Case Study – Dillon Yarns

Improved Scan/Print System with Automated Print & Apply

Integrator improves antiquated system for textile manufacturer

As one of the leading textile manufacturers and distributors in the southeast, Dillon Yarn Corp., (Dillon, SC), was faced with increasing production problems due to antiquated equipment and obsolete technology on their conveyor lines.

The Challenge:

As a manufacturer running three shifts per day, seven days per week, Dillon's productivity was decreasing due to printer downtimes. Their printing equipment was unreliable and suffered an increasing number of breakdowns and print quality issues, which caused line backup, manual intervention on the conveyor, and false or poor reads by the scanners. Additionally, repairs on their discontinued printers were becoming increasingly difficult due to the inability to get parts. Because Dillon's scanners and homegrown software systems were functioning well, they only wanted to upgrade their printers & label applicators. Any new equipment had to integrate smoothly with their existing system and scanners.

The Application:

In Dillon's facility, boxes of finished yarn spools are packaged and hand labeled with product lot numbers, then sent down one of three conveyor lines to be taped, weighed, labeled and directed for distribution.

Each line contains two Accusort fixed-mounts scanners and one Printronix T1006 tabletop thermal transfer printer, modified with an external add-on applicator. The first scanner scans the product lot number, prompting a lookup in the AS400 database for information to include on the 6" x 8" product ID label to be printed further down the line, including Lot Number, Description, Color, Quantity, Inspector, Gross Weight, Net Weight and a Supplier ID number. The box is then weighed on an integrated scale and moved into position to be labeled.

When the box reaches its exact position to be labeled, a photo eye triggers the conveyor to come to a complete stop. The conveyor must stop immediately, with no residual movement, due to the small (.125" to .25") tolerance for label placement. Label position is vital because the product ID information will be scanned further down the line by the second Accusort fixed-mount scanner, which directs the boxes to the correct point for put away in the finished goods warehouse. The Accusort scanners are straight-line lasers, not rasters, so label placement in this application is key for proper scanning position.

The Solution:

Inovity, formerly BarCode ID Systems, replaced the aging and obsolete Printronix printers and homegrown applicator systems with Paragon automated print & apply label applicators with Zebra 170PAX3 300dpi print engines and heavy-duty tamp label cylinders. The label applicators were integrated into the line and connected to existing PCs that receive product ID data and weight from the line's Primary Logic Controller (PLC) and send label formats and print signals to the applicators. Additionally, output relays on the Paragon applicators were set to trigger a signal to the PLC to restart the conveyor after labeling was complete.

The Results:

Dillon realized improved line results immediately after the new equipment was in place. The clean, quality print from the Zebra PAX engines eliminated all scanning errors after labels were printed, and their ruggedness and reliability has virtually eliminated printer downtime and maintenance issues. Line productivity has increased with the new equipment in place, and manual intervention on the conveyor due to printer downtime or scanner misreads as virtually been eliminated.

Formerly BarCode ID Systems, Inovity is a business process improvement company that transforms technology into powerful, integrated solutions that drive efficiency and reduce costs. As a specialty IT systems integrator, Inovity designs and delivers innovative solutions that connect and relay crucial business information between all points of operational activity, in real time. By emphasizing workforce mobility, ERP data mobilization and business process intelligence, Inovity provides automated technology solutions for manufacturing, distribution, healthcare, retail and field service environments.

The company was established in 1993, is privately owned with headquarters in Atlanta and maintains sales and engineering offices in Atlanta, Chicago, Boston, Greenville, SC, Greensboro, NC, Columbus, OH, Huntsville, AL and Ft. Lauderdale. With innovation at its core, combined with solutions for productivity, agility, efficiency, connectivity, and visibility, BarCode ID Systems has become Inovity. Contact Julie A. Leonard, Marketing Director, 800-452-7418, ext. 9045, jleonard@inovity.com, www.inovity.com.