

Why Part-Number-Based Systems Don't Work

With literally thousands of different types, shapes and sizes of metal products in the typical service center warehouse, inventory control calls for a product coding system that does not drown itself in a sea of part numbers.

Inventory control methods for metal service centers are unique to the industry and vary in their complexity. The task calls for a product coding solution that is based on a metal product's native attributes recognizable within the industry. It should be broad-based, yet able to capture the subtle, intricate nuances of each item.

With a product coding structure that is clear, intuitive and native to metal, searching for stock or entering quotes and orders is fast and easy. It saves time, allows users to look up stock and enter transactions using concise, consistent product nomenclature, and eliminates the use of traditional complex, cumbersome part numbers.

The product coding structure must describe products in an intuitive and straightforward way. It must also be highly flexible to accommodate a wide range of products, as well as allow a company to meet its specific inventory needs. This breadth and depth of requirements mandates a comprehensive product coding structure that includes metal product features such as type of metal, shape, grade, size (such as cross-section, diameter, or thickness), and any additional identification such as surface finish (see Table 1).

Part-number-based systems are not well suited to the metal industry for several reasons:

- Products in the metal industry are rarely referred to by generic part numbers.
- New part numbers must be created every time a "new" width or length is sold.
- Each produced remnant requires a new part number before it can be returned to stock.
- Users must perform searches or lookups whenever a product is used in order to identify and confirm the correct part number code.
- A wide variety of products, across numerous product lines, necessitates hundreds of thousands of part numbers.
- Many products carry components that are dynamic and cannot be "pre-set," such as actual width and/or length.
- Part numbers make it difficult to consolidate information in a single logical view.

Industry Jargon: In the metals industry, products are rarely referred to using generic part numbers. For example, when a buyer places a purchase order with a mill, or a customer calls to place a quote or sales order, industry jargon typically

references product information such as Bar Angle, Grade 36, 2 x 2 x ¼ at 20 feet.

New Dimensions Sold/Produced:

Dimensions such as width/length should not

Table 1: The breadth and depth of metal products calls for a product coding structure that includes such features as type of metal, shape, grade, size and surface finish.

Table 1					
Product Line	Form	Grade	Size	Finish	Dimensions
Flat-rolled	Type of Coil Type of Sheet	Grade Alloy Temper	Minimum or Nominal Gauge/ Thickness	Surface Finish Paint Colors Galvanized	Any Width or Width/Length combination
General Line	Angle Channel Bar Plate Beam	Grade Alloy Temper	Cross-section Diameter Thickness	Mill Finish Painted Galvanized Shot-blasted Heat-treated	Any Width, Length, or Width/Length combination
Bar or OCTG	Bar Pipe Tube	Grade Alloy	Any possible Di- ameter, ID, OD, Wall Thickness	Cold-drawn Cold-finished Polished	Any Length

be included in the product coding structure, as salespeople need to be able to sell any possible width, length, or width/length combination without having to first create a new part number or product code. With a coding structure that excludes dimensions, far fewer product codes are required, saving time, simplifying the process, increasing flexibility, and reducing set-up requirements.

This applies to returns to stock (remnants, drops) as well. With a part-number-based system, each remnant requires a new part number, or a "catch-all" part number is used. This demands time, creates more and more part numbers, and, since part numbers are frequently created with inconsistent formatting, it renders them difficult to organize and maintain and difficult for other staff to identify and use.

Fictitious Part Numbers: Because creating a new part number for every width/length can be cumbersome and time-consuming, some generic systems attempt to "mask" the issue by automatically creating new part numbers "in the background" every time a user enters a product and dimensions on a purchase order or sales order. The end result is that thousands more part numbers are created, making reports or analysis difficult to understand and interpret.

Excessive Use of Lookups: In a part-number-based system, each time a product is used, a staffer must look up stock or enter a purchase order, quote or sales order by viewing drop-down menus or performing searches. This is a major loss of time, especially for new employees who are not yet familiar with the part numbers. With a consistent, easy-to-use and intuitive product coding structure, the use of lookups or searches is greatly reduced, if not entirely eliminated.

Extensive Part Number Catalog: With the wide range of products typically carried by metal

Product	Form	Grade	Size	Finish
Cold Rolled Coil, CS, 18 gauge	CRC	CS	18	
Cold Rolled Sheet, CS, 18 gauge	CRS	CS	18	
Galvanized Coil, CS, Coating 30, 18 gauge, Bright Spangle	GC	CS30	18	B
Bar Angle, 36, 2" x 2" x 1/4"	A	36	2214	
Carbon Beam, ASTM A36, 12" @ 40	B	36	1240	
Round Tube, 41400-110, 5.25" x 3.625", Quench/Tempered	RT	4140-110	5.25-3.625	QT
Welded Pipe, 53B, 2" schedule 40	WP	53B	240	
Aluminum Plate, 6061, 1.25", T6	APL	6061	1.25	6
Stainless Round, 304, 1.5" diameter, Centerless Ground	SR	304	1.5	CG

Table 2: This table shows the many different variables that factor into metal products, making it cumbersome to assign each a unique part number. By eliminating width/length dimensions from the product coding structure, far fewer product codes are required, simplifying the process and increasing the system's flexibility.

service centers, hundreds of thousands of part numbers are required to accommodate different shapes, thicknesses, widths, lengths, etc. This is another reason width/length should not be part of the product coding structure. Every possible combination must be defined as a unique part number, taking into consideration the various aspects of the metal product. Table 2 illustrates some of the numerous, possibly exponential, combinations.

Consolidated Stock Inquiries: If each width or length is defined as a separate part number, it is difficult to have a consolidated stock view of all widths/lengths of a given or range of products. For example, a user would not want to view all stock lengths in one screen, then enter a new part number or navigate to a different screen in order to view all remnant lengths.

As can be seen, part-number-based systems inadequately satisfy the extensive and complex requirements of the metal industry. Using a comprehensive, flexible product coding structure, companies can tailor their inventory coding to meet their specific needs. This increases speed, provides ease of use, and improves reporting and analysis while saving time and set-up requirements. ■

Houston-based Invera Corp. offers the STARTIX enterprise management system designed specifically for metals service centers. For more information, visit www.invera.com.