A photograph of an industrial laundry tunnel. Two large, round, white linens are being processed on a conveyor belt. The machine is teal-colored. In the background, there are several large black hoses hanging from the ceiling. A chain-link fence is visible in the foreground.

LLT 'gentle tunnels' anchor wash room at Florida Linen Services in Pompano Beach



One of three, 18-compartment Lavatec tunnel washers processing about 700,000 lbs. of linens per week at Florida Linen Services (FLS), Pompano Beach, FL, for nearly 30 area hospitals. The integrated system from Lavatec Laundry Technology (LLT) also includes three LP-572 extraction presses, conveyors, a rail system and 12 dryers.

“We’ve turned this plant around,” observes David Burns, Corporate Engineer at Florida Linen Services (FLS) and a customer of Lavatec Laundry Technology. Nearly 700,000 lbs. of linens a week move smoothly and relentlessly through a trio of 18-compartment Lavatec tunnel washers destined for 30 area hospitals. For the 11-year British Navy veteran, this marks Burns’ second tour of duty at the same facility where, it turns out, Lavatec equipment also entered the picture shortly after he did.

The first tour commenced in 1993, when “opportunity arose to work in a brand new plant with new machinery.” Burns knew his way around massive, technology-driven equipment, having been a specialist welder in Her Majesty’s Service.

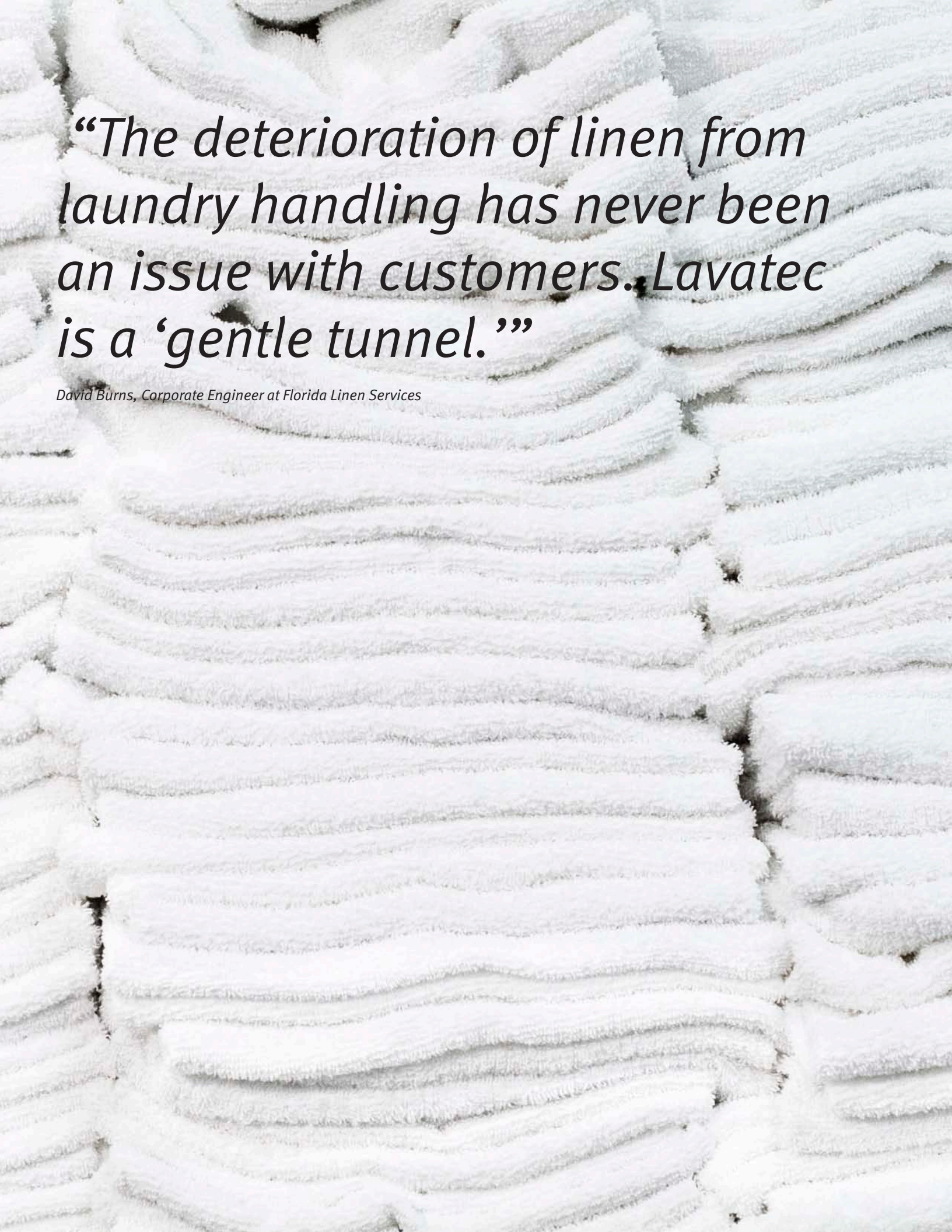
“I came to Ft. Lauderdale on an aircraft carrier and liked it here. When I left the navy, I returned to the area and initially worked as a welder at a local port.” By 1993, he also had a handle on the laundry business, gleaned from several years with a finishing equipment manufacturer and in a Miami laundry operation “servicing some equipment I built.”

