

Coil manufacturer goes green

New Madok building incorporates leading edge environmental and manufacturing technologies

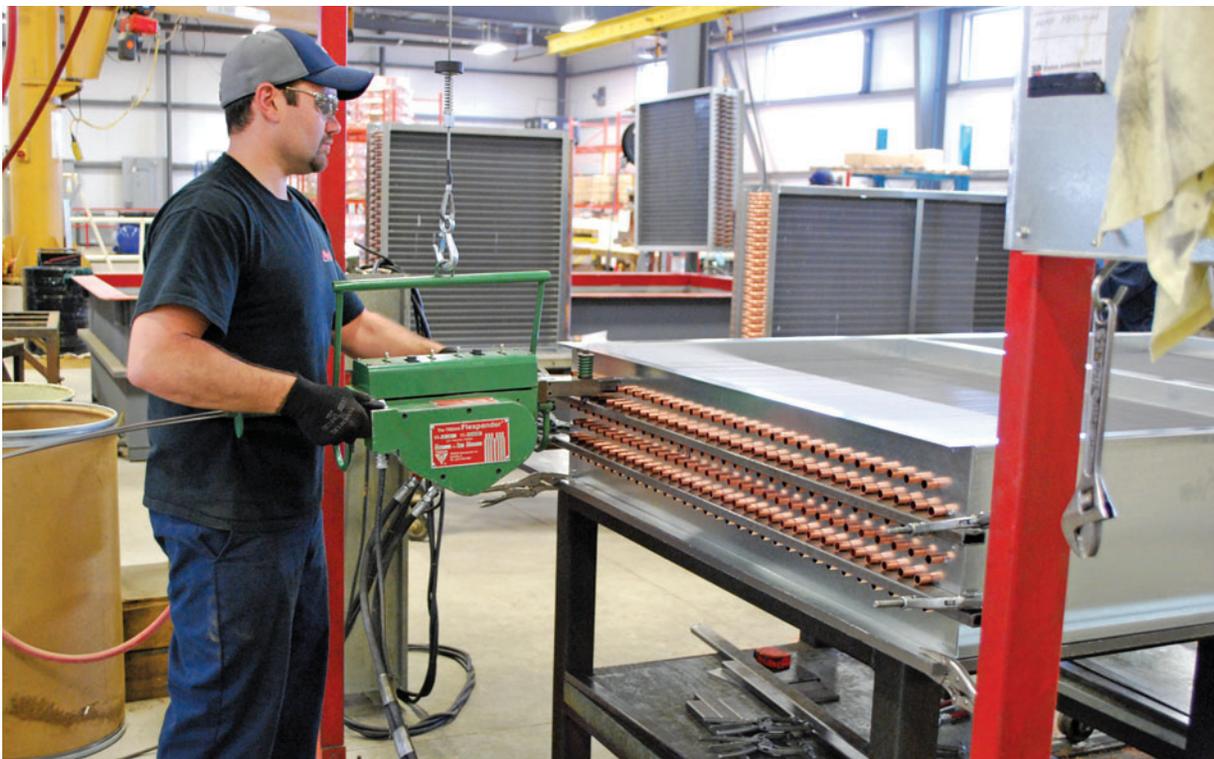
By Simon Blake

Today it's not enough for manufacturers to make water or fuel efficient products. Thanks in large part to the LEED (Leadership in Energy and Environmental Design) green building program, buyers want to know what the company itself is doing to make this planet a better place to live. This includes both sustainable manufacturing processes and green systems in the buildings in which the manufacturing is occurring.

These things were very much in mind for the owners of Madok Manufacturing (www.madok.com) in Brantford, Ont. when they realized they needed a new facility to house their expanding business. "We wanted enough space to expand and grow, but given the industry that we are in we thought we should go as green as possible," remarked company president Allan Antcliffe, P.Eng.

And expand they did, building a state-of-the-art 25,200 sq. ft. facility at 82 Morrell Street in Brantford.

Trevor Pickering expands tubing ends on a new coil so that U-bends can be brazed in place.



The new building offers plenty of space for future expansion.

But they kept the old 5,000 sq. ft. building and converted it exclusively to applying anti-corrosion coatings to coils. (The company has the exclusive license in Canada to apply Heresite baked phenolic anti-corrosion coatings through a seven-step dipping and baking process.)

