The GREEN construction magazine for CONTRACTORS
FROM THE PUBLISHER OF RURAL BUILDER AND METAL ROOFING MAGAZINE

EDITOR'S LOG • LINKS • INDUSTRY NEWS • SUPPLIER NEWS
SIPs FOR SILENCE • NATIONAL GYPSUM SITE • FOUR STORIES OF SIPs
SOLAR SAVES JOBS • ROOFERS MUST KNOW • SOLAR EDUCATION
GREEN WATER • SIPs AND ICFs PROJECT • USING DEAD WOOD • NEW PRODUCTS
In December 2008 a fire in the Grand Junction, Colo., KREX-TV studio broke out as a result of an electrical problem. Both the local fire department and Bureau of Alcohol, Tobacco and Firearms investigated the fire. Although it was apparent where the fire started, none of the investigators could identify the other details of its origin. The final consensus was that a natural gas heater hanging from the studio ceiling was most likely the source.

Timing exacerbated the unfortunate occurrence as the fire had broken out during an NFL championship game. Needless to say, football fans on the western slope and Grand Junction area were not pleased to have missed the game.

The KREX building was damaged beyond repair. Ron Tillery, studio manager, seized the opportunity to build a new studio that would be more energy-efficient and correct a long-standing problem with noise coming from a helicopter pad on the roof of the neighboring St. Mary’s Hospital, the largest hospital in the KREX area. “Our studio was right in the line of flight for the hospital helicopter pad and the noise was a problem for us for years,” said Tillery. “We set out to build an entirely new studio for the television station that would improve our facility in every aspect.”

Tillery was interested in insulating the studio for heat as well as acoustics. “We told the architect, Design Specialists, that we wanted to have the best possible acoustics and energy efficiency in our new building. They suggested we use SIPs (structural insulated panels) for the roof. The panels are already sandwiched with R-38 EPS insulation and ready to put in place and our architects felt the SIPs would give us the best thermal insulation available.” SIPs also offered acoustical benefits because of the air tightness of a SIPs-built building.

According to Frank Kiesecker, VP sales and marketing for ACH Foam Technologies, SIPs work well for blocking out mid- to high-range frequencies that are airborne. “Low frequency noise would be best handled by a heavy, dense material like concrete,” says Kiesecker. “But concrete roofs require a difficult, more complex construction. In the case of KREX, the helicopter noise was of a higher frequency, so the SIPs were able to block out some of
**ABOUT SIPs**

R-Control SIPs are pre-fabricated to specifications for the project and ready to install. They complete roof, wall or floor sections in the building design and can be placed on foundations or conventionally framed structural systems. SIPs may be erected by hand or with the use of a crane or lift truck. Panel weight and contractor preference will dictate the erection method used.

SIPs are connected by plates, splines, nails, staples and/or Do-All-Ply adhesive. All interior surfaces of the SIP panel must be finished with a code approved 15-minute thermal barrier, such as 1/2-inch gypsum board, Blazeguard or 1X wood paneling.

Tests sponsored by the Structural Insulated Panel Association demonstrated that SIPs connections did not create thermal bridging as in stick framing because the spline connection areas perform equally with the field area of the SIPs.

R-Control SIPs are a strong structural system consisting of Foam-Control Expanded Polystyrene insulation laminated to oriented strand board forming a structural panel. SIPs can be custom fabricated to virtually any architectural design. They make inside finish work easier to complete; drywall goes up fast and cabinets are quickly bolted directly into the OSB panel. EPS, the core product for SIPs systems, is a unique material, having excellent insulating qualities. It is lightweight, strong, resilient, non-corrosive and dimensionally stable.

According to Tillery, although none of the construction crew had worked with SIPs before, there were no problems with the installation. “We broke ground in late November 2008, gradually moved
into parts of the building throughout the winter, installed our new set and technical equipment in the spring and did our first high-definition broadcast on August 10, 2009,” says Tillery.

“What is remarkable about the new KREX building is that everything is new,” Tillery added. “We went from analog broadcasting equipment that was 25 years old — maybe older — to the most current technology available today, all digital. So not only is our building new, but our equipment is entirely state-of-the-art. Everyone working with it had to re-learn their jobs because of the new technology.”

R-Control structural insulated panels are manufactured by ACH Foam Technologies, headquartered in Denver. They are distributed through construction channels nationwide. SIPs have been used for more than 30 years in residential and commercial projects for their high R-Value, superior strength and quick and easy installation.

ACH Foam Technologies has been an industry leader in environmentally friendly EPS manufacturing for over four decades, using closed-loop production methods. ACH provides products for construction, geotechnical, packaging and industrial applications. With locations throughout the U.S., ACH is positioned to offer convenient, valuable, and complete solutions for its customers.