

technology

The New Electronic Shipping Standard for Structural Steel Shapes

Structural engineers should be aware of an advancement that is happening in the steel industry in the area of material identification. This is the first in a series of e-commerce improvements to come. This one simplifies and streamlines the process of material identification, using electronic capability to make information more accessible and useful.

Introduction

Computers and systems that keep track of steel shipments present many challenges. Shape producing mill, fabricator and service center systems generally lack compatibility, which means that in many cases shipments are processed using multiple, manual entries every step of the way. This is time-consuming, labor-intensive, and increases risk for error. Moreover, structural

“...a new shipment-information standard...”

steel fabricators are now required to maintain better traceability of their materials, and they often need to be able to trace a piece of steel back to its origin, typically with mill test report data.

To help solve these challenges, after several years of effort, the Metals Service Center Institute, the American Institute of Steel Construction, and the Technical Committee on Structural Shapes, have developed and tested a new shipment-information standard for companies that produce, distribute, and use structural steel shapes.

Simply put, the standard automates the documentation process of shipping and receiving between structural steel producing mills, service centers, fabricators and end users.

The standard, known formally as the *Standard Specification for Bar Coded Shipment Label and Electronic Advance Shipment Notice, including Test Report information, for Rolled Structural Steel Shapes*, provides for the computer-to-computer exchange of information about structural steel products being shipped and the accurate tagging of the physical products using standard, modern bar code technology.

“This creates a powerful set of business opportunities for both suppliers and receivers of goods. The entire shipping and receiving process and all the companies involved can now be informed about what is being shipped, when it is being sent, who sent it, and how it is being shipped, with traceability to its original mill test report,” explains Joe Dietrich, Vice President of Finance and Technology at AISC. “Receiving structural steel becomes vastly more efficient because each item now has a bar-coded license plate

“...bar coded shipping label placed on an individual lift of structural steel.”

linked to detailed shipment information in electronic format. All of this information can be easily imported into company databases and the matching process used to accurately receive items is suddenly automated.”

The culmination of this industry effort is a three-part standard. The first component delineates the information that needs to be on the bar coded shipping label placed on an individual lift (a piece or a bundle) of structural steel. The second component is an Advance Shipment Notice (ASN), an electronic file in XML format, a universal internet-based language used commonly in e-commerce transactions, sent in advance of the material

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shipment. The third component is electronic (mill) test report data, supplied by the structural shape producer, which may be included and/or referenced within the electronic file. These three components are linked via a unique supplier reference number generated by the material supplier for a specific producing/distribution facility location. The objective of the standard is to create a more efficient, integrated supply chain, whereby each shipment lift of steel can be easily identified, inventoried, and tracked.



Why Should Engineers, Fabricators and Service Centers use the New Standard?

The best reason is that it saves time and money. Fabricators and service centers that adopt the standard know what goods are on the way from the moment they leave their supplier's loading dock. They have more timely shipping information, essential for planning, receiving, pre-sales or other customer commitments. Real-time receiving means there are no delays due to the manual entry of shipment and receipt information into management information systems. There is less paper to handle, fewer chances for error, and material traceability is greatly enhanced. The standardized information stream makes training and execution of all receiving processes far simpler.

“Real-time receiving means there are no delays...”

“By adopting the Electronic Shipping Standard, the receiving company can create a far more efficient and cost effective operation since it will know ahead of time, via the electronic ASN file,

what to expect when a shipment arrives, including detailed shipping and product information,” said Bert Tenenbaum, president & chief operating officer of Chatham Steel Corporation and chairman of the Plates & Shapes Division for MSCl.

What is Needed to get Started?

Investment in equipment and software to adopt this standard may be minimal in many cases. General needs include:

- Bar code scanners, preferably wireless
- Either a wireless or wired receiving dock network
- Software that translates Extensible Markup Language (XML), a generic way for computers to communicate with each other
- A label printer if you must generate bar codes of your own

For those who have not yet implemented systems and software to directly import the ASN XML data, style sheets are provided by AISC. A style sheet is an electronic template that allows customers to display, print or create a PDF (portable document format) of the ASN file in human readable format.

How Long Will it Take to Implement the Standard?

Customer experience suggests startup may take as little as one month, depending on the size of the company, the skill of the firm's IT department or third-party software provider, and the type of shipping, receiving, and inventory software.

Training generally consists of educating staff on the use of the bar code scanner. Depending upon whether information systems are used solely for receiving or also for inventory control and shipping, more procedural training may be required.■

To access a copy of the Electronic Shipping Standard for Structural Steel and to download a style sheet, please go to www.aisc.org/barcode. Hard copies of the standard may be requested, and questions/comments may be made in writing to:

Gabriel Coleman, Committee Secretary
American Institute of Steel Construction
1 E Wacker Drive Suite 3100
Chicago, IL 60601
Email: coleman@aisc.org

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