By James Hodgson, Premier SIPS by Insulfoam

Selling SIPs

What you need to know about structural insulated panels

ALTHOUGH STRUCTURAL insulated panels (SIPs) provide multiple efficiencies for building construction and operations, many builders still often rely on the traditional building methods they are most familiar with. As builders look for ways to differentiate themselves, LBM dealers can provide a valuable service by being ready to answer questions about SIPs.

SIPs are an advanced building method, but are actually quite easy to build with. They can be used in virtually any light construction project, including single-family homes, multi-family structures, and commercial and institutional construction ranging from schools to offices to retail and restaurants.

Following are answers to common questions dealers and builders have about SIPs:

What are the key selling points for SIPs?

"For one-time residential owner-builders, a key benefit is the quality of

STRUCTUAL INSULATED PANELS arrive at the jobsite pre-cut and sized, ready to be put into place with a crane.

All photos courtesy Premier SIPS by Insulfoam

the finished home—both structurally and environmentally," notes Brian von Allworden, PE, SIP expert with Wright Engineers, Phoenix, Az. "For production builders, it is speed. The faster they can build, the quicker they can sell."

SIPs are significantly stronger than stick frame construction. Benefits include roof systems that eliminate the need for a truss system, which in turn reduces framing schedules by removing the labor and installation time for truss construction. Additionally, SIPs are exceptionally strong in racking diaphragm shear capacities, which are the primary structural properties engineers are concerned with when designing for earthquakes and hurricanes.

On the environmental side, SIPs are arguably the best performing structural system available. U.S. Dept. of Energy tests show SIP construction is about 15 times more airtight than stick framing. Additionally, DOE found that SIPs have a 47% higher whole-wall R-value than either standard stud walls or advanced framed walls. SIPs also help reduce jobsite construction waste up to two-thirds, and support indoor air quality by sealing out common pollutants.

As von Allworden noted, SIPs help reduce building cycle time because they eliminate the need for separate framing, insulation and sheathing work. Further, the panels arrive at the jobsite pre-cut and sized for each specific part of the structure.

"With the pre-built panels, you just have to piece the building together like a puzzle," says Glen Kamerman, partner with Kamerman Construction, Manhattan, Mt. Building with SIPs can help contractors earn more money because of fewer framing hours on the job.

SIPs can also simplify construction on tight urban job sites where staging space is limited. Densely packed buildings and heavy street traffic present challenges that can be solved by using SIPs, which can be installed in a matter of hours.

Will my framers be able to install them?

A skilled framing crew typically can learn the steps for installing SIPs in a matter of hours, and quickly become proficient in working with them. Because SIPs are made of wood (OSB sheathing on both sides of an insulating foam core), they are easy to nail, saw and drill—similar to traditional wood framing.

SIPS reduce and simpify building schedules, while imparting stength and durability.

What about the impact on other trades?

While there are some specific techniques that subcontractors will need to become familiar with, building with SIPs does not create a roadblock in construction.

Traditionally, very little plumbing is included in exterior walls regardless of the building style used. With SIPs, most plumbing is located in the interior walls.

Running wire is simpler and faster with SIPs, as manufacturers pre-cut electrical chases into the panels. Crews simply pull wiring through the chases after the panels have been installed, which saves the time and hassle of drilling holes through numerous wall studs, as is the case with stick framing.

What are the key trends in SIP construction?

"I see a lot of multi-family and hospitality developers looking at SIPs as a way to to stand out from the crowd," says von Allworden. "And, as more SIP structures are built, many builders are realizing that the bottom line is the same, or better, as with stick construction, but they are getting a better final product."

In what types of buildings are they most popular?

SIPs are increasingly popular in educational facilities, from K-12 schools to colleges and universities, where they can be used in dorms, gymnasiums, classroom buildings, and other structures.

What are important things to look for when choosing a SIP manufacturer?

"First you need a manufacturer who is reliable," says von Allworden. "There were a lot of SIP firms around six years ago that are now gone. You also need a company that is big enough that they are not dependent on your money to buy their materials. And, of course, you need a company with a quality product.

For LBM dealers and distributors concerned that SIPs could cut into the traditional meat of their business—lumber—it is worth remembering that there will always be a strong market for framing lumber, even in SIP structures. SIPs are typically used for outside walls and roofs, with stick-framed interiors most common. Additionally, as demand continues to grow for energy-efficient structures, being knowledgeable about SIPs can be an important way to grow business within a new market segment.

– James Hodgson is the general manager of Premier SIPS by Insulfoam, Puyallup, Wa. For more information on SIPs, visit www.premiersips.com/bc.