Inexpensive plastic moulds make millions

A few years ago, John Rolph set up a family business in Cobourg, Ontario, to make skateboards. That business did not work out too well, so instead, he turned to making parts for F-18 fighter planes. Future plans include a space-age scheme to create new technology for the huge dish antennae that track satellites.

Along the way, Rolph has established the first, and still the only, company in Canada that makes plastic prototype moulds. The company, Protoplast, has played a major role in preparing the ground for new industry in Canada to replace imports — especially in the vital field of automotive parts.

It all began when Rolph, a professional engineer who had spent his working life in industrial plants and community colleges, acted on a dream to have his own manufacturing business.

He rented a three-room mini-plant in Cobourg's Northam industrial park, and started making skateboards — just at the wrong time. So he turned his attention to the latest fad, roller skating.

But when he designed a plastic device to connect the wheels to the boot of the skate, he could not find anyone to make an inexpensive mould to test the idea. All he could find, in fact, were other Canadian entrepreneurs with the same problem.

New method

So Rolph, now 46, set out to solve the problem himself. He buried himself in technical journals and rediscovered a revolutionary method of mould-making — invented, but not practically developed, by the English — that would suit his purpose. He found out that the process was being used on a small scale in the United States.

That was the beginning of a search that lasted several months and ended in an unlikely place called Bow, New Hampshire, with a company called TAFA. Rolph bought spray metal equipment from TAFA, became the American company's Canadian agent, and incorporated Protoplast in the spring of 1981.

In simple terms, the company's technique reverses the traditional way of making moulds. Instead of "sculpting" one from a block of virgin metal, it begins at the other end, with a product design, then makes a model, usually in wood, of the part itself.

Then the model is sprayed with a metal coating less than one tenth of a centimetre thick, and the metal shell is backed with a fast-hardening epoxy resin. The result is a prototype mould that costs a quarter of the price of a conventional production tool and can be turned out in about a month, instead of the usual four months.

As for risks, the business of making roller skates was on the skids just as Rolph got his new plant going. But then a Toronto firm won an order to manufacture plastic brake-fuel housing parts for a big Detroit automaker. Rolph, in turn, got the order for a prototype mould, and that was the breakthrough he needed. Orders for prototype moulds for everything from make-up mirrors to plastic pallets followed.

New adaptations

Meanwhile, the metal-spray side of the business was finding new adaptations, like radioactivity-resistant coating for computer housings. Names such as "Xerox" are now listed among Protoplast's customers.

The company is currently working on an order from Canadair and McDonnell Douglas to spray radio interference seals on nose-cone components for F-18 fighters.

There have been inquiries from companies in Sweden and the Caribbean — and one in Trenton that makes 30-metre-wide dish antennae to track satellites, a business that gets more sophisticated by the day.

(Article from Ontario Business News.*)*

When the Canadian Armed Forces' newest airplanes take to the skies, they'll be carrying a bit of Cobourg, Ontario with them. Protoplast owner John Rolph (left front) *and his wife Joan, along with employees Neil Elder and Jim MacKenzie hold two parts of the CF-18 that they treated in Cobourg.*

Financing agreement supports sale to Barbados

The Export Development Corporation (EDC) has signed a $7-million (US) financing agreement to support a sale by Northern Telecom International Limited of Mississauga, Ontario, to the Barbados Telephone Company Limited (BTCL) of Bridgetown, Barbados.

The sale involves the supply of equipment for the fourth phase of an expansion and modernization program started by BTCL in 1978.

EDC has provided financing totalling $17 million (US) to support earlier sales by Northern Telecom International Limited to BTCL, three of which involved the expansion and modernization program. The financing agreement is guaranteed by the Bank of Nova Scotia.

The equipment being supplied includes DMS-100 digital switching equipment, SL-1 PBX equipment, and equipment for transmission, including fibre-optic systems, specialty cable, and outside plant hardware.