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**In the Zone - The Ins and Outs of Ozone Laundering**

The technology has been around for quite some time, but ozone laundering has yet to become the standard in commercial laundries. Ozone's claims include reducing gas, water and chemical consumption, as well as extending linen life, increasing productivity and creating a more comfortable work environment. However, skeptics question the reality of those claims.

Technically, ozone gas (O<sub>3</sub>) is created when a high electrical voltage is passed through oxygen (O<sub>2</sub>) molecules. And, it's that third oxygen atom in ozone that gives it powerful cleaning abilities to break down organic materials such as soil, bacteria, molds and greases. Tests have shown ozone to be effective in eliminating almost all bacteria types.

Bill Cummings first learned about ozone technology 10 years ago, but wasn't interested in using it until this past year. The original technology--which is still sold--had ozonated gas bubbled through the wash wheel, but laundry is cleaned in water not up in the air, explains Cummings, general manager of hospitality laundry for the Grove Park Inn, Resort & Spa in Asheville, N.C. The new technology adds gas to the water under pressure, so the water is ozonated.

So far, in the nine months the ozone system has been in use, the Grove Park Inn has only seen a negligible decrease in its water usage--approximately 15 percent.

Ozone can decrease or eliminate a laundry's hot water consumption, because it works best at cooler temperatures. Instead of water in a hot water heater, you take cold water and juice it with ozone. The reduction in hot water usage and lower water consumption through shorter wash cycles can result in savings in the overall energy usage, explains Jim Konides, president of IndustrOzone Technologies Inc., a Raleigh, N.C.-based manufacturer of ozone laundry systems. For example, the Grove Park Inn has experienced savings between 30 percent and 40 percent on its gas bills. And we haven't gone through the winter months yet, when the water would have to be heated from a much colder outside temperature.

The 510-room Grove Park Inn handles 3.5 million pounds of laundry from its guestrooms, F&B and spa. In addition, the facility launders 3 million pounds of external commercial laundry for other F&B and resorts in the area.

Claims that you can cut chemical usage in half or by a third are unfounded. You need to look at the energy and water savings instead, explains Konides. Ozone will activate the chemistry, but you still need all the chemicals.

To that end, five years ago, IndustrOzone and Ecolab started a joint testing program. A successful laundry operation includes having the equipment provider, chemical provider and customer on board. If you don't have all three, success is diminished, says Konides.

Cummings agrees that his chemical usage hasn't necessarily decreased. Grove Park pays its chemical provider a flat rate per pound, regardless of usage. That way, the chemical and ozone providers can work together. If not, it's not a good partnership, he adds.

Many of the washer manufacturers are allowing their clients to take advantage of ozone technology by providing machines that can be adapted to include ozone equipment. For example, Continental Girbau

Inc.'s equipment can accept ozone technology through a partnership the company has with 3E Technologies and Ozone Laundry Technologies Inc. Another example is Pellerin Milnor Corp., which also ensures its machines are compatible with the ozone technology available. We've definitely seeing some customer interest, but it's generally on a regional basis, says Gary Gauthier, marketing manager for Pellerin Milnor.

Overall, an ozone system can cost from \$80,000 to \$150,000, depending on the size of the operation. But, Konides says a company will see results and payback within eight to 18 months.

Not everyone has seen the benefits of ozone. Konides cites three reasons people are wary of ozone technology. First, different technologies tend to be lumped together. [Some technologies] may be cheaper and easier upfront, but there is a right way and a short cut way, says Konides. If you want optimal results, you need the right equipment.

A number of companies jumped into the market using drinking water technology and provided low-cost options, notes Jack J. Reiff, president of J. Reiff Consulting Inc. (d.b.a. WET-TECH). The low quality of laundry work that came out of the ozone drinking water technology that was used in the laundry industry caused bad vibes. There were complaints and poor performance, he says. But unfortunately, a lot of people buy on price.

Second, ozone suppliers need to provide support. Now that the system is done and supplied, you need to support it, says Konides. Half of the systems that were installed are no longer running because of lack of support.

Finally, anytime you ask people to change the way they are doing business, there is bound to be some resistance, says Konides. And, it's not just the hospitality industry that is being asked to change. The chemical providers, equipment manufacturers, and linen suppliers all stand to lose money from ozone gaining popularity, notes Reiff. In addition, the maintenance people do not like the increased time they are required to put in to maintain some of this lower cost technology.

In reality, the main problem with ozone is the misinformation that has been circulated in the industry, notes Sam Garofalo, principal with Technical Consulting, a firm specializing in technical operations and management issues for commercial laundries. The [ozone companies] aren't trusted anymore, he says.

The problems occur when the marketing people get ahead of the reality. Claims have been made that aren't attainable, says Garofalo.

Some companies have overpromised and underdelivered, agrees Konides.

David Gross, owner of Gulf Coast Laundry Services, says he hasn't seen any statistics that would sway him to switch to ozone. I'd love to see detailed documentary evidence of natural gas bills, water bills, scientific testing methodology, a benchmark of consumption per pound of laundry produced--not marketing hype, he says.

However, Gross is not totally discounting the process. We spend hundreds of thousands of dollars on washroom chemistry and water studies each year, and we would be happy to participate in any scientific study regarding ozone, he adds.

In the end, ozone technology is something that all hotel properties might want to consider. It's an interesting technology, but some properties may have greater wash needs, says Pellerin Milnor's Gauthier. Each individual property should determine what is right for them.