

Small, high-tech metal shops thriving

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North Bay home to handful of new, niche operations

NORTH BAY- There's a new breed of manufacturing operation quietly gaining ground in the region: high-tech metal shops.

Lamont sets up a computerized milling machine at OMW Corporation. The machine is networked to the OMW server and workstations for programming.

These small but high-capacity shops typify the radical changes brought about in the industry through computer-aided design and machining.

"There are close to 15 in Sonoma County alone, making parts that go into Boeing aircraft, into missiles, into human bodies," said Dick Herman, president of SantaRosaMFG.com, an organization devoted to spotlighting and bringing new resources to area manufacturing companies.

The large, labor-intensive shops of the past are giving way to shops with two to 15 employees, using PCs running computer numeric control (CNC), CAD and CAM technologies to match the output of much larger operations.

"The CNC technology has been around for nearly 30 years, but the machines mostly collected dust," said Joe Osborne, president of OMW Corporation in Novato. "The Microsoft Windows interface and the Internet changed that."

computerized mill machines a customer part at OMW. The machine is programmed using state-of-the-art CAD/CAM software on local workstations.

Now, instead of a worker running a lathe or mill to match the specs on a printed design, CAD designs come over the Internet, programmers translate the code into language understood by the machines and the machines turn out the parts.

"The ratio in metal shops used to be a lot of people running a few machines. Now you have more machines than people," said Mr. Osborne, whose eight employees operate 11 machines, most of them computer-controlled.

Dick Hunt, who with his wife Analisa runs seven-employee Datum Technologies Inc. in Santa Rosa, has been in the industry over 40 years, starting in a Norfolk, Va., shipyard long before today's technologies came into being.

"We used to use drawings, or reverse-engineer a part. It would take weeks just to get to the machining stage, and then there were accuracy problems. Now we take the designs from the Net and get the part right the first time. The advances in quality and increase in turnaround time are extraordinary," said Mr. Hunt.

That's not to say that skill and craftsmanship are no longer needed for precision machining. But the skill has shifted to CNC operation, programming and mathematics.

"Mechanical aptitude and skill can simplify and shorten the process," said Grant Kerr of G-Man Precision Machining in Santa Rosa, "and that's where you beat the competition.

"A part might require four or five different operations, but skilled workers who can think for themselves instead of merely following instructions can often streamline the process."

His five-employee shop does work for Lockheed Martin, L3 Communications and other U.S. defense contractors.

Mike Maendl of Prototfab in Petaluma agreed that machines alone don't make a metal shop business.

"Safety, manufacturing, quality assurance, office support and sales are equally important. Manufacturing requires able programmers and knowledge of your machine's capabilities. Can you prototype a part accurately and quickly and then reproduce it accurately? Can you check for quality? These are aspects that can't be allowed to fall through the cracks."

Protofab, which makes medical device and orthopedic components, has grown in two years to 13 employees, including six programmers.

"We've been successful from day one," said Mr. Maendl, who foresaw the demand for parts machined using CNC and CAD/CAM technology. His company is taking on manufacturing work as well as prototyping as its reputation grows.

"When our clients' companies reach full maturity they'll outsource manufacturing overseas. We can't match labor costs in Asia and they have the same technology," he said.

Most of the North Bay shops face the same inevitability, but there's enough startup activity in the area to keep them busy. And being local helps.

"Flexibility, expertise, versatility and quick response are our advantages," said Mr. Kerr. "And we can be in your designer's office the very day we're needed."