At FLS’ Pompano Beach facility back then, Lavatec was the tunnel of choice: three 18-compartment (110 lb.) washers. It also marked Burns’ first association with Richard Luneburg - who heads his own family-run FLS today - which continued for six years until the initial operation was sold, and Burns moved to a laundry in Miami.

The plant was subsequently bought by National Linen, which offered Burns the position of Plant Manager. After a year, however, he decided to “retire to South Beach,” to run a hotel with on-premise laundry.

Return engagement, and a larger contingent of new Lavatec equipment

Burns’ second tour of duty started in 2006 when Luneburg, who founded FLS in 2003 and repurchased the Pompano Beach plant, coaxed Burns out of retirement to help turn around the operation. At stake was FLS’s service to 30 local hospitals, as well as keeping FLS employees occupied processing linens during two daily production shifts.



“The deterioration of linen from laundry handling has never been an issue with customers. Lavatec is a ‘gentle tunnel.’”

David Burns, Corporate Engineer at Florida Linen Services



Conveyors from Lavatec Laundry Technology (LLT) designed into Florida Linen Services (FLS) tunnel wash system, provide on-the-move “storage” of goods being processed, to help prevent drying time delays from causing tunnel washers to go on hold.

“The original 12-year-old Lavatec units weren’t properly maintained during those interim years,” Burns bluntly states, recalling the last owners had replaced controls on the tunnels with different, relatively rudimentary electronics. “No one could get them to work properly, even people who programmed it didn’t know how.” FLS consensus was that cleaning house was the way to go.

In 2007, brand new Lavatec equipment again entered the 42,000 sq. ft. building - not only three 18-compartment tunnel washers but a trio of 40-bar Lavatec LP-572 extraction presses, twelve 450-pound dryers, a shuttle, conveyors, and tunnel loading rail system.

During the transition, the hybrid controls created equipment-replacement headaches for everyone involved. “Lavatec was really wonderful,” says Burns. “They installed the first unit in June, the others in October-November. Since then, our entire tunnel-to-dryer wash system is all Lavatec, and it works.”

“These machines have plenty of bells and whistles, monitoring systems and such; yet the controls, for example, immediately make sense. They are very easy to operate and easier to maintain.”

David Burns, Corporate Engineer at Florida Linen Services

Simple, functional engineering, key-component redundancy

While home base for Burns and about 200 FLS employees is Pompano Beach, he also oversees engineering at two other facilities, in Immokalee and Jensen Beach, and will soon add a third. FLS recently purchased Space Coast Services in Orlando.

Meanwhile, the main priority seven days a week is turning out freshly processed linens. “We run 90-second cycles and average 100-lb. loads. The machines are very reliable and have been very productive for six years; they have many more years left.”

Burns’ optimism stems from current as well as earlier Lavatec experience and what he calls German logic: practical engineering that is focused on function and performance.

“Some manufacturers make things too complicated, but not Lavatec; it’s very simple. Look at system diagrams or the equipment itself, and you can tell right away what’s going on. These machines have plenty of bells and whistles, monitoring systems and such; yet the controls, for example, immediately make sense. They are very easy to operate and easier to maintain.”

Burns points to another example: Drive wheels for tunnel compartments, rather than chain drives that other makers use. “Lavatec’s system is good, four motors driving each drum. If you lose a motor or two, you can still run and get out the laundry in the tunnel, and keep processing at (temporarily) lower weights.

“With a chain drive, if you lose a motor you’re dead in the water. You also have to lubricate and periodically adjust chain drives.” Has Burns worked with chain-drive washers? “I have,” he replies ruefully, without further comment.

“Lavatec motors don’t require such servicing, and we can replace drive wheels when necessary during our third, non-production engineering shift.”

Lavatec redundancy with this system is a real plus, in Burns’ view. Another backup with FLS tunnels is an emergency controls option they added when purchasing the new machines. “If a PLC goes bad in the controls, you can continue to run until you get it fixed.” In six-plus years “we’ve never used it, but it’s nice to have.”

Burns’ engineering background, hands-on equipment know-how and years on the firing line give him a pragmatic perspective on all aspects of tunnel wash systems.

