

ThermaSave article below

# Home Safe Home



Alabama-made construction material being used to house millions around the world

BY NANCY MANN JACKSON

Before last year, no businesspeople had ever been invited to speak about their product on the floor of the United Nations. But in September 2005, H.H. “Hoot” Haddock, president of IHSN, Inc. in Florence, Ala., was not only invited but coaxed to speak at the U.N. to share his ThermaSAVE building system with leaders from nations across the globe.

“They don’t normally let people come to the U.N. to talk about their products, but they said they believe our product will save more lives and help make more people comfortable than anything else out there, so they wanted me to come,” Haddock says.

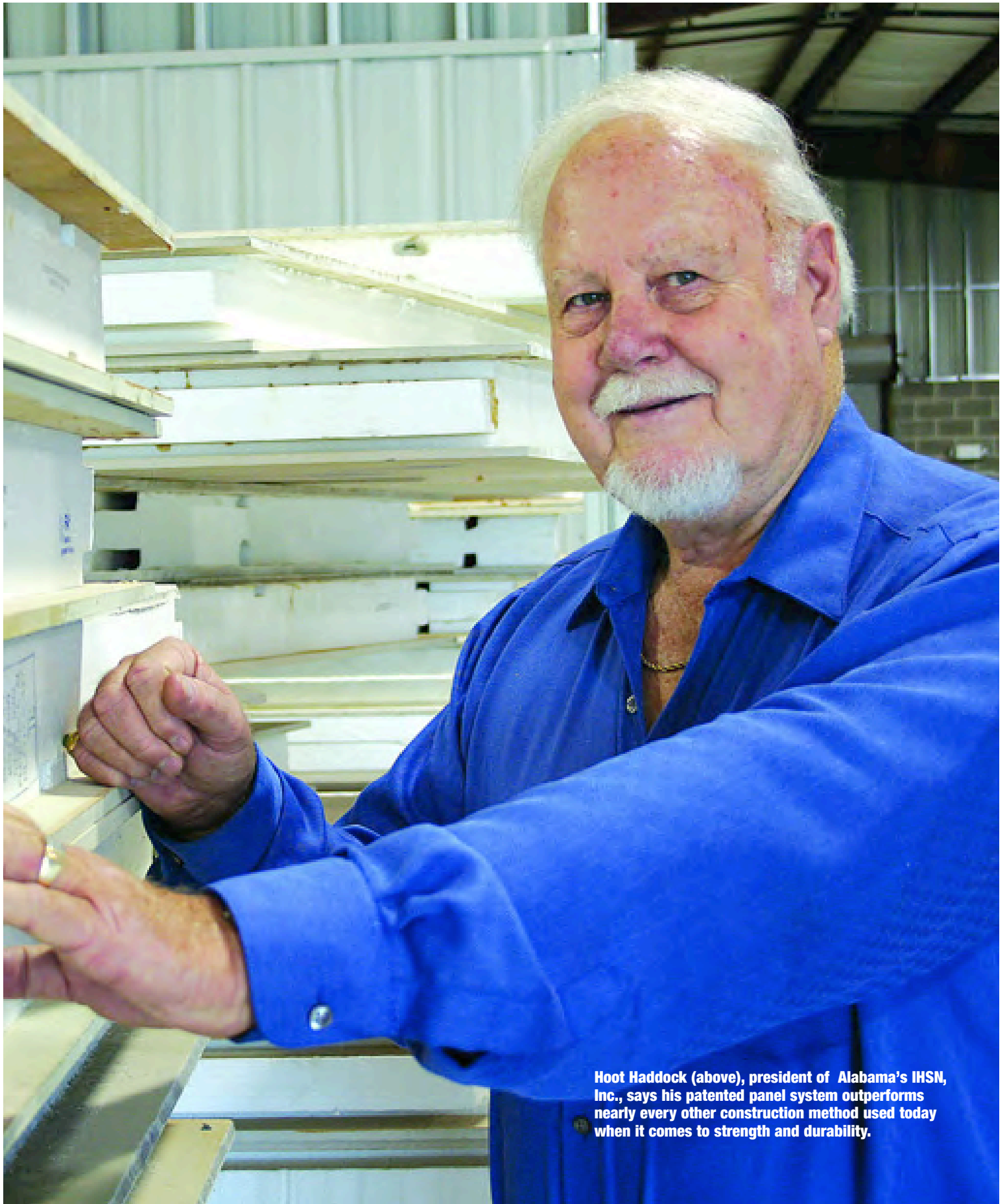
After his speech on the floor of the U.N., Haddock says one African ambassador stood and declared that he would build 1 million ThermaSAVE homes in his country — and that promise is already coming to fruition.

