

# Small engineering firm sees growth ahead

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THE CONTINUATION of a lucrative subcontract with the US Navy could propel a small Ottawa engineering firm to significant expansion.

Dominis Engineering specializes in the precision, five-axis machining of medium to large propellers, turbine blades and other complex parts containing sculptured surfaces. The company has developed a unique proprietary technology and computer-driven system for the design, measurement and milling of sculptured surface parts to final form.

In August 2003, Dominis was subcontracted by Marinette Marine Corp. of Wisconsin, through Canada Alloy Castings of Kitchener, to machine six impellers for "floating barges" to be used by the US Navy to offload vehicles and cargo containers from ships at anchor. If the US Navy opts to continue the initial contract, worth \$40.5 million, next spring, it could see Dominis working on another 96 impellers and sharing in an extended contract worth \$404.8 million.

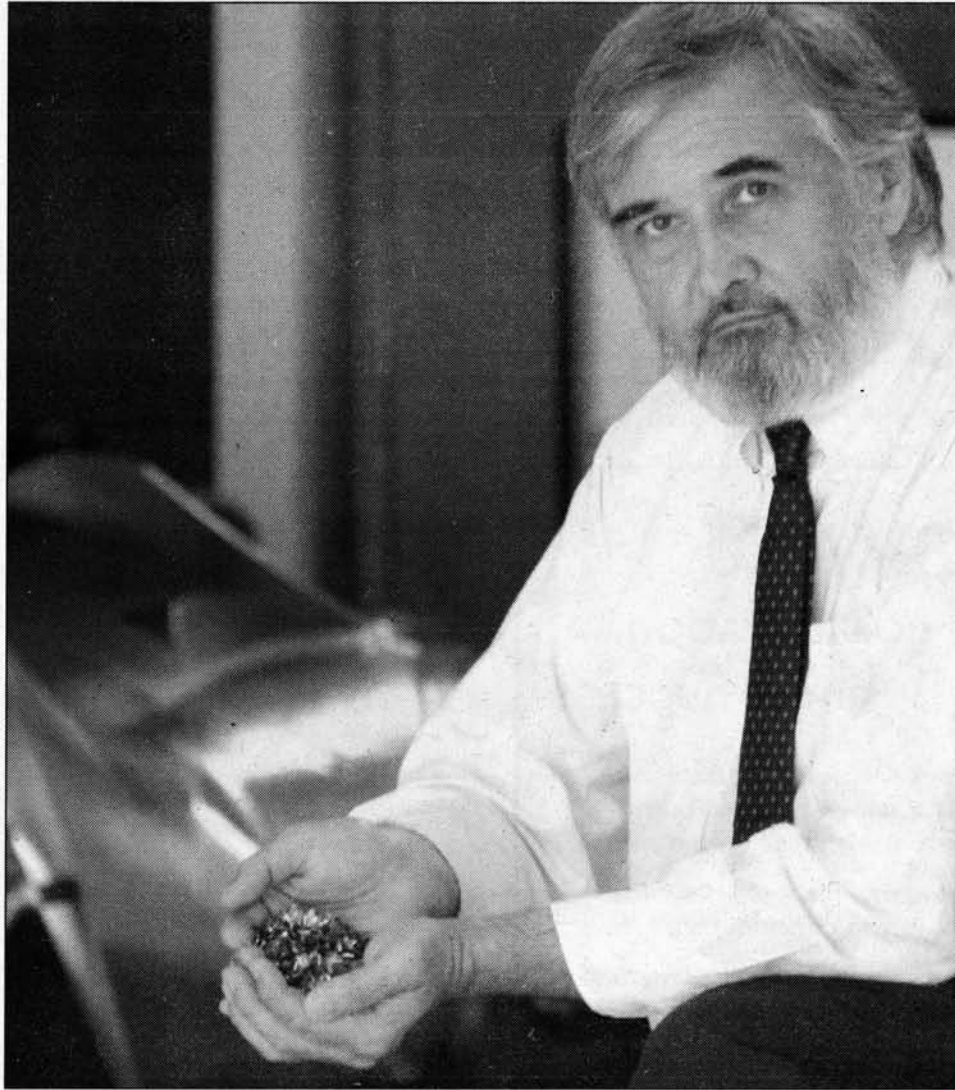
Slobodan "Bodo" Gospodnetic, president of Dominis, said the continuation of the contract would lead his company to purchase a second Toshiba horizontal machining centre worth \$1 million, adding to the \$2.5 million worth of machining equipment already located in Dominis' 9,000-square-foot east-end Ottawa location. Mr. Gospodnetic said the company would also add five employees to its 11-member staff.

