Steel industry seeks market share

Already developing the stud market, the industry makes its own type of pre-insulated panelized wall known as ‘The Sandwich’

If you are looking for endorsements of panelized wall construction among the nation’s major industries, you don't have to look beyond the steel industry.

Already enjoying a steady growth of the market share for steel stud framing, (a major component in panelized walls using exterior finishing systems), the industry is doing a good job of promoting its own panelized wall system.

The industry is marketing a ‘sandwich’ wall in which insulation is placed between interior and exterior steel wall materials to form the pre-insulated panel.

What does the industry target its promotion of the ‘sandwich’ system to? The same considerations that the makers of ‘solid state’ prefabricated walls do: energy savings.

The steel industry points to what it terms “new and stringent performance levels for thermal transmission” characteristics of walls. It says its preinsulated panel product “can cut energy usage more than a third, compared to ordinary masonry construction.”

It should come as no surprise that the steel products companies are aggressively seeking to expand their markets. The industry finds the same opportunities in the sudden upturn of energy-efficient materials markets that builders of other systems are attempting to exploit.

The record says the steel industry has already enjoyed a healthy market share. Industry figures indicate that use of pre-insulated panels is on the upswing. Industry spokesmen say steel manufacturers consider their product to be of technological superiority when compared to many conventional building systems, and they fully intend to cash in on their new found opportunities.

In its push for a larger share of the panelization market, the steel industry is showing off its multiple styling characteristics. Already constructed with the system are such buildings as (clockwise from left): St. Luke's Medical Center in Chicago, R.G. Barry's corporate headquarters in Fairfield County, Ohio, First Northwestern Bank in Billings, Montana, and the United Gas Pipe Line Building in Houston.

This section of a profiled panel illustrates the pre-insulation principle utilized by the steel industry. The three-in-one combination consists of exterior, insulation and interior.
Steel producers believe it’s a big market

They don’t have to worry about getting a good jump on the market. Industry figures estimate that pre-insulated steel panels account for 15 percent of the 135 million square feet of metal wall panels to be erected during 1980. The industry is forecasting a much larger share, to about 40 percent of 160 million square feet of metal panelized walls within the next 10 years.

The industry’s figures are significant to builders of other systems, because already about one third of all of the single-story non-residential buildings are pre-engineered steel buildings. Says the steel industry: “Obviously, a prime market for the panels.”

Adding to the significance is this note from the Steel Products News Bureau: “Other commercial, industrial and institutional categories have also been won over to pre-insulated steel wall usage. Major types include banks, hospitals, industrial plants, power plants, office-type buildings, nursing homes, refrigerated and controlled-temperature warehouses, schools and stores.”

And, in a third market area solidly impacting wall and ceiling contractors, the bureau notes “They’re (pre-insulated steel panels) now winning applications as interior partitions to regulate humidity and environment, as ‘clean room’ walls and rooftop equipment enclosures.”

Add, too, the enormous opportunities within the growing retrofit market. Steel wall panelizers are already making steady sales growth in this important field.

The steel industry also does a good job of promoting the other benefits of its panelized systems. For instance, product literature points out that panels can be made in multi-widths, (usually from 24-36”), for fewer seams, and normal length dimensions can run from as little as four feet all the way up to 38 feet. Also readily advertised is the minimal weight of the systems. Foam core panels can be as light as three pounds per square foot, a 75 percent savings over precast concrete panels which can weigh up to 12 pounds per square foot.

The steel panels also come in a wide range of colors, and exterior finishes can be added in a range from weathering steel to stainless steel to chip-coated aggregates.

Even where the walls run into tight comparisons with other building systems, product promotion is positive in approach. Here are a few examples:

“Although not meant for axial loading, the composite ‘sandwich’ has good resistance to buckling and wind forces, as well as greater strength than the field-assembled panels of the same thickness.”

“Where there has been concern in the past about possible fire problems with plastic-type insulation, today’s foam core types -- especially the recently-developed isocyanate-base foams -- are able to meet accepted fire test standards.”

“Considering material costs alone, pre-insulated wall panels are higher-priced than two separate wall panels plus insulating material. Considering erection costs, however, the reverse is true. With the interlocking type, as each panel goes up, that section of the wall is completed -- outside, insulation and inside -- for significant labor and time savings.”

What all of that promotion boils down to, in terms of the prefabrication market, is a complex set of pluses and minuses for other panelizers: on the minus side, it means a concerted serious competitive entry into the market by the steel panel manufacturers, such as Armco, Butler Manufacturing, HF Industries, Inryco, Moncrief-Lenoir, National Steel Products, H.H. Robertson, the Elwin G. Smith Division of Cyclops Corporation and Varco-Pruden. That will further tighten an already crowded market.

On the plus side is the fact that steel manufacturers are promoting panelized building as an answer to energy controls, have developed an easily-copied marketing strategy maximizing the cost, weight and efficiency benefits of panelized construction, and could open a whole new area of diversification to a contractor seeking access to a larger market share in retrofit or panelized, pre-insulated wall construction.

Regardless of how the steel industry’s big push into the panelized market is measured, it confirms the validity of forecasts from other segments of the construction industry that panelization will be a growing (if not a necessity-mandated) construction trend during the decade ahead.