

STRUCTURAL BUILDING COMPONENTS MAGAZINE

June/July 2002

Growing Your Component Business with Cold-Formed Steel Trusses by Thomas J. Valvo

As wood component manufacturers search for new products and markets to help fuel future growth, the emerging cold-formed steel truss market offers a tailor-made opportunity for true incremental sales and income. From rather humble beginnings less than a decade ago, factory-built, cold-formed steel roof and floor trusses have blossomed into a market estimated in excess of \$150 million. And, based on architectural, demographic and building code trends within the commercial and institutional construction sectors, explosive growth for cold-formed steel components is anticipated to continue into the foreseeable future.

While cold-formed steel trusses (CFST) seem to present a natural avenue of diversification for wood truss producers (after all, who better understands the process of estimating, designing and producing computer-designed structural components?) it is important to recognize the very real and dramatic differences that exist between the two products. This article, the first in a series, will outline the key differences between the wood and steel truss markets. Future articles will delve into more detail on marketing, estimating, designing, manufacturing and delivering/installing cold-formed steel truss systems.

THE MARKET

First, let us examine the differences in the uses for wood and steel trusses.

Today, nearly 100 percent of prefabricated cold-formed steel trusses find their way into commercial and institutional structures. Schools, assisted living facilities, office, retail, correctional, high-rise and churches are just a few of the myriad end-uses for CFST. Simply put, these are buildings that, due to end-use, occupancy, size or classification, require noncombustible construction.

By contrast, the most recent WTCA surveys results indicate that fewer than 13 percent of wood trusses are sold for these types of commercial applications. Wood trusses are predominantly, 82 percent, a residential construction product. Of course, there are areas of the country where the mix between residential and commercial is more evenly balanced. However, in general, prefabricated wood components are most prevalent in single family and multi-family residential.

Given the limited overlap in target markets for wood and steel, it is not difficult to understand why cold-formed steel trusses present an attractive opportunity for diversification. The tendency for one product to "cannibalize" the other is quite limited.

THE PRODUCT

Although abundantly obvious to even the casual observer, it bears mentioning that steel and wood are very different products. Unfortunately, all too often, wood truss manufacturers have approached cold-formed steel as a mere extension of their existing product line. Such a casual approach is fraught with many perils. Consider:

- As previously noted, the markets for the two products are very different in size and scope.
- The quotation, ordering, approval and construction cycle times are significantly different.
- The scope of responsibility and level of detail and engineering intensity in steel trusses can be quite dramatic.
- Connections and bracing are much more specialized and design-intensive in steel.
- Cold-formed steel is more susceptible to handling, transportation and installation damage than wood. Remember, it is “light gauge” steel. Many of the unique profiles that are used to create these trusses are no thicker than the fender of your car! They do not respond well to being run over by a forklift, beaten with a hammer, sent through a finish roller, or being secured to a flatbed by a 300-pound truck driver leaning on the strap winch.
- The manufacturing processes for CFST and wood, although yielding the same basic result—a prefabricated component of varying degrees of detail and complexity—are very different in their levels of sophistication and automation.
- And, perhaps most importantly, the expectation level of the commercial contractor purchasing a CFST system is often times very different than that of the carpenter or residential contractor. Here in lies one of the greatest potential pitfalls for the neophyte CFST supplier.

All these issues will be explored in greater detail in future articles in SBC Magazine.

THE SPECIFICATION OF CFST

Much like the wood truss industry thirty years ago, cold-formed steel trusses are a specification-driven product. As the increasing awareness level for CFST among the building design community intersects with the structural and demographic shifts in commercial/institutional construction market, the specification of this product continues to rise.

What are the market drivers that are creating this environment of heightened awareness and specification?

- Aggressive marketing, educational and promotional activities by some cold-formed steel suppliers and fabricators. Such efforts are focused on educating specifiers on the features and benefits of CFST.
- Increasingly stringent fire codes are spurring the demand for more 100 percent noncombustible structures. Although distinctions may be drawn as to which product, wood or steel, performs better during a fire, the issue is really one of designing structures that essentially offer no fuel for fires.
- Shifting demographics have driven the demand for certain types of typically noncombustible structures. For example, a burgeoning population of school-age children has forced many states such as Ohio to go on massive new facility spending binges. In Ohio, nearly all new school construction contains at least some CFST work.
- At the other end of the demographic spectrum, there has been a dramatic increase in the

number of Americans entering their golden years. In fact, an estimated 80 million people will reach retirement age over the next 15 years. And, today's seniors are living longer thanks to medical and pharmaceutical advances. The result has been, and will

- continue to be, a boom in the construction of independent and assisted living facilities. Again, due to code restrictions, many of these structures are required to be noncombustible.

DEFINING THE MARKET OPPORTUNITY FOR WOOD TRUSS MANUFACTURERS

Using the previous review of the fundamental differences between wood and steel trusses as a backdrop, how might a progressive wood truss manufacturer investigate the market potential for CFST in the area(s) it serves?

Perhaps the easiest way to gather market intelligence is to take a look at the types of light commercial and institutional projects in the local "Dodge Room" or on other plan services. Poll your salespeople. Are they seeing CFST being specified frequently? They are probably not even looking for these types of projects or, they quickly dismiss them when they do come across them. What can you learn from your contractor customers? Ask the drywall/metal-framing contractors you know. Oftentimes, cold-formed steel trusses are included in their scope of work. Architects, structural engineers and general contractors are also excellent sources of information on current and future commercial projects.

Depending on the area of the country in which you are located, you may be surprised by the size of the potential CFST market. If this is the case, the obvious next question is, "How do I go after this business?" In a future issue of SBC we will deal with the staffing, start-up and development of a cold-formed steel truss division within your wood truss operation.

[SBC HOME PAGE](#)

Copyright © 2002 by Truss Publications, Inc. All rights reserved. For permission to reprint materials from SBC Magazine, call 608/310-6706 or email editor@sbcmag.info.

The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing of structural building components to ensure growth and continuity, and to be the information conduit by staying abreast of leading-edge issues. SBC will take a leadership role on behalf of the component industry in disseminating technical and marketplace information, and will maintain advisory committees consisting of the most knowledgeable professionals in the industry. The opinions expressed in SBC are those of the authors and those quoted solely, and are not necessarily the opinions of any of the affiliated associations (SBCC, WTCA, SCDA & STCA).