

INVESTING IN CERAMICS:

A Superior Solution

by **Christine L. Grahl**, Editor

Superior Quartz Products is bringing a new level of service to ceramic component machining.

For Canberra Co. (previously Aptec-NRC) in Concord, Ontario, Canada, sourcing ceramic components used to be a significant chore. The company makes gamma exit/entrance monitors (GEM 5), hand and foot surface contamination monitors (Sirius-2 and Sirius-4), and whole body beta or alpha + beta surface contamination monitors (Argos-4), which monitor for radiation contamination and help ensure personnel safety in power utility plants. High-purity (98% and 99%) alumina components are a key part of the detector technologies used in these systems.

Throughout the late '90s and early 2000s, Canberra obtained most of its ceramic components from Borges Technical Ceramics, Inc. in Pennsburg, Pa. According to Ed Zacarias, purchasing supervisor for Canberra Co., dealing with Borges wasn't a pleasant experience—the company was unreliable and had a slow response time—but Canberra wasn't aware of any better alternatives. Then, in 2003, Borges went out of business, leaving Canberra and dozens of other customers in the lurch.

"We tried going elsewhere for the ceramic components, but we couldn't find a good supplier who could give us a consistent product. We even experimented with some other materials besides ceramic, but nothing worked right. It was very frustrating," Zacarias says.

A New Alternative

In late 2003, Zacarias received a letter from Superior Quartz Products, Inc., in Phillipsburg, N.J., announcing that the



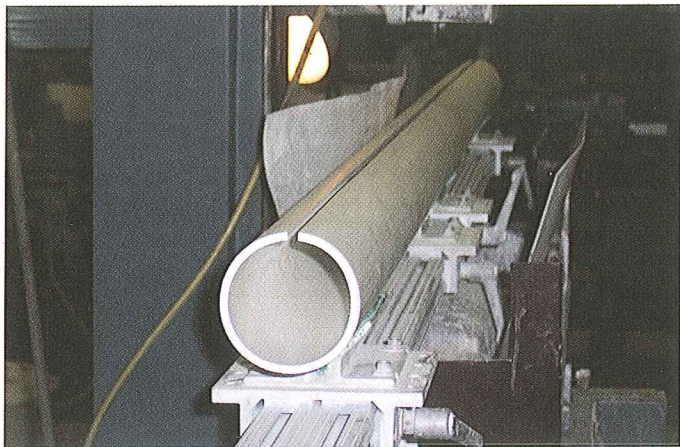
Skilled ceramic machinist Joao (John) Demai works 50+ hours a week cutting, drilling, grinding, and milling ceramic and quartz pieces to very high tolerances. Here he is cutting a 4½-in. diameter dense mullite tube to length.

company had acquired Borges. At first, Zacarias just glanced at the letter and then filed it away. But after months dragged on without finding a reliable ceramic supplier, he decided the company was worth a second look.

Zacarias was immediately impressed. "We went through a series of changes with a certain part because we were in the middle of evolving our detector design, and Superior Quartz was able to adapt quickly to our changing requirements," he says. "They gave us whatever we required in a very short period of time, and everything was to spec—we didn't have any problems."

What was the company's secret? According to Jack Sabo, operations manager for Superior Quartz, it's as simple as a "service first" mentality and a different approach to what some might see as more conventional ceramic machining operations.

"Superior Quartz has been around since 1961 as a manufacturer of medium and high pressure quartz lamps. We've worked with a lot of 'mom-and-pop' shops over the years, but we've always tried to treat every order—small or large—with the same high level of service," Sabo says. "Additionally, our experience in machining has primarily been



A 90-in. long by 4½-in. diameter dense mullite tube is fastened into metal V-blocks to hold it steady so that it can be slotted its entire length.

with metals, but we've applied some of that to ceramics with a great deal of success. The ability to crosscut between some of the technologies used in the metal and ceramic industries has allowed us bring some new efficiencies to the process."

A Growing Business

For Canberra Co., it was a welcome change. "We've had no failures, no rejects and very good turnaround time from Superior Quartz—unusual in my experience in dealing with ceramic companies. I'm typically faced with long lead times, and it's very difficult to get things turned out quickly," Zacarias says. "We get a lot of what we call 'bluebird orders' that just pop

up—budgetary expenditures that power utilities make at the last possible minute because they have to expend their budget. Because of Superior Quartz's ability to turn our components around so quickly, we've been able to take advantage of that extra business. "We've also been getting a lot more business globally, and our head office has been investing in us to build more products because we can turn on a dime."

Superior Quartz is seeing its business grow as well—both in quartz lamps and ceramic machining. Within the next year, the company plans to move to a new 62,000-square-foot building that's double the size of its current space so that it can handle the increasing number of orders.

"We're bulging at the seams in the building we're in," says Sabo. "We currently employ 70 people, and I believe that will expand to 100 in the new building. We're basically a job shop—whatever a customer needs, we try to do. We're eager to see where the ceramic business will take us." 🌐

For more information about Canberra, visit www.canberra.com.

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