

PROBLEMSOLVER

By Ken Rose

Ken's Foods invests in a wastewater processing system and serves up efficiency & dependability

What started out as a signature dish in a restaurant more than 65 years ago has today become a company with more than 400 varieties of salad dressings and sauces. When Ken's Steakhouse began in 1941, the owners were in search of a special salad and dressing to go with their steaks. The salad dressing soon rivaled the steaks in popularity—and a new company was born. Today, the company has grown to include plant operations in Marlborough, Mass., McDonough, Ga., and Las Vegas. The company manufactures not only its own line of salad dressings but also makes products for notable brands such as Paul Newman's line of dressings.

Ken's Foods has always been dedicated to providing customers with safe, high-quality products. The company knows that food safety begins at the manufacturing plant, so when it came time to design its wastewater treatment system in the company's new Las Vegas plant, Ken's looked for best-in-class solutions.

In 2002, faced with an expansion plan that led the company to build a 185,000-sq-ft Las Vegas plant, the salad dressing leader wanted to ensure it had the best wastewater treatment system available to help meet the company's strategic priorities. Additionally, it was important to the engineering team that it incorporated a system that would maximize efficiencies while maintaining a small footprint; space saved in operations is space that later can be allocated for growth and expansion.

Handling Large Solids

One of the critical issues to be addressed in any food manufacturing plant is sanitation. "In a typical day, we'll get solids, entire chunks of cheese, relish, similar produce and more into our wastewater system," said Dave Muskopf, vice president of engineering for Ken's Foods. "These solids can create real problems when they get through the traps on the floor drains." The company needed a system that could handle large solids dependably. To address the challenge, Muskopf and his team turned to World Water Works for guidance.

World Water Works is a provider of complete turnkey installations including design, build, installation, startup and operation of water and wastewater systems. Tailored to

World Water Works team was prepared to deliver high-quality solutions to Ken's Foods.

A Five-Course Meal Approach

"We installed three solution tanks at the new Ken's plant, utilizing a batch treatment solution to wastewater," said Kyle Booth, engineer for World Water Works. "They fill one up, start filling the other one and then treat the one that's full. Then, a pump will pull the wastewater from that tank and run it through the purification system to a pH adjustment tank and then down the drain."

This efficient operation keeps Ken's management happy, as well as the local and state authorities and customers, by maintaining strict food manufacturing safety practices.

Another challenge that needed to be addressed was the sheer volume of the washdown. "Because of the amount of productivity this company handles on a day-to-day basis, the volume was an issue that needed to be factored long-term," Booth said. World Water Works relied on the Gorman-Rupp Co.'s Super T-Series technology to address the durability challenge. The Gorman-Rupp T3A60S-B pumps are integrated into the total solution. "There are five self-priming, centrifugal pumps down there," Booth said.

