Environmental Impact, Part 1

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Wausau, WI-based Linetec is an architectural finishing company that takes seriously its delicate relationship with its state's natural beauty. The company, founded in 1983, has consistently and eagerly moved toward reducing its environmental impact through dozens of projects, both small and large, which has led to reductions in volatile organic compounds (VOCs), waste, excess heat and energy — not to mention dollars spent on daily operations.

The company's primary operations, high-performance metal finishing, involves painting, anodizing and powder-coating both large and small aluminum parts to be used in architectural installations. And the standards for quality — what Linetec president Rick Marshall means when he describes his business as "high-performance" — are staggering. He says, "People think of automotive as high-performance, but if you leave your car out in the sunshine, you'll see a difference in the coating. In architectural, [finishes go] on buildings that are 40 or 50 stories tall and are expected to last 40 to 50 years. It's about as high-performance as high-performance can get."

The chemicals vital to Linetec's business are not kind to the environment, but that has only further encouraged Marshall's emphasis on environmental stewardship. When Marshall came in to helm the company more than a decade ago, he established 11 "Core Values," which include environmental responsibility. Jon Close, Vice President of Sales and Marketing, says these values are not "just words on a wall. People see the company doesn't just preach it, but live it." The local forests, prairies and farmland that surround the multi-facility complex a few miles west of

downtown Wausau live it, too — they are, in all respects, in the immaculate condition that Wisconsinites love and expect out of their state.

And those efforts haven't gone unnoticed. In 2006, the company was given a Wisconsin Manufacturer of the Year Grand Award for overall outstanding achievement in the category of a "large company" (300 to 999 employees). In 2011, the company was honored with another Wisconsin Manufacturer of the Year award, this time in the sustainability category.

Tammy Schroeder, a Linetec senior marketing specialist and a LEED® Green Associate, was tasked with compiling data on all of Linetec's environmental improvements over the last three decades, which she likened to writing a novel. Most of the changes — and the overall significance of Linetec's innovation — were small-scale projects focused on a specific inefficiency. Close agrees: "Being a job shop, I think you'll see a lot of that sustainability message come through from the very, very small things. You'll look at it and think, 'That can't make that big of a deal,' but a lot of small things add up to some big things."

No More Wasted Heat

One of Linetec's most recent environmental investments is its Anodize Scrubber Heat Capture project, which captures waste heat and uses it to keep the plant floor warm during cold Wisconsin winters. The project was completed in February 2011, but the genesis for this investment began more than a decade ago, when Linetec's management recognized the enormous amount of energy that was exhausted out of the anodize facility. According to Schroeder, 60,000 cubic feet of 62 degree F air was being exhausted outside the plant every minute.

The company had actually atempted to solve this issue by redirecting warm waste heat back into the facility straight from its scrubber units, but that drastically increased the level of humidity in the plant — Schroeder says many surfaces were actually collecting condensation from the high dew point. The redirection was scrapped, but Linetec's Energy Management Team took another year to conduct the necessary research and development on a method to process the air so that it could be recycled at a more comfortable humidity.

In early 2011, the company invested more than $275,000 to enhance the intake of the facility's air make-up unit with a radiator and copper coil. This system uses cold Wisconsin air to cool the water that moves through the coil, better scrubbing the air while reducing the dew point of the exhaust air. Because of this change, Linetec was once again able to pull this processed air back into its facility, reducing energy needs.

And the benefits have been numerous, and surprising in effectiveness. The system saved an annual average of 114,000 therms in 2011, which is equivalent to more than 70 Wisconsin homes. It's also equated to a $57,000 annual reduction in energy costs, which aligns well with Linetec's goals of protecting the environment while making smart investments that increase the operational efficiency of their facilities. In fact, the company says their system of reclaiming exhaust heat by lowering dew

points is the only such process currently active in the U.S.

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