A few years ago, Mr. Ross got together with some other area manufacturers to discuss their problems. With the help of Duquesne University in Pittsburgh and a local foundation, they developed a training program aimed at people who had planned to go to college and indicated an interest in a career that had ended up in dead-end jobs. So far, Lesker has hired about 15 graduates of the program, which is called Manufacturing 2000, including Dan McKenzie.

MORE EARNING POWER

Mr. McKenzie, 27, had just finished a stint with the Marine Corps and was working in a pizza shop. He saw the program’s ad for free training and jumped on it. Now, he works for Lesker as a machinist and has taken some college courses toward an industrial-engineering degree. As a result, Mr. McKenzie, who made $8.50 an hour delivering pizza, has increased his take-home pay by about 30 percent. All told, he says, that he is free to focus on the long term, rather than on quarterly results.

Mr. Rhoades’ newest and most promising technology, invented at the Massachusetts Institute of Technology, is a process for custom-making hundreds of different parts using a single machine. Rather than stamping a piece out of metal, the new process uses a computer scan of a part to create a copy of it, building it up layer by layer from a mixture of powdered metal and plastic, which is then fired in a furnace.

Mr. Rhoades says the process eventually could be used by airlines or by auto shops that want replacement parts on site, rather than waiting for them to be delivered.

And that’s why he’s hiring. He needs metallurgists and people with computer and software skills, many of whom as recently as two years ago wouldn’t have considered working for a machine-tool maker. “It just got to an unhealthy point where people were being drawn out of the work force and into dot-coms when they could make a bigger economic contribution” by working in mainstream manufacturing, he says.

Manufacturers create a local multiplier effect. They go through a lot of nuts, bolts, grease and paper clips, often relying on other local businesses and keeping their dollars in the community. They use the local delivery service, the local trucking company. Home sales here rose 14% in May, and while there was no direct correlation between robust real-estate sales and an uninterrupted flow of coated metal, it can’t hurt either.

Last year, Lesker spent $467,853 buying office supplies, gloves, cleaning materials, fasteners, bolts, grinding wheels, sanding belts and lifting devices such as slings from local suppliers. Steel to make its products comes from nearby Allegheny Ludlum Corp.

U.S. Tool & Die has survived by evolving. Formed about 50 years ago, it was engaged in the most basic aspect of manufacturing: making parts under contract for customers in the steel industry. In the mid-1970s, it began making racks to store spent nuclear fuel. It didn’t change its business, remaining a contract manufacturer, but it changed markets completely. Now, it has contracts all over the world.

While U.S. Tool & Die’s Mr. Moscardin credits the company’s strong sales to dominating an up-and-comer market, others seem to be doing well, too. “People I associated with in metal working and manufacturing, everyone seems healthy. We probably have 15 to 20 machine shops as well as a contract work, and these guys are all busy,”

John Ross, executive vice president of manufacturing at Kurt J. Lesker Co., Last year has 200 employees and $40 million a year in sales, expanded its workforce by 15%. This year, Mr. Ross says, it plans to expand another 7%. He says Lesker’s biggest problem is a shortage of skilled workers, such as welders and machinists.