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Lehigh Valley entrepreneur rules a “concrete kingdom”



ENGELMAN CONSTRUCTION AND BETHLEHEM PRECAST

By MIKE PRINCIPATO
Business Journal
Correspondent

Al Engelman, CEO and patriarch of a family business knocking on \$20 million in annual revenues, is a man who literally measures his success in milestones.

That's because Engelman Construction Inc. and Bethlehem PreCast Inc. are in the business of making stones — really big ones. Or, more accurately, concrete products used in construction, ranging from walls for the largest warehouse and distribution centers in the Lehigh Valley to the steps leading into the basements of thousands of homes all over the United States.

Engelman says he's always been drawn to concrete and construction, going back to his first job with the Michigan State Highway Department after graduating with a Bachelor's Degree in civil engineering from the University of Detroit in the mid-1950s. Now a youthful-looking 67 years old, Engelman presides over a 180-employee empire that has earned a reputation for service and quality that's as solid as its many products.

In a nod to his quarter-cen-



Photo by Mike Principato

Al Engelman, left, and his oldest son Tom are shown at Bethlehem PreCast's sprawling “kingdom of concrete products.”

tury leadership role in the concrete construction industry, the American Society for Concrete Construction (ASCC), a national trade association, recently named Engelman president. It's the latest in a string of honors the professional engineer has received, but one that seems to resonate deeply with him.

“The ASCC is very important to the growth of our industry and our business, because of the opportunities the association offers to establish alliances with other suppliers. In addition, the technology of concrete is evolving all the time, and ASCC conferences help keep Engelman on the leading edge of our business,” he explains.

The technology of concrete? That gray gruel flowing from suburban wheelbarrows into a thousand basketball hoop-holding poles every summer weekend has a technology?

“You bet,” replies Engelman, who describes concrete contracting as “art as much as science.”

“Without experience and knowledge about concrete and its properties, a lot of things can go wrong in the contracting and the pre-cast manufacturing process,” he says.

A mix that's too thin, temperatures that are too cold, air bubbles not eliminated during the finishing process — all can lead to walls, floors and pre-cast products that don't

meet customer specifications. Thankfully, reports Engelman, his company “has never had a significant problem” on a job.

It's not because the company — one of the largest concrete contractors in the country, according to Engineering News-Record (New York) — doesn't have — er — tons of opportunities, either. For major hotel chains, big-box warehouses and commercial developers throughout the mid-Atlantic, Engelman is the company of choice for concrete walls and floors.

Al Engelman says his company's “A List” of accounts trust the company's combination of dedicated craftsmanship and top-notch equip-

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ment to ensure on-time, high-quality installation of what are known in the construction business as "tilt-up" walls and "super-flat" floors.

Tilt-up walls have become the exterior wall construction technique preferred by many developers for new, mega-size commercial buildings. In a tilt-up installation, walls are formed and poured on the construction site. After curing, they are tilted into place with cranes and connected to the building's floor and struc-

tural steel skeleton.

The process, according to Engelman, results in durable, cost-effective walls up to roughly 20 feet tall, and a streamlined construction process. Many of the huge distribution centers in the Valley area, including Osram Pennsylvania's 650,000 square foot building in Bethlehem, were constructed by Engelman with this technique.

Super-flat floors utilize the latest "laser screed" and concrete finishing technology to

provide floors that are both ultra-flat and level, characteristics that are difficult to achieve over the kind of football-field size floors that have become common in one-story commercial and industrial buildings.

Engelman says his company continually reinvests in the latest laser devices and finishing machines to meet customer demand for floors that meet the engineering specification for "super flat" dimensions and finish.

Engelman has also found a willing market for its decorative concrete services, a process that capitalizes on the affordable malleability of concrete. Decorative concrete work, Engelman explains, allows architects, developers and homeowners to "sculpt" distinctive patterns into curing concrete floors, recreational areas and walkways.

Engelman calls decorative concrete a "great alternative to patio blocks and architectural bricks and stones."

"It's more affordable and doesn't move the way a lot of block or brick installations will after time," he says.

Liberty Property Trust, one of the Valley's largest commercial property developers, liked the technique so much they commissioned a 3,500 square-foot decorative concrete patio and walkway that overlooks a small pond in Lehigh Valley Industrial Park V in Bethlehem.

"Most people think the area is blue slate, but it's our decorative concrete," Engelman says with a smile.

The father of six children, all of whom work in the family business, says he's as active as ever in the affairs of his expanding business.

"We expect to hit 20 million in revenue next year between Engelman and Bethlehem PreCast, even though the economy's slowed somewhat," he says.

"Every business hits bumps in the road along the way to success, and we've had a few. But we've been on a roll for a while now."

Can we call 'em Legos for the grown-up world?

Let's get something straight right from the get-go.

Contrary to what you've been thinking all of your life, concrete and cement are two different things. Concrete is cement with aggregate — stone, sand, etc. — added to it for strength.

That's according to Al Engelman, who, as the reigning King of Concrete in the Lehigh Valley, gets asked the question all the time.

The importance of the distinction between the oft-confused building materials becomes very apparent during a visit to Bethlehem PreCast's sprawling concrete product kingdom. Al's oldest son Tom presides over a growing \$3 million, 30-employee manufacturing and installation company that resembles nothing as much as a giant concrete Lego™ factory.

For as far as the eye can see over Bethlehem PreCast's 7-acre property, concrete steps, columns, wall caps and blocks in every conceivable shape and size are neatly inventoried like a giant set of kids' building blocks awaiting assembly.

Engelman waves at the variety of products and says, "No aggregate, no strength."

Oh. That would be bad for, say, this particular set of steps that are destined for a New York City skyscraper, right Tom?

"Yep," he replies good-naturedly.

And not too great, either, for the truckloads

of "PermEntry" basement entrance steps the company ships every week to new homes all over the country.

"We're the largest PermEntry supplier in the country," notes Tom.

The steps, which like most of PreCast products, are formed in molds built onsite, have amazingly sharp definition and none of the chipped and irregular edges common on do-it-yourself versions.

Once delivered to a home site and lowered into place, often by one of PreCast's crane-equipped trucks, the steps are mated to a Bilco™ door, an increasingly popular option for homeowners who want convenient basement access from the outside.

Tom is a guy who obviously loves his work, and takes great pride in explaining the way his company produces such an amazing variety of concrete products. "Rebar" — steel reinforcing rods — form the skeleton of everything from light poles to wall caps, over which concrete is poured in wooden or steel molds. A hardening agent is added to increase durability of the finished product.

Surrounded every day by curing concrete, does Tom ever get the urge to put his handprint on his work?

"No, but I've got a kids at home who do," he laughs.

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