The Product Publication of The U.S. Architectural Market

March 2012

Project Deconstruction
Performing Arts Center at Carmel High School, Carmel, Calif.

Achieving Leed
American Society of Hematology Headquarters, Washington, D.C.

Fruitful Yield: Our reporters have been harvesting their respective beats to bring you the latest product developments ranging from flooring to roofing, to curtain walls to lighting. Join the bounty.

Product + Material Advances
new+improved

No Flash in the Pan: Velux’s Sun Tunnel is a product that helps channel and diffuse natural light from ceiling-mounted skylights to help better distribute light in interior spaces. (Page 60)

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Publication: Architectural Products
Colors: CMYK
Bleed: Yes
Output at: 100%
Insertion: #9989 Dec. 2011

Circle 121
UNEXPECTED WARMTH

Of course, there are many ways to optimize an envelope, and each component can contribute to the envelope’s environmental performance in its own way. In the case of structural insulated panels (SIPs), the environmental benefits are seen in two areas: structural efficiency and energy efficiency.

“SIPs are typically selected first for their energy efficiency, but they do have some additional design benefits,” says Kiesecker. “For example, SIPs can span long distances, which can reduce the amount of roof trusses needed. Sometimes designers specifically want fewer trusses to meet an aesthetic look and other times to reduce costs. Essentially, the design is a bonus benefit after they’ve selected SIPs for their energy efficiency.”

Perhaps there is no better selling point for a particular technology than an example of when it came through in a crisis, as happened with a SIP installation on a cold night in early 2011. That evening, Terry Schroth, the owner of TJ’s Maintenance and Repair, an HVAC/plumbing maintenance and repair business in Morrison, Ill., was understandably worried. His building had yet to be finished, the hydronic heating system had yet to be installed, and the temperature was expected to hit zero that evening. What worried him was that, given these conditions, the paint and drywall interior finish work were likely to be damaged by the extreme cold. Schroth left the building that night having plugged in two small 1,500-watt space heaters—one in the 2,000-sq.-ft shop and the other in a smaller office—not knowing what to expect when he would return a few days later.

On Monday morning Schroth visited the structure, braced for the worst, but the worst never happened. When he looked at the thermometer, it read 60°F, and the finish work and equipment were completely intact. “This is amazing—if you can understand the size of this space and that these were ‘milk house’ heaters, just little things,” recalled Schroth. “Our electrician was blown away that such a small amount of heat was needed to keep this space at 60°F through the winter. The SIP walls are phenomenal!”

Not only were the R-control SIPs, manufactured by ACH Foam Technologies, resilient in the face of a brutal Midwest winter, they were quick to install—the panels for the project were installed in 36 man-hours—and easy to route conduit through, thanks to pre-cut electrical chases.

The savings in labor cost and time, the demonstrable insulating qualities and the minimal material waste associated with the R-Control SIPs gave Schroth another green feather in his cap for the new facility. “When we get the solar installed and hydronic heating system operating, this will be a truly green building,” he said. “That makes me feel good, and it will cut down my energy costs over the long run. “Nothing like a cold night in January to show me I had made a good decision!”

Panelized Efficiency
R-Control structural insulated panels (SIPs) from ACH Technologies comprise a structural system consisting of Foam-Control EPS insulation laminated to oriented strand board (OSB). Visit www.achfoam.com or Circle 516

HORSE OF A DIFFERENT COLOR...
ER, TREATMENT

DuPont Building Innovations has launched its Tyvek Fluid Applied Air and Water Weather Barrier System, which offers similar air and water protection of its Tyvek CommercialWrap, but in a fluid-applied form. The system provides more coverage and the ideal combination of air and water hold-out compared to other fluid-applied products and is ideal for application on concrete, CMU, gypsum sheathing and complex high-rise buildings. Applied in one coat by spraying or power rolling, it saves valuable time in the installation process by yielding two-to-three times as much coverage per gallon as competing products. Additionally, combining low shrinkage with high elongation and elastic recovery allows the fluid-applied products to stretch and move with the building, resulting in minimal cracking. Providing the ideal combination of air and water holdout, this new fluid-applied product boasts industry-leading vapor permeability of 25 perms. Visit www.tyvek.com or Circle 515