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## **Casting Shop – a little foundry doing big things**

Walking into Casting Shop, Christchurch's last iron foundry, is like walking into Aladdin's cave - you just don't know what you're going to find.

"We have no core business," says director Ian Close, who set up the business seven years ago, "Our motto is, 'You Ask, We Cast'. We try to help everybody."

Ian has more than 45 years of experience in the industry and says today, the business is kept going by bespoke, customised products for customers. Elaborate Gothic-inspired rain heads for the restoration of Christchurch's prized Arts Centre sit proudly in the factory, an example of the work lan and his team are called upon to do.

Ian says once there were more than 12 iron foundries in Christchurch. Now, he's it, and he involves his small team in every step of the process, hoping to pass on his half century of knowledge. Unlike larger foundries he is happy to do one-offs (there's no point, he says, in trying to compete with China but often the prototype for a product made there is produced by Casting Shop), breakdowns for machinery that is hard to get parts for, short runs, and customised solutions

The industries he works with are varied. On the day New Zealand Engineering News visited, products included iet boat impellors, the Arts Centre rain heads, a Cadillac on his own, with just a couple of weeks to badge for restoration of a prized vintage car, molds for surgical equipment, architectural features, infrastructural furniture and more. Industries supplied include, but aren't limited to, marine, manufacturing, construction, dairy, health, food and agriculture.

"We do the things other people can't, or won't, do," lan says. The company received the order for the rain heads a couple of days before Christmas. They were installed in January following elaborate powder coating procedure and were completed right from pattern to casting in just a few weeks during to help customers who had been looking the busy holiday period.

Like most Christchurch businesses, there have been spin offs from the earthquakes. Restoration of historic buildings and homes has been a niche market, with the company producing reproduction cornices, friezes and



foundation grilles

lan never envisaged being the last iron foundry in Christchurch. He had worked at his previous workplace for 29 years, and found himself out in the cold when it was shut down. Overnight, he decided to go out find a building and equipment. He started with just himself working in the factory, occupying one room, and expanded to seven staff and the full site today.

The furnace he bought at the time, found in Invercargill, wasn't what he wanted, but he believes fate intervened that day, with that furnace still going strong and being the cornerstone of the business, with the ability to melt any metal. "Without it, I wouldn't be here.'

He has many a story to tell of being able for solutions for a long time. A particular niche market is restoration of vintage cars and machinery, with lan able to produce one-off reproductions of parts, often employing rapid prototyping and 3D printing techniques. One recent customer, from



Staff member Cezar does lost wax or investment casting

Australia, had been waiting four years for parts to be made for a steam train before lan stepped in. "Up to 65 percent of the castings we make are exported overseas by our customers," lan says.

Recycling is a huge part of the company's ethos, making it both environmentally friendly and economically sustainable.



Some agricultural parts bound for Sweden

There are three processes, green sand, chemical sand, and lost wax, or investment casting. Investment casting is used where customers need the highest degree of finish and dimensional accuracy, such as in the meat industry, where equipment can't have any marks or surface defects where bacteria might live. Surgical equipment is another example of where the process is used.

Ian says although the industry has experienced a decline, he is positive there will always be a place for foundries in New Zealand, and he hopes the business will carry on when he retires one day. To that end, he makes sure his knowledge is being passed on

"When a job comes in, we all discuss it and how to do it. I'd like to see the business continue - China can't make one-offs like we can. We're a little foundry doing big thinas.

