

Challenge Solution

Client

Bridgestone / Firestone, Inc.
Tire Manufacturing Facilities: Joliette, Quebec, Canada
Wilson, North Carolina
Graniteville, South Carolina

Bridgestone / Firestone, Inc., is an international manufacturer of tires with facilities worldwide.

Challenge

Tire manufacturers have traditionally manufactured “in-line”, a process which causes an equipment malfunction to have a “backup” effect upstream and a “domino” effect on all downstream processes. Traditionally, a breakdown would require all workers to be idle or even sent home while the machine was being repaired. The challenge was to avoid these kinds of problems, and achieve greater efficiency by more effectively managing distribution of tires from multiple upstream machines to downstream units in three of the tire manufacturing locations.

Solution

A tilt-tray sorter with a custom designed tire tray was installed in each of three manufacturing facilities, each serving the same function as a “roundabout” or traffic circle. An automatic induction unit was placed at the discharge end of each upstream machine. Each automatic inductor then fed work-in-process to an individual tray on the sorter. While traveling on the sorter, all tires were merged into a continuous stream. The sorter then disbursed the product to the downstream equipment as determined by need or availability.

By applying proven sortation technology traditionally used in distribution to Bridgestone’s manufacturing environment, a conversion was successfully made from a rigid assembly line to a system of flexible manufacturing.



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