Minimizing energy and water usage; taking water claims ‘with a grain of salt’

Relatively low energy consumption is a given with Lavatec tunnels. As for water, Burns says the bottom-transfer machines minimize water consumption per pound of laundry processed. “It’s hospital linens; our priority is getting them thoroughly cleaned and rinsed.” Furthermore, “water is recycling automatically. Basically, the machine recycles itself. We also have a plant system that recycles 50% of our water going down the drain.”



Florida Linen Services (FLS) Corporate Engineer David Burns worked in this facility when it was first built in 1993 and equipped with three new Lavatec tunnel washers. He returned in 2006 and soon afterward was again working with three brand new tunnel washers from Lavatec Laundry Technology.

Burns emphasizes that their gallons-per-pound usage is a complete, actual day-to-day production number. Some manufacturers claim their machines use less water, he says, but “You have to read very carefully, what they say. They may have .7 gallons of reuse water, and also put in fresh water (or vice versa). Actual use may be twice what they publish, if you total all sources.” Some tunnel makers talk as low as .3; but “I figure much of this is smoke and mirrors, and theirs is basically the same as everyone else’s.”

Burns notes that the combination of water, mechanical action and chemicals in wash programs is the key to cost-effectively providing cleanliness, brightness and disinfection customers insist on. A bit higher flow could also improve linen handling in the tunnel.

‘Gentle tunnels’ help save customers big dollars in linen replacement costs

“There are tradeoffs,” Burns points out. Getting the goods clean with less water, for example, can also require more-aggressive mechanical action, especially if you want shorter cycles, faster processing. “This will affect the life of the linens negatively.” Linen replenishment is a huge expense for health care and other institutions, so a minor extension of linen life can make a major difference.

Adequate mechanical action is generated by optional rib dimensions in compartments that FLS ordered in the new units. “We get the mechanical action we need with our chemicals to meet hospital criteria. The deterioration of linen from laundry handling has never been an issue with customers. Lavatec is a ‘gentle tunnel.’”

Prepped for drying efficiency, with plenty of drying capacity

Lavatec extraction presses effectively minimize drying times and, in turn, energy needs, while two extra dryers give FLS “three rows of four” 450-pounders to get the job done.

“The tunnel system is capable of running with 10 dryers, and our operation was based on no customer changes – every load would be 400+ pounds,” Burns explains. Knowing that too little



drying capacity can occasionally cause tunnels to go on hold, “we bought two extra units.”

That foresight turned out to be fortuitous. “With hospital groups and more customer hospitals, we have a ‘pool’ of linens for each group. This means you have to get one customer’s linen out of the tunnel system and out of the rail system that feeds the tunnel washer. But you may end up running two loads or just one in a dryer, which slows things down. The ‘extra’ dryers accommodate that while also giving us redundancy if we have a dryer down, or to do maintenance while still running the rest of the system.”

‘Cakes on the move’: Lavatec transportation keeps dryers drying, tunnels washing

Another assist that helps the FLS system process various hospital linen “pools” nonstop, comes from the Lavatec shuttle and conveyors.

“Laundry comes out of our presses in cakes,” Burns says. “Cakes go onto a Lavatec storage conveyor, which holds four. When it’s full, the cakes move to a shuttle, which also holds four, and it transfers to a dryer or to one of three conveyors go-

“It’s hospital linens; our priority is getting them thoroughly cleaned and rinsed.”

ing to the other dryers. So we can hold much more linen, 44 transfers if need be, waiting for dryers.”

Which helps ensure timely delivery of 700,000 lbs. each week.

With two-shift production Monday through Sunday, Burns says the third shift focuses on engineering and maintenance activities. “We’ve had problems but nothing major, all typical wear and tear. Normal stuff like replacing contactors and seals, changing out the wheels on drive motors. Our biggest issue is time to take down machines. Not to fix things but to look at them; we practice preventive maintenance and it really pays off.”

Reflecting on the situation he encountered when returning to this facility seven years ago compared to the equipment and operation today, Burns arrives at this succinct conclusion: “The Company invested money and effort to get it working again and it’s running very well now.”

About Lavatec Laundry Technology, Inc.

Delivering dependable commercial laundry equipment engineered for higher returns throughout their lifecycles has always been the Lavatec Laundry Technology (LLT) mission statement. A rarity among manufacturers of continuous tunnel washers, Lavatec LT offers center transfer, bottom transfer and double-drum construction options, plus a full range of readily integrated, end-to-end laundry system components: washer extractors, extraction presses, centrifuges, dryers, conveyor systems, pickers, feeders, ironers and folders. Simple design, durable construction, user-friendly operation and low maintenance are hallmarks of Lavatec LT machines. A global leader with equipment in laundry operations throughout Europe, the Far East, South and North America, in the United States alone, over 6,000 Load Warriors are in place. For additional information, visit www.LLTusa.com.

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