<tr>
<td>C2</td>
<td>Technical Glass Products</td>
<td>800/426-0279</td>
<td>800/451-9857</td>
<td><a href="http://www.fireglass.com">www.fireglass.com</a></td>
</tr>
<tr>
<td>33</td>
<td>Viracon</td>
<td>800/533-2080</td>
<td>507/444-3021</td>
<td><a href="http://www.viracon.com">www.viracon.com</a></td>
</tr>
<tr>
<td>1</td>
<td>Vitro America</td>
<td>800/238-6057</td>
<td>901/767-7111</td>
<td><a href="http://www.vitroamerica.com">www.vitroamerica.com</a></td>
</tr>
</tbody>
</table>

[advertising index]
The Three Holy Things

by Lyle Hill

Due to a production error, several lines were omitted from this column, which ran in the October 2010 USGlass. The article has been reprinted here in its entirety.

When I was a kid growing up on Chicago’s far west side, there were three holy things. I refer here to secular holy things and not those Holy things associated with religious practice. While I make no attempt to hide my religious beliefs when asked about them, I am very much aware that this publication has a broad and diverse readership so I am obligated to exercise a certain amount of restraint when dealing with certain subject matter. And religion is one of those subjects. So right here and now, let me say one more time that when I herein refer to holy things, I am dealing with secular items where the word holy should be viewed adjectively. So please, no nasty e-mails or phone calls.

Okay … where was I? Oh yes, when I was a kid, there were three holy things. There was holy mackerel, holy cow and holy Toledo. Each of these three holies had its own special place in the day-to-day conversations of the kids I hung around with. For instance, at a baseball game, a really great catch or outstanding hit would draw a hearty and often stretched out “holy cow” while a non-athletic event that was extraordinary or just simply unexpected would typically command a “holy mackerel” or two. To the group of kids that I spent the bulk of my time with, a holy cow was actually a compliment of sorts while a holy mackerel was simply a comment about an unusual event of some type.

Now … a holy Toledo was something else all together. You see, holy Toledos were reserved for big events, for things that were both rare and dramatic. For instance, when lightning struck the big elm tree in back of the Bruney’s house and caused a large portion of that tree to crash through the bedroom of their house just missing the sleeping Jungle Jim Bruney by a couple of feet, holy Toledos could be heard for several days. There were some who thought the occurrence only merited a holy mackerel but because the life of the erstwhile Jungle Jim had apparently been spared by what could only be defined as a fortunate twist of fate or perhaps even divine intervention, most of the kids in the neighborhood came down on the side of holy Toledo (although I do, now that I think about, remember Jungle Jim’s dad, Edison Bruney, using a completely different set of expressions when talking about the event. And trust me; there was nothing holy, from a secular or religious standpoint, about any of what he had to say).

Like all young kids, I didn’t always understand the words or expressions I heard and eagerly took for my own. In fact, until I was in about the second grade, I regularly inserted the word “torpedo” for “Toledo” and until I was about 8 or 9 I had no clue that Toledo was actually a city in a far away place known as Ohio. As with most kid things, I ultimately outgrew all of this and the three holy things of my youth faded away to become only a distant memory of a time long ago.

On August 29th of this year, an article appeared in the Wall Street Journal that described a building being built by the Toledo Museum of Art. It is to be a $30,000,000 Glass Pavilion, a symbol of America’s “Glass City” and is to reflect the legacy of its local glassmakers. It sounds good and, for sure, those early American glass pioneers of Northwestern Ohio deserved some recognition for their accomplishments. But there’s a catch. The design of the facility is such that the glass that will be used for its construction will come from China. Yes, China.

Unlike the planned New York Freedom Tower, which at last report was going to use Chinese glass because of budgeting pressure … no surprise that the Chinese product is cheaper … the glass to be used for the Glass City museum project can allegedly only be made in China. I’m having a hard time believing this but, even if it’s true, is the design of whatever is being planned unique and outstanding that it can’t be tweaked a bit to allow for a domestic manufactured product? There’s still a great deal of beautiful product made domestically and, personally, as someone who has spent his entire adult life in the architectural glass business, the trade-off is an easy one to swallow.

I know there are those who will read this article and wonder aloud if I have been living in a cave and have never heard of this phenomenon known as the global economy, but I wonder how many
A cutting-edge concept that will complement any space.

Available at
Glasswerks L.A., Inc.
8600 Rheem Avenue, South Gate, CA 90280
Call us at 1888 789 7810 or visit us on the web at www.glasswerks.com
Cut cooling costs, equipment costs, and carbon emissions with a name you trust.

When you need to deliver impossibly impressive results, count on your local PPG Certified Fabricator and Solarban Low-E glass. A third-party energy analysis shows that our leading Solarban glass can eliminate 21,000 tons of CO₂ emissions and save more than $400,000 in up-front equipment costs—results today’s architects and building owners are looking for. And with over a billion square feet sold, you know your local PPG Certified Fabricator will come through every time. To find yours, or for a copy of the energy analysis, call 1-888-PPG-IDEA.

Solarban, IdeaScapes, PPG and the PPG logo are trademarks owned by PPG Industries, Inc. | Cradle to Cradle Certified™ is a certification mark of MBDC.
LARGEST CIRCULATION OF ANY GLASS MAGAZINE
Photovoltaic Panelists Discuss the BIPV "Adventure"

The glass industry received an education in building integrated photovoltaics (BIPV) during a panel discussion at GlassBuild America in September.