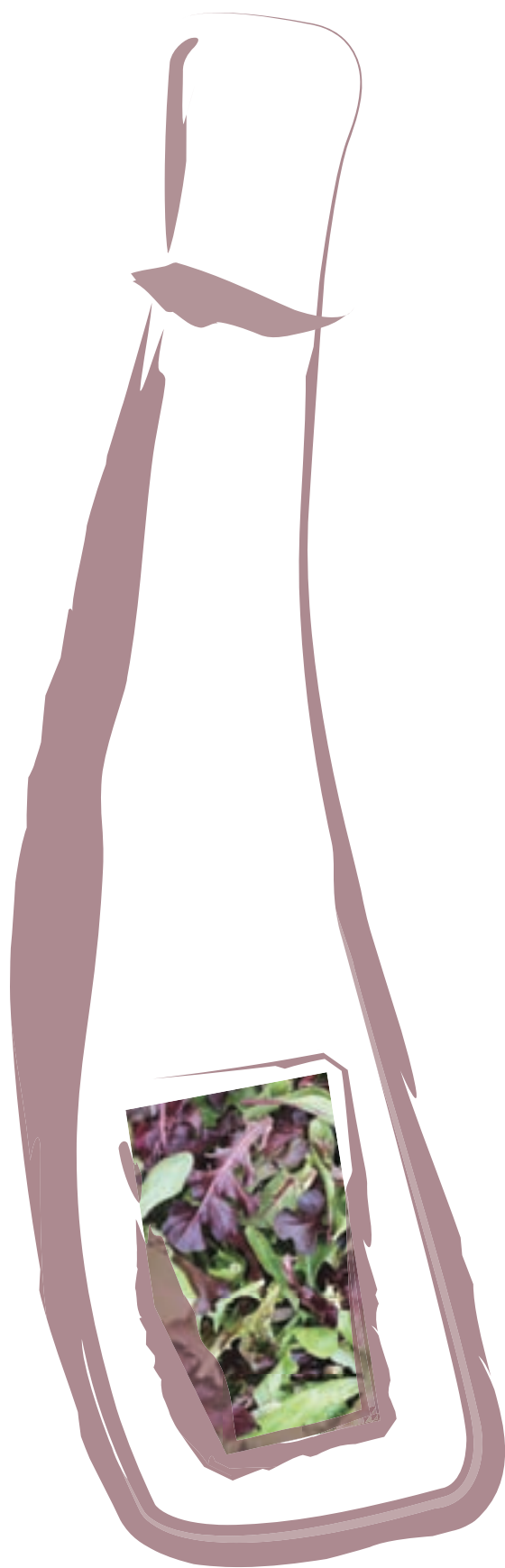
In the process, the first pump takes the outfall from the plant, which is pulled up from the 24-ft tank. This operation requires a lot of suction due to the tank's configuration. From there, the system screens the water, making it necessary that the pumping technology can handle any trash that gets through the drain. Next, the system pumps it into a tank where the wastewater is separated from as much of the free oil as possible. The operation forces the wastewater into equalization tanks to regain clarity and purity in the water.

a Dressing for success

require as little or as much customer input as desired, World Water Works' engineering staff strives to develop solutions that provide long-term reliability and consistent performance. Its products are constructed with state-of-the-art materials and control technology with an emphasis on durability. In the end, the company's goal is to design solutions for customers such as Ken's by using a total systems approach. Combining their expertise in treatability analysis, filtration and clarification with a complete line of water treatment products and services, the

"When you batch treat water, you've basically got three equalization tanks," Booth said. "The first is filled up, the operator checks the water and the chemistry to note how easy or difficult it's going to be to treat, and then adjusts the chemistry accordingly to treat the entire tank while the second and third tanks continue to fill up. In an application like this, where we've got a big section working, we ask a lot of the pumps. That's one of the big reasons why we've chosen Gorman-Rupp."

For Booth, the equipment choice was both critical and obvious. In the end, the company relied on the Super T-Series technology for several reasons, but mainly for its ability to handle solids in demanding situations. Because the water contaminants at Ken's Foods include chunks of cheese and other food products, the pumping technology has to be up to the challenge of handling very large solids reliably. The two-vane, semi-open impeller allowed the



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treatment process.

World Water Works' solution also incorporated oversight of the operation's setup and training. "This treatment plant was a turnkey project," Muskopf said. "World Water Works handled the initial startup and training, but our employees run it and maintain it."

"It was a little bit challenging on startup just to make sure everything was set up correctly and people were communicating well, working together in the manner that was required," Booth said. "But with a strong team and a strategic design, everything works a little more smoothly. The operator at the Ken's plant has also done a great job."

Looking to the Long Term

To many engineers, the cost associated with treating wastewater inside a food manufacturing plant is a necessary evil—simply the cost of doing business. Still, an investment in a dependable and well-engineered treatment system can result in significant cost savings in the long run.

"If it is not treated properly, you face problems and possible fines from the EPA and municipal water and sewer authorities," Booth said. "It's been our experience that trying to save money in the short term with less expensive solutions can lead to increased costs, lost time and bad publicity in the long run. And that's never been an option for us or our customers." **WWD**

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technology to do so. Further, with the pumps' removable cover plates, maintenance was simple and painless, ensuring that if and when the pumps get clogged, downtime would be reduced and costly delays minimized.

Smoothing Out the Process

"There are always unexpected, unanticipated situations in any treatment plant, but with this solution and these pumps, we've encountered absolutely nothing that has caused our operation to shut down the system for any period of time," Muskopf said. In fact, Muskopf and his engineering team are particularly happy with their improved ability to monitor the system electronically via a single operator during the

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