

Automated Parts Washer Keeps Up With 140 Screw Machines

Watts Regulator Company (Chesnee, South Carolina) is a large screw machine shop, with 140 screw machines turning out more than 500,000 parts a day. Founded in 1873, the company is a global supplier of home heating and plumbing equipment for industrial and DIY markets (through Home Depot, Lowe's and so on). It is a leading manufacturer of pressure relief valves for hot water heaters. The Chesnee plant produces turned bar components for about 5,000 different valves. These parts range from $\frac{1}{8}$ inch to 5 inches in diameter, with internal threads and lots of blind holes where chips can hide. About two-thirds of the parts are made of

brass; the rest are cold rolled steel or stainless steel.

The company had trouble meeting stringent cleanliness specs at such a high volume with aqueous cleaning. "The aqueous washer we were using was top-of-the-line, but it just couldn't meet our cleanliness spec, which is basically zero contamination," says Rick Wilson, process engineer at Watts Regulator. So the company decided to install an automated washer that cleans with non-chlorinated solvent.

The Universal 71C dual-chamber hydrocarbon system from Dürr Ecoclean GmbH, Filderstadt Division, North America (Wixom, Michigan) was installed in October 2000. It

runs 16 hours a day, 6 days a week. In a typical day, it cleans 100 to 125 different parts, totaling about half a million pieces. Target volume is 60 baskets per hour, but it usually runs at least 64, a cycle time of nearly 4 minutes. It now meets or exceeds all quality and productivity targets and has reduced operating costs by 80 percent.

"I'm very, very impressed with the machine," Mr. Wilson says. "Hydrocarbon solvent not only cleans better, but since it's non-chlorinated, it's also safer and more environmentally friendly."

Another advantage is lower operating cost. Watts Regulator used to spend \$5,000 to \$7,000 a month on its aqueous system—for chemicals, energy for heating, and handling contaminated water. It now spends just \$1,000 a month. Uptime is virtually 100 percent, according to Mr. Wilson, which is crucial with so



Watts Regulator Company has been using the Universal 71C dual-chamber hydrocarbon system since October 2000.

