AXIS ENTERPRISE RESOURCE PLANNING

ERP FOR METALS, WIRE AND CABLE
Streamline operations, increase productivity and reduce costs: Axis helps you compete in today’s global markets with superior tools and technology
CHALLENGES AND OPPORTUNITIES IN TODAY’S METALS INDUSTRY

Today’s metals industry is marked by intense global competition, cyclical markets, changing demand patterns, and the commoditization of products. While this environment is very challenging, it also offers tremendous opportunities to companies that are able to:

- Ensure consistently high quality
- Respond to customer product and delivery needs faster than the competition
- Control costs
- Optimize the use of capital assets

Metals producers and processors that master these key operational capabilities position themselves to increase market share, revenue, and profits. That is what Axis is all about. Axis ERP is the foundation of the Axis Enterprise Resource Management System. Primary components of Axis include:

- Axis ERP – Comprehensive support for integrated sales, production, quality, and financial management
- Axis® e/Suite – Web-based customer service
- Axis Advanced Reporting
- Axis Shop Floor Data Collection (SFDC)

Axis is built with an advanced software architecture utilizing the proven and widely deployed PROGRESS application development toolset to provide high performance and scalability, fast deployment, and low cost of ownership. Axis is an enterprise resource management system designed specifically for the metals, wire and cable industries. It helps producers, manufacturers and service centers successfully compete in today’s global markets by providing the tools and technology to:

- Streamline operations
- Improve productivity
- Reduce costs
- Decrease lead times
- Improve customer service
- Improve profitability
- Support growth without adding resources
CREATING A COMPETITIVE ADVANTAGE WITH AXIS

Axis is a comprehensive enterprise management system designed specifically for metals producers, processors, and service centers. It integrates production, sales, and financial management around a single, highly accessible base of information to help companies create a competitive advantage in today’s global markets. It provides the tools and technology to:

- Streamline operations, improve productivity, and reduce costs
- Decrease lead times
- Improve customer service
- Improve profitability
- Support growth without adding resources

Axis has been developed by professionals with in-depth experience in the metals industry to support the industry’s unique requirements. It is a complete business and operational management system with a core of mixedmode production management capabilities designed specifically for companies that transform material through melting, casting, rolling, forging, drawing, extruding, blanking, leveling, and/or slitting to produce product.

Axis provides integrated capabilities for improving business processes and enhancing visibility across virtually every aspect of the business, from customer order entry to scheduling, procurement, production, shipping, cost management, and finance. Most importantly, Axis ERP has many built-in features designed to meet the special needs of each segment of the metals industry.
We’ve achieved significant savings and efficiencies with Axis. There’s much less manual paperwork and our customers can attest that the service side of our business has greatly improved. If you can eliminate those kinds of costs, you have a system that’s certainly paying for itself.

Kathy Ament  
Chief Financial Officer  
Marion Steel
AXIS: BUILT AROUND THE REAL WORLD ISSUES OF METALS PRODUCTION AND PROCESSING

The metals industry is unlike any other. Ordinary manufacturing systems designed for standard discrete or continuous process environments simply cannot handle the special requirements of metals production and processing. Axis ERP is different. It has been developed from the ground up to support the fundamental product and process issues that make the metals industry unique. Some of these real world issues are:

**Actual quality varies from heat to heat**
Many of the unique aspects of the metals industry stem from the fact that every heat or lot of a given metallurgical grade is different. Each heat has somewhat different actual quality i.e., chemical and physical properties that must be taken into consideration when they are used to make end products.

**All material is defined by its attributes and characteristics**
Because all material has the chemical and physical properties of the heat or lot from which it is made, and also has additional mechanical and dimensional properties coming from how it is processed, it cannot be fully identified by just a part number or material code.

The attributes required to identify material are different for different types of items (e.g., grade, gauge, & width for a coil vs. OD, wall, & length for a tube). The actual characteristics must be known for each item through all levels of production from heat to finished product.

Whether its steel, aluminum, copper or specialty alloys, Axis ERP supports companies at all stages of metals production and processing.

**Inventory is tracked at the tag level**
Because of variations, inventory is tracked at the tag level (i.e., coil ID, slab #, billet #, spool #, bundle #, etc.). Quantity, properties, dimensions, and inventory location can be different for each tag.

**Material application is a function of actual quality**
Because of variations, material is applied to orders based on actual properties. Applicators must identify and reserve available material with the right combination of properties to conform to the specifications for each order (e.g., the chemical and physical properties of the rod used to make wire must match the customer’s specifications for that product).

**Material is often reapplied to other orders**
Material can be reapplied from in-process orders and Q.C. hold status to other in-process orders with different specifications. The chain of property contribution must be maintained to provide product quality certification and conformance to specifications.

**A given product can be produced in multiple ways**
The process/practice can be altered to produce a desired product based on the material that is applied. Alternate starting sizes can be used with additional operations (e.g., slit, roll pass, draw, blank, etc.). Certain properties can be adjusted by additional process steps (e.g., heat treatment or annealing).

**Quality control & tracking is critical**
Material must be tested at various stages throughout the production process and certified test results are often required by customers. Process and environmental data must also be continuously collected for process control and process improvement. Traceability must be maintained from the original heat and casting to the end product shipped to the customer.

**Units of measure are variable**
A given item may be sold or purchased in any one of several units of measure (e.g., lbs or kg, feet or meters, sqft or sqm). Production, however, may be scheduled and reported in a different unit of measure, so the various order quantities need to be converted for production’s use and then converted back again for shipment.

