Case Study: Reliability With Automated Storage And Retrieval Systems

In more than 10 years, the Automated Storage and Retrieval System installed at Hershey Creamery Company has not had a single down day.

Back in 1997 the Hershey Creamery Company, manufacturer of Hershey's Ice Cream, sought Westfalia Technologies, Inc. to design and build an automated warehousing system for its new ice cream distribution center in Middletown, PA. The company was expanding its distribution, as its original offices located downtown in Harrisburg, PA were becoming too crowded, and couldn't keep up with the company's growth strategy.

Since 1894, the family-owned Hershey Creamery Company has specialized in bulk ice cream novelties. The company distributes to more than 22,000 retail outlets, such as grocery and convenience stores, but focuses mainly on direct-store delivery. The distribution center needed to handle the volume of smaller direct-store deliveries and larger orders for Hershey's regional warehouses, while maintaining selectivity for numerous stock keeping units.

To accomplish the goals of optimizing material flow, reducing logistics costs, and minimizing labor requirements, Westfalia designed and built a 5,000 pallet position, eight storage level automated warehouse system. The two aisle system has a combination of seven- and five-deep storage lanes. Each aisle contains one S/RM capable of handling approximately 70 pallets per hour. All pallets are triple supported within the rack structure, thus eliminating pallet damage.

Parameters for the AS/RS design included:

- Maintaining FIFO inventory management.
- The ability to store one SKU in each storage lane.
- Ensuring the fastest moving SKUs were placed in storage lanes as close to the input/output conveyors as possible.

By storing the pallets in two different lane depths, the warehouse is able to meet the throughputs of the fast moving “A” products in the longer lanes, and the slower moving “B” products in the shorter lanes. This mix of lane depth also increases rack utilization. Westfalia’s design also enables pallets to flow directly from stretch-wrapping to the order selection area or shipping dock as needed, especially during peak throughput conditions.

About 5 years later, to meet their growing distribution demands, the AS/RS was expanded—aisle lengths were increased 50 percent, and a 3rd level of pick lanes were added within the rack structure. At that time, Westfalia’s Warehouse Control Software (WCS) was also installed. With these additions, Hershey Creamery has been able to deliver its products faster and more efficiently.

Westfalia’s WCS manages and reports the movement of all pallets and their cases throughout its journey in the warehouse. It issues a broad range of standard reports to keep track instantly of inventory and product flows.

Among the information gathered by the WCS at the pallet’s point of entry into the AS/RS is the SKU the pallet is carrying, height, weight, description, special storage classifications, shelf life, and the number of days a product can bypass FIFO delivery. An operator can easily add, change, or delete this information.

Westfalia’s WCS has proven amazingly user friendly. With tab-style screens, and an easy to read format, operators quickly and easily learn how to use the system. In addition, Westfalia provided a full training package with the system installation.

As Mike Dubesky, Control Room Operator explains, “While it’s a little overwhelming at first converting to automation, it doesn’t take long before you get used to it. Within a few weeks we were really comfortable.”

“In all that time, not a single day has been lost to down time,” states Tom Leonard, Control Room Supervisor, “and we move 500 pallets a day in and out of here.” In fact, Hershey Creamery is planning further upgrades to improve the efficiency of the S/RM’s now that their controls are 10 years old.

For more information, visit www.westfaliausa.com [1].

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