

Academic Distributor Improves Shipment Accuracy

To help it cope with its crush of summertime orders from primary schools, Rolec is using RFID to verify the contents of each pallet before loading it on a truck.

By Claire Swedberg

July 24, 2007—Dutch school textbook and material shipper Rolec is using an RFID system to verify the contents of each pallet it loads onto a truck. The system, provided by CaptureTech, allows the company to ensure it is sending the correct items to a school before the shipment leaves its 25,000-square-meter warehouse in the town of Ochten.

Rolec is one of Holland's leading distributors of educational materials to the country's primary schools. That includes books, teaching materials and playground equipment. The largest percentage of that material is shipped during the summer, in anticipation of each new school year. During that period, an average of two pallets per school are loaded with boxes full of textbooks, requiring Rolec's staff to work overtime. In fact, the company hires summer staff to help it ship 100,000 pallets per month between May and September.

The large volume of shipments, combined with the use of temporary personnel working at high speed, can lead to mistakes. According to CaptureTech's CEO and founder, Sander de Ridder, pallets have been shipped with the wrong quantity (either more or less than the amount ordered) and the wrong type of items. "The biggest issue was that some orders might not be complete," de Ridder says.

Beginning in May 2007, CaptureTech spent several weeks in its own lab, testing RFID tags and interrogators with Rolec's typical shipments. In so doing, it developed a quick solution that went live in June, within weeks of the book distributor's initial inquiry. "It is looking like the easiest application we've done this year," says de Ridder. "As soon as it went live, they saw the return on investment was a good one."

When filling an order, a Rolec employee packs the requested items in a box, and uses one of six Avery Dennison RFID printers to encode an 868 MHz EPC Gen 2 tag embedded in an RFID label. CaptureTech software records the tag's unique ID number, associating it with a description of the box's contents and destination. The label is then attached to the box, which is loaded onto a pallet. That pallet has its own RFID label, and its ID is also linked to the specific shipment.

RELATED_ARTICLES Each pallet is placed on a revolving platform to be stretch-wrapped in plastic film. An Impinj fixed interrogator, installed beside the platform, reads the tags on the cartons and pallet, then sends the data via a TCP/IP connection to CaptureTech software, which interprets the data and compares it with the ID numbers that should be linked with that pallet. If the software determines any RFID tag IDs are missing or incorrect, it sends a message to a video screen, alerting warehouse staff before the pallet is loaded onto a truck.

According to Ellen ter Horst, Rolec's general manager, the RFID system has led to faster, more accurate

packing and loading of shipments. It has been "very useful," she says, and has, in fact, caught several mistakes before they were made. Still, she notes, after only four weeks of use, it is too soon to calculate the return on investment. The system does not integrate with Rolec's back-end data-management system, and Rolec does not intend to make such an integration. "At this point," ter Horst explains, "there is no need for further expansion, although we will closely follow any developments made in RFID technology."

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