More than 20 years ago, Haddock developed the ThermaSAVE system, which uses a structure of patented insulated panels, to ward off a harsh Alaskan winter. Today, ThermaSAVE panels are produced in four IHSN manufacturing facilities and are being used to house millions of people in the United States and around the world.

The panels, which consist of a thick sheet of polystyrene foam sandwiched between two sheets made of concrete and embedded with cellulose fibers and plastic, outperform nearly every other construction method used today when it comes to strength and durability, says the company. All components of the system have been approved and certified by ICC-ES, the world’s strictest evaluating agency for ensuring that building products are in compliance with code.

“Black mold is the biggest problem in the building industry and the sec-





**Hoot Haddock (above), president of Alabama's IHSN, Inc., says his patented panel system outperforms nearly every other construction method used today when it comes to strength and durability.**

ond is termites,” Haddock says. “We eliminate both.” ThermaSAVE also withstands winds up to 200 miles per hour, surpasses all fire tests, and eliminates insects and rodents. The material serves as both a vapor barrier, eliminating leaks, and a sound barrier, creating more privacy between rooms and floors.

And finally, adds Haddock, its insulating capabilities conserve energy, allowing for 30 percent to 70 percent savings in heating and cooling expenses for most homes and buildings.

**W**hile Haddock says he has always known his system was stronger and more durable than other building methods, it was difficult to spread the word about the global value of one small business. But in 2003, ThermaSAVE was declared the preferred homebuilding method by the Federation of American Scientists (FAS) because of its ability to withstand earthquakes and high winds, low energy costs and ease of construction. Since IHSN partnered with FAS, word has spread quickly about the system and Haddock’s small company has been on the fast track to international business.

“An individual like me couldn’t get the word out,” he says. “But the Federation of American Scientists has the connections and the clout to share it, and they’re making it known.”

FAS ([www.fas.org](http://www.fas.org)) is a nonprofit group of scientists, including 67 Nobel Laureates, that addresses a broad spectrum of issues in carrying out its mission to promote humanitarian uses of science and technology. After an earthquake killed 40,000 people in Bam, Iran in December 2003, Henry Kelly, president of FAS, issued a challenge to



scientists and engineers to find an alternative way to use low-skilled workers to build affordable, efficient houses that could withstand earthquakes. The organization was in search of a building system that met numerous criteria including cultural acceptability, environmental responsibility and energy efficiency.

The late Roger Rasbach, a well-known Houston architect and friend of Haddock’s, introduced Haddock and ThermaSAVE to the skeptical structural engineers of FAS. After meeting with the FAS engineers, Haddock participated in an earthquake test conducted in Cincinnati by FAS engineers in January 2005. The test, filmed by

the Discovery Channel’s *Daily Planet*, involved building a ThermaSAVE home on a “shake table,” which produced all the effects of a natural earthquake.

“We shook that house four times harder than the strongest earthquake in history,” Haddock says. “We finally broke the machine, but the house was fine.” The two-story building withstood accelerations beyond the previous record.

Along with seismic tests, FAS conducted structural, water absorption and other tests on ThermaSAVE. The material passed every test and has become the centerpiece of the organization’s housing initiative. “ThermaSAVE has



**The panels (left and above), which consist of a thick sheet of polystyrene foam sandwiched between two sheets made of concrete and embedded with cellulose fibers and plastic, outperform nearly every other construction method used today when it comes to strength and durability, says the company.**

found a way to make safety and efficiency cost-effective, which is a real breakthrough,” says Kelly, FAS president. “When you try to add safety features to standard construction, it usually adds cost, but with ThermaSAVE, the cost actually decreases. The poor people who are recovering from hurricanes and other disasters are interested in both safety and affordability, and ThermaSAVE offers both.”

Since partnering with FAS, ThermaSAVE has quickly gained attention from both international leaders and international media. IHSN and ThermaSAVE have been featured by *Forbes Magazine*, *Voice of America*, *Automated Builder*, *Civil Engineering News*, the British Broadcasting Network, and other media outlets.

