

RFID Helps Metal Products Maker Track Tool, Supply Usage

Industrial supply distributor Bassett deployed an EPC Gen 2 system that lets its manufacturing customer cut costs and improve record-keeping.

By Beth Bacheldor

March 12, 2007—Industrial supply distributor Bassett Industrial, located in Portland, Ore., is leveraging RFID to help one of its customers better manage supply inventory in its manufacturing operations.

Bassett provides a variety of tools and supplies—including abrasives, cutting tools, band-saw blades and safety gear—to a number of manufacturers. The distributor offers its customers WinWare's CribMaster Accu-Port, an RFID-enabled solution that includes UHF Gen 2 RFID tags, RFID portals and inventory management software designed to help its customer track employees' use of supplies and tools during production. By more accurately tracking supplies, manufacturers can reduce the amount of inventory on hand—rather than carrying additional inventory (at a cost) in case it might be needed, they can more closely watch inventory levels and stock only the amounts required. In addition, tracking which items are removed from inventory, and by whom, helps manufacturers monitor which department or job uses which items.

Bassett will install and manage the inventory management software and related RFID hardware for its customers that opt for it. The firm has implemented a custom version of CribMaster at one of its customers, a metal products manufacturer, for which Bassett provides supplies and manages the inventory of those supplies. The customer asked not to be identified, says John Lottis, VP of Bassett.

"CribMaster offers great inventory control," Lottis says. The CribMaster software, combined with RFID, facilitates the tracking of inventory without having to employ tool room attendants or others to manually track supplies removed from inventory. Additionally, the RFID-enabled inventory management system frees employees from having to log those supplies they are utilizing. "It offers ease for people at the plant level to get their products and go back to work, without having to deal with attendants, checkout or self-issuing," Lottis says. "The RFID captures all the transactional data automatically."

Bassett has installed four CribMaster Accu-Port RFID portals at the metals manufacturer's multi-acre facility, and is in the process of installing a fifth, which Lottis says will be up and running by the end of March. Each Accu-Port has been customized to meet the customer's needs and provides a physical portal into a storeroom, or crib, where supplies are kept. The portal has an antenna above the door and another on each side. Every item inside the storeroom has an EPC Gen 2 passive tag, and each tag's unique ID number has been correlated with the item name and other information in the CribMaster inventory management software.

To remove an item, an employee passes the portal, which identifies that person by reading the EPC Gen 2 tag affixed to the employee's hard hat. A LAN connection communicates the tag data to the CribMaster software, ensuring that employee is authorized to access the crib. If that person is approved, the storeroom door unlocks. After gathering the materials needed, the employee exits the crib and walks through the portal again, which

reads those items' tags once more. That data is then passed along to the CribMaster software as well.

At the same customer site, Bassett has also installed an RFID-enabled cabinet, the CribMaster Accu-Cab, featuring an RFID interrogator with four antennas. Employees enter their passwords into a touch-screen on the outside of the cabinet to unlock the cabinet. The interrogator reads the items' EPC Gen 2 passive tags, documenting which items are removed. That data, along with the employee's name, is then communicated to the CribMaster software.

Initially, Bassett ordered 5,000 reusable tags to be affixed to a variety of supplies and tools, but Lottis says that number has grown to 12,000 since the implementation began back in July 2005. Items tagged, Lottis notes, include felt-tip pens, gloves, portable electric tools, all types of adhesives, nuts and bolts, band-saw blades, glass cleaner and a variety of personal safety equipment, including respirators, hard hats and safety glasses.

Bassett attaches a layer of Tyvek material to each tag via its adhesive backing, increasing the tag's durability. Tyvek is a synthetic material of high-density polyethylene fibers, made by DuPont. Lottis says the material is extremely resilient and strong, difficult to tear (though it can be cut with scissors) and water-resistant. With Tyvek covering their adhesive backing, the tags can be reused and need not be torn off the items to which they are attached.

According to Lottis, Bassett affixes the tags to supplies via a variety of mechanisms. The tags can be attached to goods using masking tape, or put in a plastic bag along with the item. In some cases, the tag is inserted into a laminated sleeve that is part of a hangtag (similar to the tags used to identify luggage).

"When you are dealing with the variety of items that we deal with, you have to be creative," Lottis says. "You need to make it easy to get the tag off, so you can recycle the tag, because the cost of tags is still prohibitively expensive. When you are talking about issuing gloves that cost 34 cents a pair, and then you add a tag that pushes the price of the glove up to 80 or 90 cents, you need to be able to reuse that tag." Thanks to its various attachment methods and its use of Tyvek, he adds, Bassett is able to reuse a single tag numerous times. "We've got lots of the original tags that have been in use for two years."

Since its customer started using RFID tags and CribMaster software, Bassett has been able to track which of the metal manufacturer's more than 25 departments are pulling what items from the cribs and cabinet. This helps Bassett accurately bill each department, and to cut the time required to count inventory and replenish supplies.

Bassett's customer benefits largely because all personnel are now accountable for whatever they take out of the cribs. Every time someone removes a supply from the crib, the RFID system documents it, allowing for more prudent choices. The manufacturer is spending less money on gloves and other consumable goods, because instead of grabbing a dozen, employees are taking only the quantity needed.

RELATED_ARTICLES In addition, the manufacturer is saving money on repair costs. Since it can more easily track how many times a grinder or other tool has been used and repaired, the company can more easily determine when a tool needs to be repaired, and when it is cheaper to replace the tool instead of mending it again.

These efficiencies, along with detailed billing information allowing it to track all expenditures per job, has spurred the customer to expand the RFID capabilities. "We started with one portal and are going live with our fifth this month," says Lottis. "Over the last two years, it just keeps expanding, and the customer loves it."