



Biju Pulickal, EDM programmer, checks out A-1 Jay's Sodick AQ535L wire EDM to make sure it's running smoothly. The company operates 4 Sodick wire EDM machines and 1 Sodick K1C hole popper.

The Power of Two

A Silicon Valley Job Shop Combines Two Machining Technologies to Succeed in a Competitive Environment.

Story and photos by C. H. Bush, editor

When James Machathil came to America in 1987, his goal was much like that of countless other immigrants. He wanted to settle down, find a good job and build a happy life for himself and his family. But the U. S. is not just a land of opportunity, it is also a land of happy surprises, as Machathil learned fairly quickly.

"I was twenty-seven years old when I arrived," Machathil recalls. "I had four full years of training in tool and die making at Nettur Technical Training Center in India. Luckily I was able to get a job in a mold-making shop where I made and repaired molds and did some prototype machining. I never dreamed I would end up owning my own business."

But four years after his arrival in the U. S. Machathil found opportunity knocking loudly at his door.

"I was working in the machine shop for a company

called Henry Plastics and Molding," he says. "We had four manual mills, one small Bandit CNC, some tool lathes and two or three surface grinders. Then one day my manager, Dennis Bush, came to me and said, 'James, the business is going down. Either you look for another job, or you can take over this shop.' It took me a couple of weeks of hard thinking to decide, but I finally decided to take the gamble. I had no money, but they didn't want a down payment. They leased me the equipment for about \$2,000 a month and let me rent the space in their shop, so I didn't have to move. It was a huge risk in my life, but I was determined to do it. How many times does an opportunity like that come along?"

Rapid Growth

Calling his company A-1 Jay's Machining, Machathil started out with no customers, but that didn't stop him.

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James Macathil, president-founder of A-1 Jay's Machining, Inc. (left) discusses QC requirements on a part with George Kochintedath, chief inspector.

and one Sodick K1C hole popper EDM. Our customers come from four main markets: semiconductor, fiber optics, computer and some medical. To keep all this going, our staff has grown to forty-five people.”

Machathil decided to add EDM to his shop's capabilities because he had started to get work that required both milling and EDM machining.

“We had some work that needed EDM machining,” he says. “We bought the Fadals from Jim Selway. He was a good friend of mine, so I asked him what kind of EDM he thought I should buy. He gave me Don Miller's phone number over at Sodick. A lot of our customers want rapid turn-around, and I didn't like having to wait on outside vendors, so I figured I would buy one EDM machine and give it a try. So far it has been a great decision.”

Discovering Synergism

Machathil had the same learning curve problem with EDM as he did in transitioning to CNC milling.

“I knew something about the theory of wire EDM,” he says, “but that's different from practice. As a result, we went back and forth quite a bit, but we learned. I had one operator to run that machine, and we ran some small parts on it.”

But then Machathil discovered an unexpected benefit of having both milling and EDM under one roof.

“There are some operations that can be done much faster on an EDM than on a mill,” he explains. “Now when we get a job, we look at it and decide which is the best technology to use and in what order to use them, though we

“I needed cash flow, so I called around and got a couple of small customers,” he says. “I was alone, so I didn't want big business, you know. But after about six months I got a couple of bigger customers and, after a year I had four or five people working for me. Things were going well, but then one day the building owner came to me and said, “James, you're making too many chips, so you'd better get out. We need our space back. I had no choice. I found a 3000 square-foot building in Milpitas and moved in with a three-year lease. After that we just kept growing. Pretty soon I had fourteen people working for me, and we were outgrowing that building. That was in 1992.”

In 1996, the owner of the 10,000 sq ft building next door to him decided he wanted to sell his building.

“We were friends,” Machathil says, “and he asked me if I wanted to buy his building. He offered me a good price, so I bought it. Even then we were still running all manual machines, and I knew that if we didn't go CNC, we wouldn't survive. Without CNC you just can't compete.”

First CNC Equipment

Machathil made the move to his new building and to CNC milling at about the same time.

“We bought a Fadal VMC 4020 three-axis mill,” he says. “We knew nothing about CNC programming, so we had to start from scratch, but we learned fast. The good thing was that as soon as people knew we had CNC milling, we started getting more work. We bought one new CNC mill every six months after that. Now we have ten Fadals, two dual-pallet Daewoo horizontal milling machines, plus we have four Sodick wire EDM machines



Joi Vale, EDM operator, prepares A-1 Jay's



View of milling department at A-1 Jay's Machining, showing two Fadals and a Daewoo horizontal milling machine.

usually do the milling first and then the wire EDM work. A lot of the work we do requires both.”

Machathil says his customers like having both types of machining under one roof, too.

“I think they like it because it's really convenient for them,” he says. “They don't have to go to different places to get the work done, which reduces a lot of handling for them and for me, too. For most of our customers timing is really critical. What we're finding is that having both technologies under one roof actually brings in more business than we might have had otherwise. Of course, we will do milling only or EDM machining only, but we don't really sell it that way. At our shop the two technologies together add up to more than just the sum of the two separate technologies. We believe they make us much more competitive than we would be otherwise.”

Machathil points to a job he just got in as an example of his turnaround capability.

“A guy came this morning at 8:30,” he says. “He wanted his parts by tomorrow noon. The parts have both milling and wire EDM on them. It's nine o'clock now and the job is already in the mills, and as soon as they're done, they'll go to EDM. We'll ship them today. We couldn't do that, if we had to go to an outside EDM vendor.”

Sodick Shop

After “trying out” his first Sodick wire EDM, Machathil

bought two more by the year 2000.

“We kept getting more and more work,” he says, “so I bought my second EDM, an A325 in 1999 and another one in 2000. We found that one guy can easily run two machines, and that helped productivity.”

In 2004 he purchased a Sodick AQ535L, which is Sodick's biggest machine. Then in 2006 he bought a Sodick, AQ300L.

“The reason we bought that machine,” he says, “is we had some ongoing work from one of our customers, so we had to dedicate one machine to them. The reason we keep buying Sodick is that so far they have been very reliable. We really haven't had any real problems with them, but when we need help, Don Miller usually comes out personally and helps us. Sodick gives us good service.”

Although he never expected to be in business for himself, Machathil has shown a knack for doing the right things at the right time.

“We owe much of our success to the hard work and loyalty of our employees,” he says. “and we hope to continue the same way in the future, too. Right now I'm planning for the future by training my two sons to run the business some day. I have two sons and a daughter, and both my sons are already working here during the summer. I talk to them and tell them that someday the shop will be theirs if they want it. I hope they do, because this business and America have been good to us.” ■