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New sludge **suspension liquid** proves effective for Ohio heat treating company

Detrix vapor degreaser is seven-feet-tall and totally cleans all parts sent to Winston for processing.

Winston Heat Treating, Inc., of Dayton, Ohio, had a problem. Over the years, thick sludge deposits had begun to develop inside their thermal fluid heat transfer system. As a result, the system was taking too long to heat the heat transfer fluid and maintaining constant temperature of the fluid was becoming increasingly difficult. To solve the problem, the company decided to try a new system-cleaning product developed by Paratherm Corporation of Conshohocken, Penn.

"In short order, the cleaning liquid solved the sludge problem," said Guy Harshman, Winston maintenance manager. "All we did was follow the instructions and the product functioned exactly as promised."

Winston's business is commercial heat-treating of metal tools and molds to customer specifications. Capabilities include harden and temper, air draw, carbon harden, carb only, vacuum heat transfer (10-bar capability), carbon-nitride, gas nitride, flame harden, induction harden, straighten, deep freeze/stabilize, stress relieve, normalize and annealing.

When parts to be heat treated first come in, they tend to be covered with residual cutting oils and other contaminants. Before heat treatment or other processing can take place, the parts must be made perfectly clean.

"That means the first step of any treatment is cleaning the parts in our Detrex Vapor

Degreaser," Harshman said.

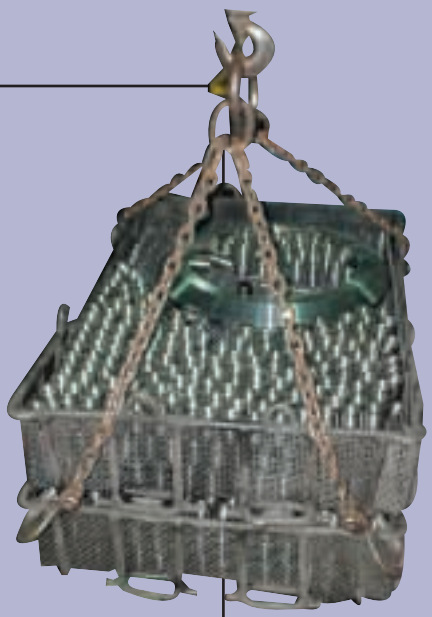
This seven-foot-tall unit electrically heats liquid perchlorethylene to its boiling point. Once vaporized, the perchlorethylene totally degreases the metal parts contained in the workbasket. However, the parts being processed must first be preheated for the vapor degreaser to function properly. Heating the parts is taken care of by a separate, free-standing hot oil temperature control unit which is located outside the vapor degreaser. Inside the vapor degreaser, the system circulates heat transfer fluid through six stainless steel coils which surround the workbasket. In order to satisfactorily pre-heat the parts being treated, Winston heats fluid in the enclosed heat transfer system to 350 degrees F.

"We've always known Paratherm products to be reliable, that's why we decided to use their new cleaning system fluid to flush the system," Harshman said. "The process is quite simple. We drained the heat transfer fluid in the system and replaced it with the fluid. The system was then heated to 150 degrees F for ten hours to give the fluid the 'soak' time it needed to dissolve sludge.

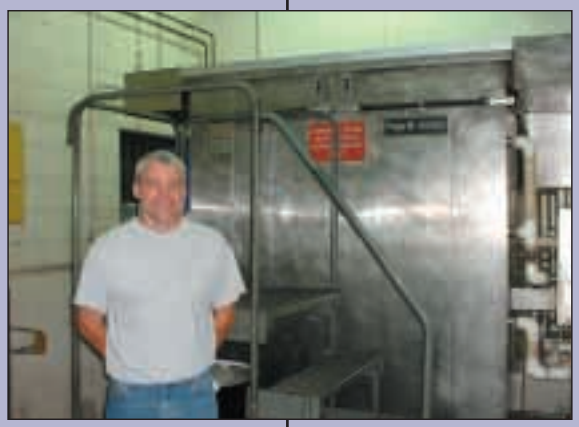
"At the completion of this cycle, the fluid was drained and the system was charged with non-fouling NF® fluid. We ran that at 150 degrees F for two hours, then emptied the system again, filling it with the fresh NF fluid. The liquid level gauge, which previously had turned brown from old sludge, was now completely clear. Plus, the system heated the thermal fluid faster and the 350 degrees F running temperature is now easier to maintain," Harshman continued.

Winston Heat Treating employs about 45 people and uses three shifts that operate around the clock. The plant is certified QS 9000 and ISO 9002 and has customers throughout the U.S. and Japan in varied industries from automotive to aerospace.

For more information on the SC® Fluid, contact Paratherm Corporation at 610-941-4900 or email info@paratherm.com



Basket of cleaned parts immediately after being removed from the vapor degreaser.



Gary Harshman, maintenance manager for Winston Heat Treating.

Empty vapor degreaser work basket. Contaminated parts are preheated in this basket by a system charged with Parathem NF heat transfer oil before vapor degreasing.