Mr. Gospodnetic said the percentage of the initial contract received by Dominis is small, but the price of each impeller compares to that of an average car.

Further contributing to Dominis' busy schedule is a multi-year contract the company was awarded in October 2003 by Public Works and Government Services Canada for the manufacture and supply of propeller blades for the Canadian Patrol Frigates. The \$1.9-million contract calls for up to 30 propeller blades for the state-of-the-art, Canadian-built naval vessels that have seen duty in Afghanistan and the Persian Gulf.

Dominis started as a family business in September 1985, founded by Mr. Gospodnetic and his father, a research scientist and naval architect who had just retired from the National Research Council of Canada. Mr. Gospodnetic, who had worked on computer applications in the fields of computer communications, radar modelling and image processing, wanted to combine his skills and an electrical engineering degree from Carleton University with his father's expertise.

"We wanted to do something different and not compete with everyone else with a little



Slobodan "Bodo" Gospodnetic, president of Dominis Engineering, is piloting the 19-year-old company into a growth phase after landing several new contracts.

Photo: Darren Brown, OBI

machining shop," said Mr. Gospodnetic. "We wanted to make a difference and be unique."

The father and son self-financed the business, taking several years to tinker with various ideas and software applications and test them at the NRC and Carleton.

"It was a fair chunk of change," said Mr. Gospodnetic of the amount of money it took to start the business. "You have to put your pocket where your mouth is."

At the same time, Mr. Gospodnetic was researching the propeller machining market, which was consolidating throughout the supply chain to form about five large players, including companies such as Rolls-Royce.

"We had no idea of what the revenue-generating possibilities of the market were, we had no clue," he said. "It took a year to get an idea of the competition."

Research convinced Mr. Gospodnetic that a fully automated, numerically controlled

method of machining propellers would be a significant improvement over "very crude" traditional methods and carve Dominis a lucrative niche market.

In the late 1980s, Dominis moved into its Canotek Road location and financed the purchase of its first horizontal machining centre, as well as a horizontal boring and milling machine worth about \$700,000. Using proprietary software, Dominis' integrated propeller manufacturing system machines large, three-dimensional complex surfaces to tight tolerances, usually without the need for hand finishing. Materials used range from brass, bronze and aluminum, to stainless steels and titanium.

"Then we started beating the drum," said Mr. Gospodnetic, whose company employs engineers and technologists.

Dominis approached other propeller manufacturers with its innovative technology, as

well as hydro turbine manufacturers. Some of the company's first contracts were with the Department of Defence, building propeller models that are often the first step in developing the large-scale product. In the early 1990s, Dominis landed its first hydro turbine contract, worth \$700,000.

"(Machining the propellers) the first time around was not obvious, even though we had some shop experience," said Mr. Gospodnetic. "But after 500 blades, we knew exactly what to do."

"There are a relatively small number of shops with this level of capability," said Keith Pomeroy, vice-president with VA Tech Escher Wyss Canada, which contracted Dominis to machine runner blades for a water turbine manufacturing project in Quebec. Mr. Pomeroy estimated there are three to four shops similar to Dominis in Canada and 10 to 12 in the United States.

## First job with US Coast Guard

In 1998, Dominis landed its first job with the US Coast Guard, a contract for 72 blades worth \$1 million.

"It was announced on the government bid pages; if you're qualified, you can bid," said Mr. Gospodnetic, who surmised the Coast Guard was likely surprised by this new, unknown bidder. After passing an inspection and meeting the stringent requirements of US Coast Guard representatives, Dominis was awarded the work.

Concentrating on the North American and European markets, Dominis' client list grew to include the Canadian Coast Guard, Atomic Energy of Canada Ltd. and other government agencies, as well as several large private players. The company's technology in fine-tuning propeller blades was particularly attractive to demanding military customers, Mr. Gospodnetic said.

"When it's a \$500-million frigate, the propeller blade better be right," he said. "The military want accuracy because of noise considerations."

In addition to reducing noise, finely tuned propellers perform better, need less maintenance and are more fuel efficient, Mr. Gospodnetic said.

After shunning at least one buyout offer for the privately owned company, Mr. Gospodnetic and his father continue to work on the technology and find new opportunities in a market where a customer can also be a competitor. The new impeller technology for the latest in military vessels promises to be a lucrative avenue for Dominis, Mr. Gospodnetic said.

"We're constantly improving the technology." ■