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David Domanski
Business Unit Manager – Metals,
North America
ABB



Mix Masters

A global company turns to Whitby engineers for the tools that make stronger steel

Molten steel does not solidify and harden with ease. Even though the glowing metal will quickly form an outer shell as it is fed through a copper water cooled mold, uneven branches of crystals will often emerge in the slowly cooling layer at the centre of every piece. And each branch represents a weakness in the final product.

Equipment created by Whitby engineers can keep these imperfections from developing as the cooling metal takes shape.

Electromagnetic stirrers from ABB’s JME Division come in the form of magnetic coils that wrap around the column of liquid metal which emerges from a mold. These magnets create the eddy currents that effectively stir the mixture, breaking apart the largest crystals and allowing stronger but smaller crystals to form in their place. “You end up with a very homogeneous cross section,” explains David Domanski, Business Unit Manager – Metals, North America. “That’s wonderful if your end product for the steel is making something like car parts or truck axles. There’s no room for error where you have a good truck axle here and a bad one there.”

Of course, the Electromagnetic Stirrers are recognized as superior products in their own right. ABB already dominates the market across North America and are now exporting to mills around the world.

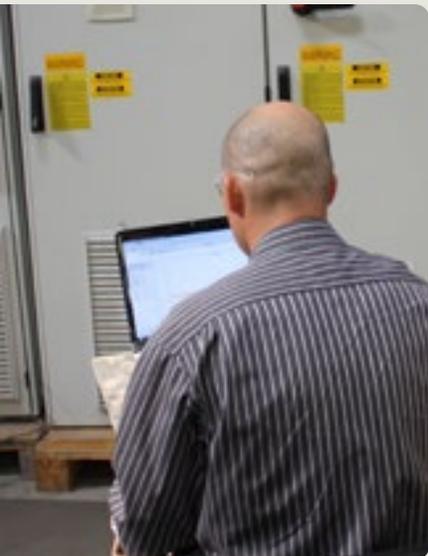
The local division of ABB was originally founded as J Mulcahy Enterprises (JME), when several former members of LASCO Steel’s engineering group joined together to support a new generation of mini mills which transformed scrap metal into steel. LASCO even served as a working laboratory for JME’s emerging technology, and the partnership continued after the mill became Gerdau Long Products.

When ABB purchased the business in 2000, it added a world class global support and service network to the mix.

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Community of Choice...for Business

Fast Fact ABB exports to a number of European and Asian markets from Whitby.



four companies in the world have this expertise. “You can’t pull people off the street and say, ‘You will be doing this.’” That’s why the company has always been careful to hire leading graduates from schools including Durham College’s electrical and mechanical programs, and further enhance their skills on the job.

As global as the business has become, Whitby also remains an ideal location for the work.

“Whitby is a great spot for shipping,” Domanski stresses. “We’re on the 401 corridor; we have access to the Eastern Seaports of Montreal and New York; Pearson Airport is there for air freight; any border crossing to the USA is within a half-day’s drive. It’s seamless.” Local suppliers even remain competitive when compared to offerings from low-cost countries. With a 40 minute drive to a major airport like Pearson Airport, meeting our global customers face to face is easy and effective.

The ongoing research and development in this shop that already holds six patents will also be vital as the technology continues to evolve. Today’s equipment enjoys a longer life than ever, for example, and a new “dual coil electromagnetic stirrer” system can further improve mixtures by stacking a pair of stirrers. “Our big focus now is aluminum,” he adds, referring to the way this equipment can reduce energy consumption with energy-wasting gas burners. Our new line of aluminum stirrers are reducing carbon footprints of our customers, increasing production, and also increasing their bottom lines.

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Of course, there are other advantages to working in Whitby. Domanski may travel the world, but he enjoys the chance to take his children to hockey or lacrosse games when he is working at the head office. “It’s very much our home in every sense,” he says.

It all contributes to a perfect mix of work and life.

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