MARKET NEWS

Managing Steel Price Increases

Increasing global demand for both structural steel and steel scrap has triggered significant domestic increases in the producer price of structural steel during 2008. This year the mill price for wide-flange structural steel has increased 28% to just over $1,000 per ton. Other structural materials such as HSS and plate have experienced increases into the $1,100 to $1,200 per ton range. This increase is typical of the price volatility that has been experienced by all construction materials since early 2004; global demand peaks have triggered price volatility and availability concerns for cement, gypsum, copper, plastics, and lumber products during this period.

The current increase in the cost of structural steel products can be traced to an expanding global marketplace combined with increased competition for the purchase of steel scrap, iron, coke, and metallurgical additives that are used in the production of various types of steel. Scrap index prices have increased from $290 per ton in December of 2007 to a current level of $555 per ton. The recycled content of wide-flange structural steel is nearly 90%, which equates this $265 per ton increase directly to the $220 increase in the per ton price of structural steel. At the same time domestic structural steel, as a result of the weakened U.S. dollar, remains $20 to $40 per ton lower than the global price, which discourages imports.

At the present time, structural steel remains readily available in the U.S. market, with service centers holding over three months of inventory available for immediate delivery. Direct mill shipments of wide-flange shapes continue in the range of 12 to 14 weeks, while HSS is available from producers in four to six weeks.

The transition from a domestically driven market for construction materials to a global market requires significant changes in how construction projects are managed:

- ✓ Early involvement of specialty contractors, including structural steel fabricators, during project design as a means of optimizing the material supply chain, as well as the use of materials on the project.
- ✓ Engagement of product suppliers (mills and service centers) in early dialogue regarding pricing levels, material reservations, and the availability of price-lock mechanisms.
- ✓ Clear definition within bid solicitations of which party will be expected to hold the risk for material price fluctuations, with the understanding that the assumption of that risk requires compensation.
- ✓ On some projects it may be acceptable to incorporate an escalation clause into the contract. Typical contractual language is available upon request from the AISC Steel Solutions Center (solutions@aisc.org).
- ✓ Rapid acceptance of bids and early authorization of material acquisition, with the understanding that the specialty contractor will be reimbursed for both the material and storage charges when they are incurred.

For more information contact John Cross, AISC's vice president, at cross@aisc.org.

letters

Outside Problems

James Smelser's May article "Constraint and Stability" (p. 66) was very well thought out! Some [of these] things we already do and some we will rethink. When you state that shop management must have choices, it assumes that approved drawings are issued as part of the package. How do you address the problem of outside detailers and approvers not keeping up with the shop's needs?

Rod Spengler

James Smelser responds:

Great question, Rob. This is a problem that we all struggle with, but there are things that we all can do to streamline the approval process.

Make a large job small. Sequence projects into manageable erectable segments. This helps detailers submit drawings earlier. It also allows the shop to start earlier by reducing the lead time needed to produce parts.

Set up meetings with the structural engineer and other interested parties as soon as possible after a project is awarded. Agree on the approximate number of drawings in each submittal and how often shop drawings will be submitted. Produce a submittal schedule to be issued to the structural engineer. Ask for weekly meetings to clear up RFI questions. The answers to RFIs often create additional questions and more RFIs; the weekly meetings break this cycle. The submittal schedule and the weekly RFI meetings allow the structural engineers to plan and schedule their work.

Electronic transfer of drawings makes a huge improvement in the approval process. The hard copy process involves between seven and ten mailings. Even with overnight service this can add two to three weeks to the schedule. Electronic transfer can travel from detailer to fabricator to customer to architect to structural engineer in a matter of minutes. Approval comments can be added directly to the digital copy of the drawing, or a print can be run, marked up, and scanned to make a new digital drawing. In minutes, the approval drawings can make their way back through the chain to the detailer.

Quality in the Shop

I have noticed a lot of high-tech/engineering articles, but I haven't seen many about the actual steel that's fabricated and shipped having any quality inspections before shipping. If the material isn't checked before shipping, how does the fabricator/fitter ever find out if he's making mistakes?

I've been to several ironworker union halls and [discovered] they had small training areas to teach the workers how to erect and repair poorly fabricated structural steel. The older workers/instructors told me it's just that way and it's never going to change, so they just repair it and move on!

I started out in the structural steel industry around 1970 and went from holding the dumb end of the tape to fabricator/fitter/welder and everything in between, up to plant manager and quality control. That's how I learned. I recognize that even the best fabricators/fitters can have a bad day. I saw mistakes every day when I was in quality control, even in the smallest shops with as few as five workers. It's really bad when fab shops don't perform quality control. I wonder how many ironworkers have been seriously injured and maybe even died trying to erect poorly fabricated steel. I can understand why office personnel won't go out into the shop—too much noise, welding flash, sparks flying, etc.—but the shop absolutely must have quality control. It should involve the best and most experienced fabricator/fitter. He could even do some teaching/correcting along the way for young workers that want to eventually become fabricators. An experienced "old man" on the shop floor is like a gold mine.

Engineers are pretty much insignificant if the shop floor doesn't have quality control. It can be perfect on paper, but what's getting out the door wrong makes the whole company—president, engineers, and all—look really ignorant. If it fits in the field, word gets around; if it doesn't fit, word *definitely* gets around.

Jim Caudle
J&B Specialty Tools

PRODUCT DIRECTORY

We Have a Winner!

We're happy to announce that Brian R. Robertson has won the drawing for an Apple iPod Touch. Robertson, a graduate of Texas Tech University, is an EIT/structural engineer with Parkhill Smith and Cooper, Inc., Lubbock, Texas. His recent design projects include an elementary school and an office building addition, and he's currently working on a new high school.

So how did Brian win such a great prize? By visiting MSC's online product directory at **www.modernsteel.com/products.**

While the iPod has already been claimed, you should still visit MSC's online product directory. The directory includes more than 30 categories and hundreds of companies, and you can browse for products and services by category or via keywords. Search results include contact information, web site links, and company descriptions.

If your company offers a product that you would like to see listed in the directory, contact Lou Gurthet at gurthet@modernsteel.com) or 231.228.2274.

BIM

BIM Book

A new guidebook, the *BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors*, encompasses all areas of the A/E/C industry as it relates to building information modeling. Written by a group of leading pioneers and researchers in BIM, the handbook is a highly visual resource guide developed to help the building and design community better understand new businesses processes facilitated by this technology.

The *BIM Handbook*, by Chuck Eastman, Paul Teicholz, Rafael Sacks, and Kathleen Liston, is published by John Wiley and Sons, Inc. and is available for $85. To order it, call 800.225.5945.