

Arbortech

HELPS RELIANCE GEAR CLEAN UP ITS ACT

“I CAN REMEMBER THIS LIKE IT WAS YESTERDAY—LATE SUMMER OF 2004. HOT DAYS, HOT NIGHTS AND A WHOLE LOT OF GEARS TO GRIND. BUSINESS WAS VERY GOOD FOR US THEN, SAME AS IT IS TODAY, BUT ONE WEEK IN PARTICULAR, THAT WAS THE TOPPER,” RECALLS TOM GUERRA, MAINTENANCE AND WELDING SPECIALIST AT RELIANCE GEAR CORP. OF ADDISON, IL, A PRECISION MANUFACTURER OF CUSTOM GEARING, SPECIALIZING IN SPIRAL BEVEL GEARS.

The week Guerra recalls in 2004 began following a very hot weekend. When employees first came into the shop on Monday and turned on the equipment, they thought something, or quite a few things, died in the plant the prior two days. Guerra says the odor was unbelievable and they had to evacuate the front offices for a couple of hours. Each day after that, the same thing happened.

He further explains that the process of grinding gears requires coolants that accumulate contaminants, such as fine metal shards mixed with the consumable grinding wheels’ particles. Oils are removed during the process and the operation generates mop buckets full of spent floor-washing solution from the extensive housekeeping entailed by grinders and the rest of the shop.

Reliance tried to run this wastewater combination through a waste treatment machine, but the agitation during processing just caused the smell to get worse. Finally, the company emptied out the grinders, called in a waste hauler and started over fresh—pun intended. Guerra knew that a new system had to be in place before the summer of 2005. The hauling company ultimately saved the (next) summer by suggesting

they contact Arbortech Corp., a company that manufactures equipment to recycle industrial fluids.

“The salesperson from Arbortech came in and provided us with a quote on a recycling system and even offered to lay out a design so we could save money on the accessories necessary for a complete installation, instead of buying the parts from them,” said Guerra.

“They worked with us on aspects of the operation that they were going to sell, sure—that’s to be expected—but also told us how we might best optimize their Washer Washer’s performance, including preparing a special CAD drawing so we knew exactly how to do the installation.” He says Arbortech also offered to provide a free unit to use during the transition.

Reliance Gear placed the order for an Arbortech Washer Washer Aqueous Cleaner Recycling System. The system came equipped with an internal heater designed to enable pasteurization of the wastewater, thereby killing off “bugs,” which were the likely source of the foul odor the previous summer.

The recycled solution, a combination of grinding coolant and





floor wash, is sent into a drum, which then overflows to the sewer. This provides both a draw point for reclaimed floor wash, instead of always making up new cleaner, and a place where the overflow can easily be observed for visual clarity prior to discharge from the premises.

As part of their order, Reliance Gear elected to engage the services of Arbortech to maintain the performance of its permanent filters, both the module in use and the spare that comes as a standard part of Arbortech's recycling systems, whenever such attention was going to be required. Essentially this case was closed... or at least that's what everyone thought at the time.

Guerra explains that the system Arbortech loaned the company while building its product indicated that the filters needed slightly more attention than he liked, but when the one Reliance purchased came in, Guerra met with Ray Graffia Jr., president of Arbortech Corp., to see how to cut back on the frequency of Arbortech's service.

"Instead of protecting his own wallet—their 'annuity,' the restoration of the membrane filters—he showed me how to construct a small cleaning station so we could do the maintenance ourselves."

Since putting the station together, Guerra has only required restoration assistance from Arbortech once, but, "They never squawked about us doing our own membrane restorations and, in fact, continued to help me evaluate several ideas I had for improving that process, each of which made it work better," he says. Most important, "We went through the entire summer last year without any recurrence of the stench." ■

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