Amitive Automates Management of Steel Transformation Process for Business Efficiency and Reduced Costs in Auto Industry

Especially in the current economy, the automotive industry is looking for every opportunity to save money, and is pressuring suppliers to improve just in time (JIT) manufacturing and to procure goods at a lower cost. Arguably the world's most complex industry, the auto sector has thousands of suppliers and manufacturers, and lengthy supply chains spider-webbed around the globe.

Steel is used extensively, from sheet to components to assemblies, and involves a complex network of processors throughout fabrication and assembly. This is an industry with so many moving parts that it can no longer be managed manually. If suppliers want to stay competitive, they need to automate their community supply chain.

One Detroit-based steel supplier provides steel coils for automotive parts fabrication. They source steel from producers globally, and manage the entire transformation process: from steel slitting to stamping to processing for customers.

This supplier needed a solution to track inventory through the transformation process, with real-time insight into the state of the final product during each stage. Amitive is the primary application for planning and procurement, and for managing inventory throughout the transformation process.

The Challenge:

Extending SCM throughout the Transformation Process

In providing value-added services, such as managing the transformation process from steel coil to stamping to finished product, automotive suppliers face an array of business and technology challenges, including:

- Managing supply and demand, when you're buying one thing (e.g. raw steel) and selling it as another (e.g. door panel);
- Efficiently tracking the Bill of Material (BOM), a list of components that make up a final product, as inventory moves through its various states of transformation, from coil, to baby coil, to stampings, etc.;
- Aligning different units of measure (UOM) – in this case, steel is bought from Asia in kilograms, but the end product, coils, are sold to the customer in pounds. Suppliers must track each inventory unit separately, because although it is actually the same good, it has different UOM quantities (Kilos vs. Lbs.);
- Tracking transformation in order to determine what's being made for commercial sale and what is waste by-product;
- Maintaining lean inventory amidst the long lead times and price fluctuations that are de rigueur in the industry.

These complexities were too much for traditional supply chain management (SCM) systems, which could not properly manage the intricacies of inventory transformation and did not meet the challenge these business practices presented.

"Suppliers in the auto industry need to take advantage of every opportunity to save money, and this means getting the highest quality parts at the best cost, and as quickly as possible. Amitive is at the heart of solving this challenge, helping us to automatically and precisely track the transformation process."
– Steel Supplier Supply Chain Manager, Mitsui USA Steel Products Division

The Solution:

Single Platform for Community SCM

Amitive's community supply chain management system enabled the company to:

- Simplify the transfer of steel to processors for conversion to finished components;
- Meticulously track and provide real-time communication about inventory transformation at different levels, as it moves through many locations within and across processors;
- Accurately manage inventory at a BOM level;
- Seamlessly convert kilos to pounds with "multiplier" feature;
- Communicate in real-time on a single, software as a service (SaaS) platform;
- Manage:
    - standard inventory, as well as what has been processed, including yield loss throughout the processes;
    - scrap and waste within orders;
    - multiple inventory change attributes, including lot and packing control, as well as coil and heat level.

Integration, Communication Characteristics:

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- Communication managed via a combination of EDI and manual communication for BOM and inventory transformation
- EDI is used for invoices, ASNs and forecasts among processors.
- All processes are performed against the Base UOM, and the recording of the fulfillment transactions is converted to the Alt UOM using the multiplier and rounding for quantity and price.

"No matter how well you've planned for inventory and forward looking forecasts of customer demand, there are so many factors that can disrupt the process, like the conversion of kilos to pounds, or the management of stamping and waste. You throw all these things together into one pot and you get the iceberg effect, with calculation and planning complexities hidden under the waterline."

– Supply Chain Manager, Mitsui USA Steel Products Division

Results with Amitive

Amitive ensured seamless technology integration to the steel suppliers' customers for fast, succinct communication with many processors. The web-based community SCM solution has proven flexible in its ability to move and track inventory in its many forms, delivering the following benefits to the user:

- Lean, JIT manufacturing with a focus on efficient use of steel with minimal waste;
- Reduced inventory, with close alignment of demand with unit production;
- Improved communication across entire partner and customer network;
- Improved coordination of suppliers and customers within global supply chain;
- Flexibility to add or change supplier and customer partners;
- Efficient management of complexity through configurability of system.

Within the dynamic community it serves, this supplier counts on Amitive to support the complex industry processes and respond to the ever advancing practices of the future.