



Text size: [A-](#) [A](#) [A+](#)

BizTimes.com
Milwaukee and Southeastern Wisconsin Business News

PRINT MAGAZINE
[Current Issue](#)
[Subscribe](#)
[Archive](#)



Innovations: Hartland company creates lightweight frames for buildings

By [Alysha Schertz](#), of BizTimes
Published [July 23, 2010](#)

Jim Jendusa started Hartland-based Jendusa Design & Engineering Inc., a structural engineering firm, 10 years ago. Throughout his experience working with contractors and construction companies, he encountered problems associated with using traditional insulated concrete forms, and decided there had to be a better way.

That's when he developed a patent-pending lightweight composite framing system and subsequently founded a side business for that system, called Lightweight Structures LLC.



COHESIVE COMPOSITE: According to Jim Jendusa, founder of Lightweight Structures LLC, using FortEco Lightweight Structures in a building project would save money, time and create a more energy efficient building.

"Traditional forms can be very difficult to work with, particularly when working with wood framing, in floor heating or in high rise situations," Jendusa said.

The FortEco light weight structures are created using light gauge steel with insulation board as the decking material, Jendusa said. Concrete or fly ash can then be poured on top of the insulation board once it's in place.

"The steel joists are manufactured with holes to allow the concrete to flow and cure between the beams," Jendusa said. "The two materials bond in a cohesive composite fashion and because of the insulation the concrete can be poured in any temperature."

The company is able to construct floors and walls with the product. The framing can be assembled on site with just a screw gun, or it can come pre-fabricated in 8-foot panels, Jendusa said.

The product can be used in place of precast concrete slabs and has a greater load capacity per square foot because of the compression strength of the composite structure, Jendusa said.

"The advantages of using this system are endless," Jendusa said. "The product is 20 percent less expensive to produce than traditional methods. When you are talking about large projects, 20 percent could mean millions of dollars."

Due to the built-in insulation, the product is also more energy efficient than traditional methods and also reduces sound travel between floors and walls, he said.

Advertisement



Mix'n' Mingle
Networking After 5



Thursday, August 12
5:00-7:00 p.m.
Naga-Waukee Park



WIS BUSINESS.COM



The company can produce lightweight composite floor, wall and foundation panels. In addition, using the lightweight composite system in a building project would also earn additional LEED credits needed to achieve higher levels of green certification, Jendusa said.

Jendusa has utilized the FortEco Lightweight composite framing in a number of different residential projects in the area, but thinks the mid- to high-rise construction market would benefit from using the product as well.

"The lightweight nature will allow a contractor to quickly and easily install the joists and panels and have a crew follow behind and pour concrete," he said.

Traditionally, it can take up to a week to pour and set concrete framing in a high-rise building, Jendusa said.

"With our product, we can reduce the installation time to a day," he said. "That means that projects can be completed almost 30 percent faster."

According to Jendusa, the FortEco framing system is ideal for working in spaces with low head room or in high-rise situations, but also has added benefit for geographic locations with seismic activity or poor soil conditions.

"This product would be ideal for reconstruction in Haiti," Jendusa said. "Because it's lightweight, we can ship it easily, and it can be easily assembled with just a screw gun."

The flexibility of the light gauge steel, bonded with concrete, would create a super strong composite structure, ideal for withstanding an earthquake, Jendusa said.

Jendusa hopes to launch the product beyond local projects.

"We've already bid on \$8 million worth of work," he said. "We want to launch this product nationally."

The firm began internally financing local projects in the fall of 2009, but hopes to attract the attention of investors who see the benefit of the patent pending technology before launching the product nationally, Jendusa said.

"Our product can revolutionize the way buildings are being constructed," he said. "In terms of cost savings time savings and the energy efficient components of the product it seems like an obvious decision."

About Alysha Schertz

Alysha Schertz is a reporter with BizTimes Milwaukee, covering the technology beat. She also handles Personnel File and BizNotes submissions for the publication. Alysha is a 2007 graduate of Carroll College. Alysha's contact information is below. News also can be sent to Alysha Schertz, BizTimes Milwaukee, 126 N. Jefferson St., Suite 403, Milwaukee, WI 53202.

Alysha can be reached by:

☎ (414) 336-7123

☎ (414) 277-8191

✉ [Click to contact via email](mailto:)

🌐 <http://www.biztimes.com>



© Copyright 2010 BizTimes Media LLC

[About Us](#) | [Contact Us](#) | [Privacy Policy](#) | [Advertise with Us](#) | [Help](#) | [Site Map](#)

BizTimes provides news and operational insight to the owners, presidents and other top executives of closely held businesses in southeastern Wisconsin, including Milwaukee, Waukesha, Ozaukee, Washington, Racine, Kenosha, Walworth and Sheboygan counties.

Site Designed and Developed by [Red Anvil, LLC](#).

