

OPERATIONS • MARKET DEVELOPMENT • PRACTICE

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PRODUCTS

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SEPTEMBER 2007

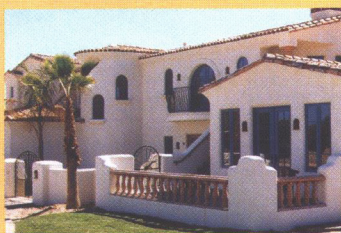
- Bridge funding, p. 4
- Boral + Schwarz RM, p. 6
- Record paver shipments: 800 million square feet, p. 8
- Hanson Pipe & Precast's Ohio market ramp up, p. 20
- RCC vs. asphalt, p. 40
- PPE standards, p. 48
- Custom form liners, p. 64



ICF PIONEER EXPANDS PRODUCTION

Specialized insulating concrete form manufacturer Rastra recently opened an Albuquerque, N.M., satellite operation, joining the company's Scottsdale, Ariz., flagship. The new operation has begun with a single shift and payroll of 10, plus the prospect of a second shift and additional staff later this year. The Rastra ICF, developed in Switzerland by engineers who reportedly envisioned a green building solution, combines polystyrene beads and cement paste.

In 1968, their initial attempts to design an affordable, structurally sound, and environmentally sustainable building system saw the use of large polystyrene panels in which diagonal and vertical holes were cut and filled with concrete once the units were set in place. That design fell short of expectations, due to the obvious disadvantages of polystyrene serving as a base for plaster and other wall finishes. Consequently, a search for better materials as well as enhanced



shapes and sizes led to the discovery of promising developments by a German chemical company, which was experimenting with a mixture of polystyrene beads and cement paste. Adapting that concept, Karl Holik created a similar mix for use in a new building component design, and the basic Rastra element debuted in 1972.

Years of testing, engineering, and refinement for expanded applications and streamlined production have yielded Rastra's current ICF building system. Its lightweight elements—including standard, twin, and end units—comprise more than 80 percent recycled content consisting of post-consumer plastics, such as expanded polystyrene, mixed with portland cement plus admixtures. That proprietary mixture, branded Thastyron, provides the basis for a permanent framework enclosing a grid of reinforced concrete that forms load-bearing, shear, and stem walls; lintels; and, retaining walls, as well as other building components.

Thus, for walls of various types, Thastyron offers such properties as thermal insulation, sound attenuation, and resistance to fire, frost, insect infestation, while molding into easy-to-install elements that reduce construction time. The blocks are stacked and glued together with a foam adhesive; minimal bracing is positioned to resist lateral forces during the pour; and, cells are filled with concrete after rebar is installed. Suitable for finishing once the cells are filled, walls readily take stucco or a variety of other wall coverings.

Accordingly, as a 'green' building solution, Rastra entails both first-cost and life-cycle benefits for residential, commercial, and institutional applications. Providing structural strength plus high R-values and durability in a

lightweight building system, the company affirms, its ICF alternative costs less to use, transport, and maintain than other materials—the "ideal" answer for economical and environmentally effective construction. —www.rastra.com, info@rastra.com, or 480/443-9211

