

Compact Parts Cleaner Satisfies Company's Environmental And Productivity Concerns

Ruland Manufacturing Company (Marlborough, Massachusetts) specializes in shaft collars, rigid couplings and flexible couplings. The company's products vary in material (carbon steel, stainless or aluminum) and size (ODs from $\frac{3}{8}$ inch to 7 inches), but all meet close tolerances. Cleanliness specs are demanding for all, but especially for the carbon steel parts, which are black oxidized. For years, Ruland used vapor degreasing with TCE, but concerns about ozone depletion and potential carcinogens led the company to look for an alternative.

"We searched for two years, doing a thorough review of every type of cleaning system out there," recalls Mike Pervier, facilities manager at Ruland Manufacturing. "Aqueous just wouldn't get the parts as clean as we wanted in the cycle time we wanted without a lot of cost and aggravation."

Finally, Ruland discovered a hydrocarbon cleaning system from Dürr Ecoclean (Wixom, Michigan) that promised to be both productive and environmentally friendly. The system combines immersion cleaning, injection flood washing and vapor degreasing with vacuum drying, reducing emissions to virtually zero.

"It sounded too good to be true," says Mr. Pervier. "We sent two people to Dürr's Michigan facility with parts and said 'Clean these!' It was unbelievable—the parts were perfectly cleaned, in half the time."

As a result, Ruland installed a Dürr Compact 80C parts cleaning system. Because the machine is only about 14 feet long by 5 feet wide, it was brought into the plant by one man, on a dolly. It was up and running the next day.

"To the operators, it's just like our previous system," Mr. Pervier notes. "They put pans of parts on the conveyor, and it automatically loads and unloads the work chamber."



This compact parts cleaning system combines immersion cleaning, injection flood washing and vapor degreasing with vacuum drying, reducing emissions to virtually zero.

Instead of baskets, Ruland uses standardized pans measuring about 9 inches by 19 inches by 7 inches deep. The parts stack together like coins, bonded by the capillary action of the oil and coolant. Each pan holds 200 to 250 of the larger collars or couplings, or 3,000 of the smaller ones. Typical production is 60 pans per day, although the system can handle more. Some parts are washed two or three times, at different stages of production.

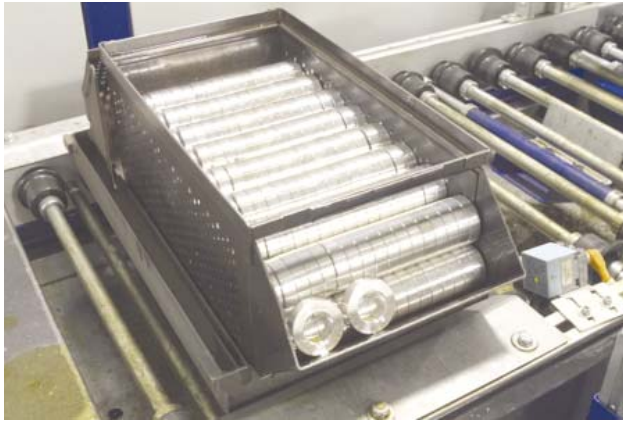
Halves Cleaning Time

The cycle time for the new cleaner is 7 minutes, half the time required by the previous method. Although the differences in material and configuration would challenge some cleaning methods, the new system cleans them all consistently.

"Cleanliness is essential to our quality," explains Mr. Pervier. "Our process requires us to be very fussy. But even the parts with blind holes, where

Loading/unloading of parts-laden pans into the work chamber is completely automatic.





The new system cleans parts in half the time required by Ruland's previous system.

oils can get trapped, are cleaned totally by this system. An ultrasonic cleaning option is available, but this machine cleans our parts perfectly without it."

Ruland uses Isopar L, a hydrocarbon solvent, from ExxonMobil. Overall, the new system is more productive and more environmentally friendly than the TCE degreaser it replaced, but it has not increased operating costs. Downtime is rare, even for main-

tenance. The filter must be changed every week or so, but this can be done on the fly. Similarly, the oil is distilled overnight (every 2 or 3 weeks) without affecting production.

The system is well-designed, according to members of the Ruland team. They like the redundant safety features and the stainless steel containment pan that can hold the contents of all the tanks in the event of a leak, keeping the floor clean.

Also, when the company moved to Marlborough from Watertown last May, moving the washer was no problem. "We just shut down the washer and emptied the tanks," Mr. Pervier recalls. "As easily as it moved in, it moved out. And it went up again just as easily.

"No one else has a system like it," he sums up. "I think Dürr and hydrocarbon cleaning are two of the best-kept secrets in the industry. This washer does exactly what we need it to do, and it's better for the environment and our employees."

For more information from Dürr-Ecoclean, call (248) 960-4630, or enter **PM Direct** code **218RB** at www.production-machining.com.

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"The parts were perfectly clean, in half the time."

Mike Pervier
Ruland Manufacturing Co.
Marlborough, MA



A hydrocarbon parts washer from Dürr Ecoclean has eliminated hazardous degreasing at Ruland Manufacturing Co. — and it cleans parts twice as fast.

"No one else has a system like it," says Mike Pervier, Ruland's facilities manager. "It does exactly what we need it to do, and it's better for the environment and our employees."

The system thoroughly cleans shaft collars and couplings of different materials and configurations, and is:

- high-volume, yet compact
- versatile (one fluid cleans virtually any material)
- energy-efficient
- emission-free, with no VOC's

Dürr Ecoclean has a complete range of systems to meet any parts cleaning challenge. For a free consultation, call **248-960-4630** today.



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