

GE Solves Energy Challenge at a Vaccine and Blood Serum Derivatives Manufacturer

Background

In 2005, an Illinois manufacturer of vaccines and blood serum derivatives was facing an energy challenge. Their WFI storage and distribution was maintained hot for bacterial control reasons, but was cooled to ambient temperatures at each POU due to hemoglobin temperature requirements. The constant cooling and heating cycles throughout the distribution loop was costing close to US\$750,000 in energy on the two systems in operation. This manufacturer's European parent company mandated a study into the compliance and operational aspects of ozone at this location. (The use of ozone is much more ubiquitous in Europe than in the US, where heat sanitization is more widely used.)

Challenge

This manufacturer had a very traditional operational philosophy, and was unfamiliar with ozone. With minimal US-based references of existing end users using ozone in their WFI storage and distribution systems, and the familiarity with the current operation, the advocates for heat sanitization initially outweighed the advocates for ozone.

Solution

GE Water & Process Technologies conducted educational meetings at the plant to bring the engineering, operations and compliance personnel up to speed about the common use of ozone in other industries and other end users worldwide. Together, GE and the manufacturer collaboratively reviewed governing laws and contacted various government offices to establish precedence. Though minimal, other customers were contacted to provide reference and operational history. Finally, after a long period of evaluation, the customer decided to implement two of GE's Pharmaceutical grade ozone

systems, complete with ancillary safety equipment and state of the art controls.

Results

Once installation began, the mechanical connections were completed and the control protocols were incorporated into the plant operations within days. Site personnel were thoroughly trained. Finally, the customer passed a very rigorous in-house, as well as, consultant led inspection process.

The two new ozone systems paid for themselves in about a year's time based on the energy savings realized by the Customer. As energy costs continued to rise, the Customer proceeded with retrofitting an additional two storage and distribution systems with ozone technology. The Customer estimates that this action will result in approximately US\$1MM in total energy savings on a yearly basis.

For additional information, please visit www.gewater.com/highpurity



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