

# Painting Contractor Saves More Than a Drop in the Bucket

Using EPC RFID to track its leftover supplies, Vulcan saves thousands of dollars each month.

By Mary Catherine O'Connor

March 21, 2008—Vulcan Painters, a large industrial painting contractor based in Bessemer, Ala., specializes in bridges, stadiums, dams, power stations and other big projects. When a new job comes in, the company specs out the task and must quickly secure all the materials it'll need to complete the job. These include the obvious, such as paint and sprayers, but also include industrial materials such as blasting abrasives and sponges used to remove old paint and clean surfaces to prepare them for painting.

Rather than maintaining a full warehouse of these items, Vulcan Painters orders supplies from its vendors per job. But when a job is complete, there are always leftover supplies. Vulcan used to take a rather haphazard approach to utilizing those supplies for future jobs: "We had done a really poor job of managing materials, in the past," says Rob Post, Vulcan's operations manager. "We really didn't know what we had on hand."

Having learned about RFID from supply chain classes he attended while pursuing a master's degree at the University of Alabama, Post thought the technology could help Vulcan Painters get a better handle on its supply inventory. It has. The system, which has been up and running for a month, has already saved Vulcan \$12,000 in reduced supplies cost, along with an additional \$2,000 in savings through a reduction in fees related to disposing of expired supplies, Post says. "Having the RFID system has allowed us to see what materials we can use for upcoming capital projects."

Shain Armstrong, operations manager at Atlas RFID Solutions, an RFID consultancy and systems integrator, says that previously, some Vulcan personnel relied on their own memory to know what extra supplies they had on hand, he says, but might still have difficulty finding the supplies within the storage facility in Bessemer. Or, if even if the stored supplies were located, they had sometimes expired and were unusable. The company would then have to pay to have expired materials hauled away and properly disposed.

To keep better tabs on these stockpiled supplies and turn them into a viable resource for future jobs, Vulcan hired Atlas RFID Solutions to design an RFID-based tracking system and deploy it at Vulcan's Bessemer facility.

After a job is complete, excess supplies are sent to the facility, where a worker attaches a pre-encoded passive UHF RFID EPC Gen 2 tag to each unit (such as a can of paint) that Vulcan wants to track. The tag's unique ID number is then read, using a Motorola NC9090G handheld RFID interrogator, and associated with the item, along with its expiry date, in a database that Atlas created for the Vulcan application. Also associated with this data is an ID linked to the specific shelf or storage bin in which the tagged item have been placed for storage.

Later, when a new painting contract is received, Vulcan workers refer to the database of tagged supplies in

order to determine what goods in inventory can be used toward the completion of the new job. They then put requests in for these items. As they remove these supplies from the inventory storage area, an RFID portal mounted around the door of the storage room collects the tag IDs of the items. If tags attached to items not requested are removed, these items are put into an exceptions report that is automatically sent to the inventory manager, who reconciles what is in the storage facility with what is listed in inventory.

RELATED\_ARTICLES After testing a number of different tag form factors, Atlas chose a foam-backed tag design by industrial label converter Metalcraft. The foam backing provides a buffer between the tag and the metal paint cans and the liquid paint inside the can, both of which would otherwise impede on the RF signal reflecting back the reader. The tags contain Alien Technology Squiggle inlays, while the door RFID portal was built by Venture Research and contains an Omron EPC Gen 2 interrogator module.

Vulcan has purchased 2,000 tags to date, and Post expects that his company will consume up to 500 per year.

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