A Nice Finish

>>> UniMetal Cleaning Up After Major Financial Investment

>>> by David Krechevsky

When you clean something, whether it's a sink, a car or a pair of pants, the objective is simply to remove the dirt or stain. Precision cleaning, as practiced in the metal-finishing industry, seeks a more measurable goal.

Just ask UniMetal Surface Finishing LLC, which is headquartered in Thomaston and has a processing facility in Naugatuck. UniMetal is an industrial precision metal-finishing company that offers precision cleaning of metal components.

UniMetal recently made a major financial investment in a new, state-of-the-art, automated Roll parts vacuum ultrasonic cleaning machine, seen here. The Roll machine, being operated above by Keith Gallion, is more efficient and more environmentally friendly. Contributed.

Industry Standards

According to Jim Orsatti, UniMetal's vice president of sales and marketing, precision cleaning of manufactured parts involves removing "oil, residual metal particles and debris to a qualitative and quantifiable specification." These specifications, he said, are established by customers, engineers, and/or industry standards.

The standards are measured, achieved and maintained through periodic "white-room laboratory analysis" of the size, weight or count of residual contaminants and particles, Orsatti said.

New Machinery

UniMetal recently made a major financial investment in a new, state-of-the-art, automated Roll parts vacuum ultrasonic cleaning machine. The company's Thomaston facility already had four self-contained Ransohoff & Jenfab precision cleaning machines, which are designed to maintain an enclosed, controlled environment for cleaning parts that eliminates possible contamination of components during the cleaning process.

The new Roll machine, installed earlier this year, uses both spray and immersion technologies to clean products from various industry sectors. The machine uses solvent-based vacuum degreasing solutions to achieve not only a cosmetic clean, but an "exacting cleanliness" as measured by specifications needed for parts used in aerospace, automotive, medical, and military applications.

UniMetal also offers ultrasonic precision cleaning, which uses "ultrasonic irradiation while parts are submerged during the cleaning process," Orsatti said. "This facilitates the removal of impurities in difficult-to-reach recessed areas. The cleaning cycles are timed through the computer controller based on the amount it takes to achieve the desired results."

Cleaning Cleaner

The new machine not only is more efficient, helping to increase productivity and reducing downtime, it also recovers 97 percent of the solvent used during the cleaning process, significantly reducing emissions into the environment, the company said.

The new machine also uses solvent at higher temperatures, which improves its ability to clean, and is capable of meeting particle and weight cleanliness requirements. Productivity is also improved because the machine can process six loads per hour, compared to four per hour for the other machines, and can run three shifts daily instead of two.

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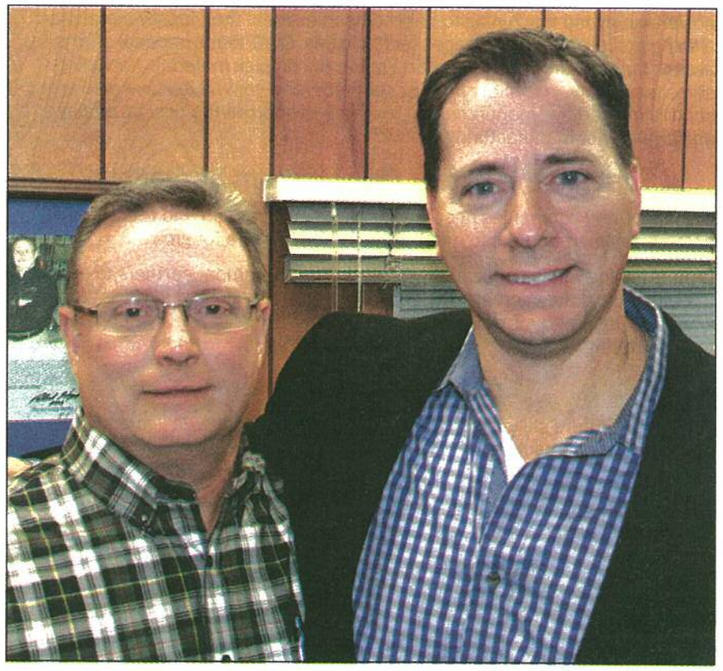

UniMetal is led by Senior Vice President and Chief Technology Officer Patrick Hayden, left, and President George LaCapra Jr. Contributed.

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UniMetal, however, does more than just clean metal components. With its combined operations encompassing more than 150,000 square feet, it is the largest and most diverse precision metal-finishing company in the Northeast, employing a combined 130 people.

The company is led by President George LaCapra Jr, who works alongside his father, CEO George LaCapra Sr., and Senior Vice President and Chief Technology Officer Patrick Hayden.

The metal-finishing services they offer include bright dipping; deburring; oxides; passivation; phosphates; reel-to-reel plating; copper, electroless nickel, nickel, tin, zinc and zinc alloy plating, and precious metal plating including bright silver, silver and gold.

Each process serves a different purpose for metal finishing. Deburring, for example, uses various abrasives on bulk parts or components made from metal or other materials to achieve a variety of surface effects. That can include removing burrs, descaling, smoothing, radius formation, removing rust, surface finishing and more.

For this UniMetal uses several methods, including barrel tumbling, dry tumbling, vibration, sand blasting, among others.

Some of the benefits for precision cleaning and metal finishing include corrosion resistance, conductivity, and cosmetic.

Quality Control

UniMetal takes pride in its Quality Management System, which is designed to exceed ISO 9001: 2000 and National Aerospace and Defense Contractors Accreditation Program (Nadcap) standards.

The company, which was created in 2011 by the merger of Quality Rolling & Deburring Co. of Thomaston and Donham Craft Inc. of Naugatuck, may be focused on metal finishing, but it doesn't make any finished products.

As George LaCapra Jr. told the Republican-American about a year after the merger, "What we do is take thousands of metal components that our customers use to manufacture their products and finish them, improving them either functionally or cosmetically."

With the addition of the new Roll machinery, UniMetal can now clean those products with even greater precision as well. ✦

Above: UniMetal's Tony Bonatsos empties cleaned parts from the company's new Roll parts vacuum ultrasonic cleaning machine back into a customer's container, which is lined with a plastic bag to maintain cleanliness. Contributed.

Left: A close-up of parts after they've been cleaned in the new Roll machine. Contributed.

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