On a recent Friday afternoon visit to IHSN headquarters in Florence, workers were loading the last of four truckloads of panels to be shipped to Turkey, where earthquake-resistant homes are greatly needed. After the first batch of homes is built in Turkey and residents are introduced to the value of ThermaSAVE, Haddock and his team will set up a production plant there, installing equipment made at his Alabama facility and training local workers to make the panels and build homes with them.

“In many cases, it’s cheaper to set up a local manufacturing facility in other countries than it is to ship the panels there,” Haddock says. Earlier this year, Haddock agreed to a similar deal with Shibao Industrial Co. of South Korea, which will allow Shibao to use the ThermaSAVE system to build a total of 15.1 million homes in 11 Asian countries.

The panels are currently being used to build affordable, safe homes in countries all over the world including Pakistan, Afghanistan, Iraq and the Dominican Republic,

as well as to rebuild hurricane-resistant homes on the American Gulf Coast. For instance, in the hurricane-battered cities of Gulfport, Miss., and Mobile, Ala., FAS and ThermaSAVE, are partnering with Habitat for Humanity to build show homes that will both offer housing to families left homeless by hurricanes and will promote the merits of building with ThermaSAVE.

“We’re building houses side by side, one with standard construction

**Haddock says his company is thriving with its headquarters based in Alabama**

and one with ThermaSAVE,” Haddock says. “We’ll be monitoring everything about the houses without invading privacy, like the indoor air quality and heating and cooling use. These studies will help us show the differences between ThermaSAVE and standard construction.”

In addition to the Habitat homes, ThermaSAVE and FAS are

also building a luxury home in downtown Houston, “to show that it’s not just for little houses,” Haddock says. In fact, once completed, a ThermaSAVE house looks no different than a standard construction house. “You’d never know the difference unless you could see inside the walls,” Haddock says, “Or if you looked at the utility bill each month.”

**W**hile ThermaSAVE buildings use 30 percent to 70 percent less energy for heating and cooling, the savings don’t stop there. Many power companies and governmental organizations offer rebates of several thousand dollars to homeowners who build with the material because it qualifies for all Green Building and Clean Building programs. And buildings constructed by ThermaSAVE require much smaller heating and cooling systems than traditionally constructed buildings, signaling another significant savings.

For instance, the architectural plans for a library recently built with ThermaSAVE called for an eight-ton or nine-ton HVAC unit, but IHSN recommended only a



patent-pending construction system appear to have a bright future. New U.S. plants are planned for Gulfport, Miss., Port Arthur, Tex., Jackson, Tenn., and Richmond Ind., resulting from licensing agreements with companies in those areas. And while other states and countries are clamoring for access to his product, Haddock says his company is thriving with its headquarters based in Alabama.

Although he lived in Alaska for 20 years and started the company there, he and IHSN relocated to his hometown of Florence in 1993. “This is my home; I was born and raised here,” he says. “I like the people here and we have no plans to move.”

Haddock has been especially impressed with the Shoals Entrepreneurial Center ([www.shoalsec.com](http://www.shoalsec.com)), the local business incubator from which he rents office and industrial space and which has been recognized as one of the premier incubators in the

nation. Although IHSN has outgrown its space at the center, Haddock says the incubator’s staff and leaders have been “really helpful” throughout the growth of the company.

As IHSN searches for new space in which to continue growing, other changes are also in the works. Haddock is currently looking for workers to fill managerial roles so that he can spend more time in research, perfecting his product. While ThermaSAVE is a new concept to many people, Haddock points out that he built the first ThermaSAVE house more than 22 years ago in Wasilla, Alaska — and his daughter still lives in it.

After more than two decades of work, it’s rewarding for Haddock to see his product being embraced by scientists, engineers, and people around the world. “I really enjoy what I’m doing; it’s a real honor,” he says. “As they say, good things happen to those who wait, if they work real hard while they wait.” ■

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two-ton unit. “It’s doing a great job keeping the facility cool in the summer and warm in the winter,” Haddock says. “And they saved several thousand dollars on the unit, as well as their monthly utility bills.”

As homes and commercial buildings made of ThermaSAVE go up all over the world, IHSN and its