Tunnel Washers: The Answer to Rising Labor, Utility Costs? (Part 1)

A 12-module Girbau Industrial TBS-50 continuous batch tunnel washer installed at Laundry Plus in Sarasota, Fla. (Photo: Girbau Industrial)

Theresa Boehl | May 22, 2014

OSHKOSH, Wis. — For laundries looking to upgrade wash equipment, a continuous batch washing system (CBW®), also called a tunnel washer, might be an attractive option. But how is a tunnel system different from open-pocket washers, and how can a company’s operations benefit from this technology?

In Making Sense of the Tunnel, a recent webinar hosted by the Association for Linen Management (ALM), Seth Willer, national sales manager for Girbau Industrial, discussed the technology behind these systems and the advantages they can have over other systems in certain situations.

Willer also addressed the main driver for many companies looking to upgrade to tunnel washing systems: skyrocketing labor costs.

“I promise you the minimum wage will go up and I promise you labor will get more expensive if you choose to operate your laundry in the U.S.,” he says.

Willer also points to the historical trend of replacing labor with technology.

“Technology is just increasing and increasing and the laundry business is no different,” Willer comments. “We’ve always had new technology emerging.”
WHAT IS A TUNNEL SYSTEM?

Willer says the textbook definition of a tunnel system is an automatic system with the capability to sequentially wash and dry batches of linen at a high production rate with great labor and energy efficiency.

Unlike a traditional front-load washer, which fills with water and drains with every wash phase, a tunnel washer’s phases occur as they move through various modules that are all connected to make one large system.

“To use a tunnel washer, you’ve got the same wash formula, but we’re doing it in a bigger configuration,” Willer says, explaining that a tunnel washer is like a series of open-pocket washers bolted together, side by side. This configuration allows loads to be continuously moving through the system.

“You could have 10 different phases of the wash cycle and you could have 10 different loads all washing at the same time, just in different phases of your wash formula.”

CLASSIFICATIONS AND COMPONENTS

According to Willer, tunnel washers are typically classified by module capacity (in pounds of linen), by number of modules (usually ranging from around five to 20), by type of transfer (top or bottom), by existence of outer drum or by bath design or wash process. He listed the major components as a loading device (often a conveyor), the tunnel washer, an extraction device, an automatic shuttle and dryers.

There are two main types of tunnel washers on the market today: bottom-transfer and top-transfer tunnels. Bottom-transfer tunnels provide mechanical action through what Willer calls an “Archimedean-type screw,” which runs the length of the tunnel and provides back-and-forth agitation before rotating fully so the linen flows into the next module, where it will be exposed to another element in the wash cycle.

Bottom-transfer tunnels are ideal for high volumes of like items, Willer says, but they tend to have less mechanical action and some other limitations as well.

“But bottom-transfer tunnels don’t tend to be all that flexible when it comes to changing programs, and that’s where your inner and outer drum is key,” he explains. The outer drum, which acts as housing for the inner drum, is what allows for change in wash programs, and bottom-transfer systems typically only have outer drums around a few modules in the system.

“But if you have a large operation where all you’re washing are white towels, then a bottom-transfer will work quite well,” Willer says.

But for those who need more flexibility in their programs, a top-transfer tunnel might be the better way to go, he says. Besides having an outer drum that runs the length of the tunnel, allowing for inputs on any module, a top-transfer tunnel also features drums with a more significant rotation, picking up linen and dropping it repeatedly.
“An advantage of a top-transfer [tunnel] is you get good mechanical action,” Willer says. And that leads to the possibility of more flexible wash cycles, so wash formulas can be adjusted accordingly.

“In a lot of circumstances, if you can increase your mechanical action, you might be able to get by with washing in less water, or less chemical or detergent.”

But Willer is careful not to imply that a top-transfer tunnel is preferable for all operations.

“The top-transfer [tunnel] is becoming a popular model, but there’s no real definite answer because it’s all about what you’re washing and how you’re washing it, and what design is most advantageous to you,” he says.

Check back Tuesday for the conclusion!

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