



Customer Report

Customer: Buckley Systems
Location: New Zealand
Project: Ion Implanter Magnets
Date: January 2006



Steel Solution for Ion Industry

As the largest manufacturer of ion implanter magnets in the world, Buckley Systems is at the forefront of a rapidly expanding global market. Which is why this successful New Zealand company turns to XLERPLATE® for its steel needs.

Founded in 1978 at the very beginning of the microchip age, Buckley Systems manufactures precision electromagnets, ion beam physics hardware and high vacuum equipment used in the semiconductor ion implant industry, laboratory research and particle accelerators.

“The ion implanter magnets we manufacture are found world-wide in wafer fabrication plants for producing the silicon chips used in modern computers, communication equipment, automobiles and everyday appliances,” explains Bill Buckley, founder and President of Buckley Systems.





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Bill Buckley, founder and President, Buckley Systems



Along with the microchip industry, the company has grown exponentially over the last two decades. At the time Buckley Systems commenced operations, the process of manufacturing chips was changing – from chemical deposition to the ion implantation process, which requires extremely large, heavy magnets in order to operate.

"Prior to starting the company, we had done a fair bit of work in nuclear physics, so we were familiar with the ion implantation process," says Bill. "So it was a logical step to begin manufacturing our precision electromagnets."

With an annual turnover in excess of \$50 million, a multi-disciplinary staff of 200 personnel, and decades of expertise in the industry, it's no wonder that Buckley Systems now produces 80-90% of the world's semiconductor ion implantation magnets for the semiconducting silicon chip industry.

According to Bill, this success has been due, in part, to BlueScope Steel. "A lot of our success can be attributed to the fact that BlueScope Steel has been such a good supplier," he says.

"We have been dealing with BlueScope Steel since our inception. When we were initially looking at steel suppliers, BlueScope Steel came to the party and produced the steel we wanted, and was able to match the rest of the world in pricing.

"Even though we are half a world away from the end users of our product, we are right next door to the country that produces our steel. BlueScope Steel has bent over backwards to get the steel to us in a reasonable timeframe."

Ranging from 0.5 tonnes to 25 tonnes in weight, all Buckley Systems' magnets are made from a special grade of XLERPLATE® steel, a brand of high quality hot-rolled steel from BlueScope Steel.

Buckley Systems works with internationally recognised physicist consultants to design its electromagnets. Once designed, the magnets are then manufactured in Buckley Systems' state of the art facility in Mount Wellington, Auckland.



"We take pride in being able to undertake total manufacturing, finishing and testing in house, keeping both small and large production projects entirely under our control," says Bill.

The XLERPLATE® steel is delivered to Buckley Systems already cut and profiled by NZ-based steel company, Fletcher Steel. The steel is then machined, and the magnets are assembled, with electrical coils attached. The complete system is set up and tested in a pressurised vacuum clean assembly room, prior to despatch to the customer.

Above: Buckley Systems' magnets are made from a special grade of XLERPLATE® steel.

Above: Bill Buckley, founder and President, Buckley Systems

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Bill says that developing specialised proprietary manufacturing processes, providing up-to-date manufacturing engineering support to its customers, and being able to rely on the support of suppliers like BlueScope Steel, has kept Buckley Systems at the cutting edge of technological and cost competitiveness.

"With the combination of BlueScope Steel's help and our expertise we have maintained our place at the forefront of the industry – and we'll continue to do so," says Bill.

XLERPLATE® hot-rolled steel plate is backed by an experienced technical support team throughout Australia and New Zealand. These highly trained technical specialists can help deliver solutions for virtually any steel related challenge large or small.

The team can assist with a range of issues from day to day technical enquiries to special joint task forces working in customers' plants on process improvement or product development projects.

For more information
on XLERPLATE® steel call
1800 800 798
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