

## Burlington Industries Utilizes Conveyor System To Improve Customer Service



to be stored, packed, and shipped to customers.

The packing, sorting, and shipping operation in the first finishing plant was slated for a major upgrade.

Prior to the installation of the new conveyor system, the plant used two parallel lines of powered roller conveyor to move cartons of finished rugs through the packing process. The cartons moved by power conveyor to a taper, followed by a strapper. Next, the cartons, which were then ready to ship, were manually moved to the trailers or a floor staging area.

When an item in the floor staging area was due to be shipped, employees

### **"We wanted to create a better, more ergonomically correct workplace for our employees"**

Customer-oriented companies like Burlington Industries scrutinize any materials handling approach that promises to improve customer service. In the case of the company's rug finishing plant in Monticello, Arkansas, the projected improvements offered by a new conveyor system included enhanced customer service, better ergonomics, and improved flexibility.

Burlington House Area Rugs,

a subsidiary of Burlington Industries, operates three facilities in Monticello—two finishing plants and a spinning plant. At the spinning plant, raw fiber is spun into yarn. The yarn is shipped to the first of the two finishing plants to be tufted into rugs.

The rugs are transported to the second finishing plant for coating, dyeing, and other operations, then returned to the first finishing plant

used hand trucks or dollies to move it to dock bays and into outgoing trailers. Because all of the carton handling in this area of the plant was performed manually, company managers worried about potential handling-related injuries.

Project Industrial Engineer Rick Hudock and Cisco-Eagle's sales engineers analyzed the shortcomings of the old design and co-designed a new

# Customer service and system flexibility have been improved

approach that links together all of the operations in the area with a powered conveyor system.

## Improving the ability to meet customer needs

"What we wanted to do," explains Hudock, "was to try to meet several different goals using one system. We wanted to create a better, more ergonomically correct workplace for our employees. We knew that we couldn't eliminate all of the manual handling in this area, but we felt that we could substantially improve our materials handling operations.

"In addition, we also wanted to improve our ability to meet the needs of our customers. To do that, we needed to make the operations in this area more flexible and more responsive. Integrating automatic data collection into these operations was also on the list. And of course we needed to be able to cost-justify any new system that we chose. We really wanted to modernize these operations."

## A System That Delivers The Goods

Working over the course of two long weekends, Hudock and other Burlington managers teamed up with the field installation crew from Cisco-Eagle to install the new Hytrol Conveyor system. This approach to project scheduling minimized installation downtime.

The pre-planning and careful identification of performance goals paid off in a quick ramp-up and in a system

that matches the real-world needs of the plant.

Work begins as orders are received via EDI from the company's headquarters in Greensboro, NC. When the inventory control system determines that all of the items required to complete an order are in the warehouse, the rugs are loaded into totes and released to the packing area.

## Operations are choreographed—data, orders, conveyors

The totes are then transported to points alongside the plant's two parallel lines of packing workstations. Here, rugs are packed into a wide variety of different sized cartons. Workers in this area also attach customer-specific labels to each rug, and affix a bar code label to the outside of each carton.

Once a carton is packed, the employee slides it onto an outgoing conveyor for transport to taping.

The two conveyor lines coming from packing merge, then feed the cartons into strapping and taping machines.

Next, the cartons flow into a long



loop of minimum-pressure accumulation conveyor. The cartons then travel through a scanning location where their dock destination is determined. The information is transferred to the system's primary logic controller which activates an overhead pusher at the appropriate dock location. Cartons flow onto an extendible conveyor that transports them into trailers for loading.

## Injury potential diminished, errors minimized

The benefits of the new system are clear to the employees who work in the packing and shipping operation. Much of the potential for handling-related injuries has been reduced or eliminated, and both customer service and system flexibility have been improved. In addition, order-filling/shipping errors have decreased.

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