**Inexact quantities are a way of life**
In purchasing, manufacturing, and selling, exact planned order quantities are virtually never realized. Shipment or receipt of a quantity that is slightly more or less than the order quantity is a normal practice. Customers often specify quantity tolerances that are acceptable to them.

**Effective scheduling is important to mill productivity**
All metals companies are capital intensive and must effectively utilize their capital equipment in order to be profitable. Because of this, scheduling is driven by numerous factors in addition to customer request dates.

In order to minimize downtime due to setups, most metals processors sequence production by either the attributes of the material being produced (e.g., grade, width, shape, thickness, diameter, etc.), and/or by the attributes of the material it is being produced from (e.g., starting thickness vs. ending thickness).
Many mills also schedule around their biggest bottleneck (e.g., melt shop, rolling mill, annealing furnace, etc). In some cases, a standard production cycle of related products is scheduled in advance and customer orders are booked against that schedule. This is often called a cycle schedule, rolling schedule, or campaign.

**Shipping/receiving logistics are a key aspect of operations**

Because the material being shipped or received is typically of considerable size and/or weight: loading/unloading capacity is limited, freight costs are significant, and shipping mistakes can be costly. Efficient carrier scheduling and proper loading are crucial to both customer service and overall profitability.

**ENTERPRISE-WIDE VISIBILITY AND CONTROL**

Axis is designed to integrate and streamline the entire business around a common base of information. It gives management the visibility and control of operations that is needed to effectively compete in today’s challenging environment. Axis ERP provides the tools and information to:

- **Ensure Consistent High Quality**
  Integrated quality tracking and control capabilities ensure that products are produced or processed according to customer specifications while maintaining complete product genealogy and process history, including chemical/physical lot properties and in-process test results.

  Automatic generation of certification documents, the ability to match customer requirements to material/melt specifications, online entry of heat results, in-process check chemistry support, and many other quality management features dramatically reduce the effort required by factory and office personnel. Inventory control and material application by lot and tag # not only enables better utilization of inventory, it also ensures the proper use of material at every stage of production.

- **Respond Quickly and Effectively to Customer Needs**
  Axis ERP’s sales, production management, and customer service capabilities enable you to be highly responsive to your customers. Features such as order promising, workflow-driven quotation development, and attribute-based product lookups help you win more orders by quickly addressing customer questions and requirements.

  A comprehensive product and process definition capability speeds collaborative development of custom products. Advanced scheduling and production management capabilities reduce lead times. Real-time order status, full claims/RMA management, and optional web-based customer access to selected information enable you to provide the service your most demanding customers expect.

- **Control Costs**
  Axis integrates financial management into every aspect of operations. Based on a detail costed product and process definition and variance analysis using either standard or actual costs, Axis ERP cost management provides full visibility of exactly where product costs are and the opportunities for reducing them. Order margin analysis helps identify the products and customers that are the most profitable.

  Integrated multi-company, multi-currency Accounts Receivable, Accounts Payable, and General Ledger applications provide financial managers with the tools they need to control both costs and cash flow. A wide range of operational support capabilities such as outside processing management, auto freight calculations, rapid invoicing, and many others help functional managers in every department streamline their business processes to further reduce costs throughout the enterprise.

- **Optimize Use of Capital Assets**
  One of the most powerful aspects of Axis is its production scheduling capabilities. Attribute-based scheduling increases throughout while minimizing setup and scrap. Automatic job/lineup scheduling based on product and process characteristics optimizes capacity utilization while saving significant personnel time and effort. Group Technology scheduling capabilities help production schedulers select the best resources for any given job. Efficiency and utilization reporting gives managers clear visibility of how assets are being used over time.
When we need ‘moment-in-time’ information, such as quality, holds, shipping, and billing, we can pull the information from Axis ERP in real-time. These capabilities help us identify and act on statistically-relevant information, rather than just acting on a whim.

Eric Hiler
President
Stripco
LEVERAGING INFORMATION AND TECHNOLOGY

Think of Axis as your most valuable machine. It helps accelerate and automate every aspect of your business. It provides an infrastructure of cross-functional capabilities to:

Help Sales, Finance, and Production Work as One
Axis helps break down departmental barriers by operating as a single integrated system on a single consolidated base of information. It completely eliminates the need for entering information twice or figuring out which version is “the truth.”

Customer orders are immediately visible to production schedulers, real-time order status is always available to customer service personnel, changes in material requirements are quickly highlighted for purchasing, and financial information is a direct and accurate reflection of actual operations.

Improve Productivity Throughout the Business
Axis helps streamline business processes and reduce both the time and effort to get things done in virtually every department of the company. It automates many repetitive and calculation-intensive tasks people may be doing today either manually or with un-integrated PC-based tools such as spreadsheets. It integrates seamlessly with plant automation and data collection systems to minimize data entry. And Axis makes it far easier to get new employees productive by providing a clear framework of information and procedures for performing their jobs.

Make Information Your Most Valuable Asset
Axis can make information one of your most powerful competitive advantages. It provides people across every function with ready access to the information they need to make better day-to-day decisions and better serve customers. At the same time, it positions you to act faster when new opportunities arise and to respond quicker when market conditions change. Just as a new machine can increase the production capacity of your plant, the information provided by Axis can increase the business capacity of your entire organization. One of the benefits most often stated by Axis users is that they have been able to manage significant increases in sales without significant increases in staff.

More than 9,000 customers around the world rely on us to give them a competitive edge. By providing innovative, industry-driven enterprise application software, Aptean helps businesses to satisfy their customers, operate most efficiently, and stay at the forefront of their industry.

For more information, visit: www.aptean.com