The company was founded in 1976 to manufacture heating and cooling coils both for OEMs and for custom and repair applications. Antcliffe joined the company 18 years ago from Keeprite. Vice president and general manager John Beck came over from Garland Canada, a commercial food service equipment business. Beck also joined Madok as Antcliffe's business partner, with a clear mandate to grow all aspects of the business.

Last September Madok purchased the assets of Custom Coils Canada and added its 3/8" OEM coils to its half-inch and 5/8" product offering. All this meant the existing plant was just not big enough. Fortunately, there was a piece of land available right next door.

So Antcliffe and Beck worked with Robertson Building Systems (www.robertsonbuildings.com) of nearby Ancaster, Ont. to design and build a new state-of-the-art 25,200 sq. ft. facility with financial help from the Business Development Bank of Canada (BDC). About 2,000 sq. ft. is devoted to offices with the remainder for manufacturing and warehousing.

Designing green

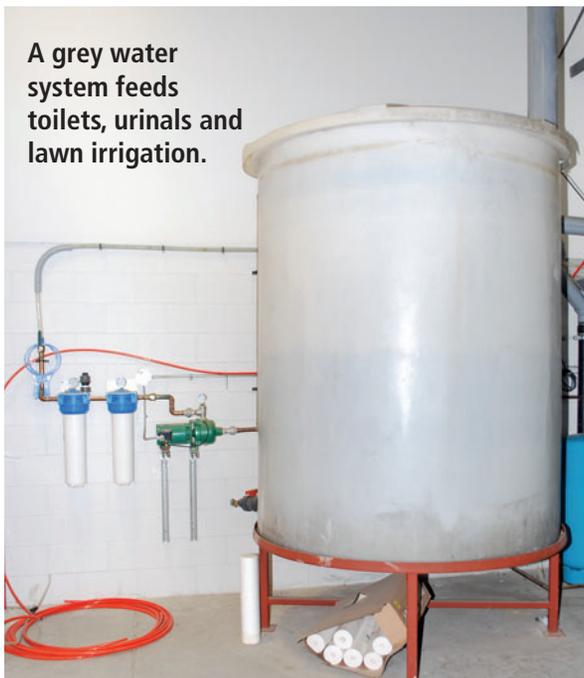
Any manufacturer that is designing a new facility from scratch has an advantage in incorporating sustainable technologies over one that is trying to retrofit an existing building.

The new Madok facility is a tightly sealed steel building with additional insulation in the walls and roof. Other green features include:

High efficiency two-stage infrared heating and rooftop cooling systems, with an HRV and high efficiency furnace in the office area along with on-demand tankless water heaters. Large eighteen-foot diameter "Big Ass" fans – that really is the brand name – circulate air in the shop. And there's one very low-tech piece of green design – the windows actually open. As well, the large windows supply lots of natural light.

A rainwater collection system feeds dual-flush toilets, low consumption urinals, the coil test tanks and an outdoor lawn irrigation system. Motion sensors throughout the building turn the high efficiency lighting on and off.

A grey water system feeds toilets, urinals and lawn irrigation.



Allan Antcliffe, left, and John Beck wanted their spacious new facility to be as green as possible.

Efficient manufacturing

The additional space allowed more efficient manufacturing processes and a more comfortable work environment for employees. This has paid dividends both on the OEM side and the custom coil side.

“There are occasions when a truck will pull in (with a coil in the back) and they say ‘Make me one of these – we need it yesterday!’” laughs Antcliffe. And typically those coils are ancient so there are no drawings or specifications available. Sometimes they turn these jobs

around in as little as 24 hours. Both custom and OEM coils are leak tested in large tanks to 325 psi, with coils designed for R410a refrigerant tested to 600 psi.

Antcliffe worked with the BDC to streamline manufacturing operations and today Beck and Antcliffe guide their business with lean enterprise principles. The changes along with the new building allowed the Canadian Custom Coils business to be seamlessly integrated into the plant, with that company’s former general manager Terry Murison becoming business

development manager at Madok.

The incorporation of an enterprise resource planning (ERP) system improved communication within the company and is helping Beck and Antcliffe manage the rapid growth. ERP is an office management software system that integrates and co-ordinates information from all sectors including sales, manufacturing, accounting, etc.

These changes leave Madok Manufacturing well positioned to grow its business in the future. Few would say that going green doesn’t pay these days. +

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