According to session moderator Richard Vorheis of Consulting Collaborative, "The U.S. Department of Energy (DOE) feels BIPV fenestration products have the potential to generate half the electrical power needed in the country." Vorheis said PV installations are expected to double by 2012, further driven by the prediction that grid parity—the point at which the cost of grid power is equivalent to the cost of solar power—will be achieved by 2015. He pointed to the DOE's goal of having all new commercial buildings reach 100-percent net zero energy by 2025. "BIPV will play a major role in reaching this goal," he said.

But others feel there is a long way to go. During his presentation, PV consultant Steve Coonen rued the lack of progress made by the glass industry in taking on PV installations. "The roofers have taken this on much more aggressively," Coonen said, pointing out that the majority of solar installations today are more traditional rooftop applications. However, he added, "More than 90 percent of solar panels are glass—1/8-inch tempered glass—so why are roofers going after this?"

Coonen said that although some glass companies are beginning to look at participating in the solar work, the majority of solar module manufacturers are overseas. Among other problems or technical concerns, that can mean PV edge connectors that aren't UL-certified. Still, he added, "There's no reason it can't be done today," he said.

While one might point to the fact that few buildings of any type are being specified now, especially buildings featuring BIPV installations, Brett Trainor of Trainor Glass Co.'s Solar Systems division in Riviera Beach, Fla., argued that these projects are out there and the demand that Trainor is seeing for its solar installation expertise is the proof.

Trainor, who provided an installer's perspective on the topic of solar glazing, reassured his audience, "For any glazing contractor who has the ability to do custom curtainwall, BIPV comes easily."

The biggest concern among glaziers seems to be in running the necessary wiring for BIPV installations, since that is the chief difference from a typical installation. Trainor pointed out that there are dozens of ways to run the wiring, through mullions or with off-set glass, and so on. What glazing contractors will find, he cautioned, is that the electrical contractors aren't necessarily familiar with BIPV hookups, so they will subcontract that work to a PV consultant.

Each trade involved has distinct con-
cerns. Designers, for example, are concerned about the opaque nature of most BIPV facades.

“BIPV panels have a range of transparency,” Trainor said. The trade-off is that the more transparent the product, the less efficient it typically will be.”The further you get away from blue or black shade, the less efficient you’ll be. But there are color options.”

Rather than choosing a less efficient product, Trainor pointed out that BIPV doesn’t have to be used in vision areas.

“There are a lot of neat things you can do with sunshades and canopies,” Trainor said.

Ray Lucchesi, founding principal of Lucchesi Galati Architects, agreed that “form matters,” as he elaborated in his presentation on solar design principles. “PV needs to be applied with awareness of relationship with the sun,” he said, as he flashed across the projection screen a slide of a spherical building with solar modules on the sides—pointed away from the sun.

Lucchesi encouraged his audience to “start at the passive process,” stating that all of the players should be involved in the design stage since in these types of projects the integration of systems is critical.

In his presentation, Dr. Teodosio del Caño, chief technical officer of Onyx Solar Energy, agreed that BIPV is a matter of shifting from the passive strategies for energy efficiency currently promoted within the glass industry (i.e. high-performing glass, coatings and double- or triple-glazed units) to active solutions (i.e. ventilated façades and BIPV). “Let’s think about multi-functionality,” he said.

“This might be an adventure now,” del Caño said,” but in the next ten years we’re going to see this market explode.”

**Company News**

**Beneq and Glaston Team Up for Solar Glass Coating Equipment**

Glaston, the Finland-based glass processing machine manufacturer, has signed a strategic cooperation agreement with Beneq, a provider of industrial coating equipment and technology based on aerosol technologies, also in Finland.

The cooperation is intended to provide a framework for the two companies to work together in developing and delivering systems for continuous production of TCO coated glass for the solar industry. Beneq has extensive experience in developing and providing aerosol technologies for advanced thin film coatings, such as transparent conductive oxides (TCO), anti-reflective and low-E. Glaston provides continuous flat glass heat treatment technology with high capacity and quality glass for demanding solar solutions.

Together, Beneq and Glaston will bring TCO coating lines to the solar industry in an unprecedented combination of mature technology, economically feasible solutions and reliable equipment.

**Solutia Opens New Photovoltaic Laboratory**

Solutia Inc. has opened a new Photovoltaic Laboratory in Springfield, Mass., to develop innovative solutions that support the fast-growing solar energy market.

"Demand for renewable energy is growing, and that drives the demand for innovative technologies and materials," says Aristotelis Karagiannis, vice president of technology for Solutia’s Advanced Interlayers division. “With our deep understanding of EVA and PVB technologies, a track record of rapid innovation and our new laboratory, we’re in a unique position to develop and deliver high-value solutions for the solar module market.”

The new facility was designed to accelerate new product development timelines and provide expert technical service to the makers of solar modules. The center is operated by a photovoltaic development team of EVA and PVB experts in chemistry, physics, polymer design and formulation and polymer processing.

"We knew that the acquisition of Etimex Solar GmbH (see April 2010 USGlass, page 48) was going to provide synergistic opportunities for EVA and PVB product development and support," says Eric Nichols, vice president of Solutia’s Advanced Interlayers division. “Our new laboratory houses our experts and provides them with state-of-the-art equipment to drive these technologies plus further enhances our ability to solve customer problems including process improvements.”

To help accelerate the commercialization of new products, module manufacturers can utilize Solutia’s improved ability to perform key International Electrotechnical Commission (IEC) tests for new module packages prior to formal testing submissions. The laboratory also provides full capabilities for all photovoltaic encapsulation processes and pilot production of encapsulants.

"The new laboratory is a one-stop shop for the development of photovoltaic solutions," Karagiannis says.