



## RUBBER MANUFACTURER ELIMINATES MIS-SHIPMENTS

CARLISLE SYNTEC, INC.

CARLISLE, PENNSYLVANIA



**industry**

MANUFACTURING – RUBBER ROOFING

**applications**

WORK-IN-PROCESS • INVENTORY CONTROL • LABOR TRACKING • SHIPPING/RECEIVING

**situation**

Carlisle Syntec manufactures rubber roofing products and employs 350 employees at company headquarters in Carlisle, Pennsylvania.

**critical issue**

The company was losing time and money due to mistakes on product shipments. A typical month might see as many as five significant shipping errors, in which customers would claim that the shipment they received differed from the quantity or type they had ordered. Each shipping mistake created a ripple effect of increased costs, as Carlisle Syntec would spend time and money investigating the customer's claim; spend more time and money getting the misshipped product returned to their plant; and finally spend more time and money getting the correct shipment out to the customer.

**reasons**

Carlisle was using a paper-based method for shipping and receiving. Rolls of rubber roofing are typically 36 inches in diameter, 10-to-25-feet long, and wrapped with a color-coded wrapper. The colored wrapper is supposed to indicate the proper length, thickness, or material used to fulfill a given order. However, occasionally personnel would mistakenly put the wrong colored wrapper on a roll, thereby misleading order-pickers who would unknowingly send the wrong product off to the customer.

**vision & capabilities**

Carlisle Syntec wanted an item marking and data collection system that would allow the company to accurately track each rubber roll from beginning to end: starting with the raw materials used in a particular batch, to labeling, put-away, order picking, and, finally, actual shipping.

**intermec solution**

Intermec business partner, Computer Support Services, of Lewisburg, Penn., supplied Carlisle Syntec with a radio frequency (RF) bar code data collection system. The significance of a wireless system means that each step in the process is double-checked and verified through two-way communication. For example, before a worker selects a rubber roll for shipment, he scans the bar code label on the roll. The host computer (Hewlett Packard 3000) tells the worker via the RF network and hand-held computer with built-in scanner (Intermec's JANUS™ JR2020) whether or not the roll is appropriate for the work order, regardless of the color-coded wrapper which may be on it. Intermec MODELS 9180 and 9181 function as the network controller and base station receiver in the 900 MHz wireless system.

**benefits**

The company has avoided mis-shipments since using the bar code system, and has saved \$15,000 per year because it no longer investigates claims on mis-shipments. The company believes more accurate shipping leads to higher customer satisfaction. Carlisle now can perform lot traceability if required. For example, if Carlisle manufactured a batch of rubber rolls that was out of specification due to receiving improper mixing compounds from its own suppliers, Carlisle now has the capability to recall only the rolls known to be defective.