CLOSE UP

Gold Rush

Brooklyn supplier finds second life gold-plating components

JOSEPH C. ANSELMO/NEW YORK

To save his family's business, David Epner first had to melt it down.

His father started the operation in 1910 with $600 to gold-plate jewelry and novelties. In the early 1970s, Epner capitalized on a chance meeting with a Xerox engineer to expand the company into a supplier of optical gold coatings for copy machines and, ultimately, aerospace hardware. But a blue-chip customer list wasn't enough to offset poor management and a bloated and disgruntled workforce, and the company was pushed to the brink of survival. In 1978, Epner told his creditors to auction it all off.

"We liquidated the company, paid off the creditors and started over with a fresh focus," says the company president.

The first step was sending his wife, a magazine editor, to an auction to buy back the company name for $1,000. "I went to the auction in a wig and dark glasses to see what was going on," claims the brash—and very bald—Brooklyn businessman.

In an era when supplier consolidation is in vogue, some mom-and-pop operations are managing to survive and even thrive at the lowest levels of the aerospace supply chain. Three decades after Epner started over, a leaner Epner Technology has cemented its role as a supplier of gold plating to the aerospace and defense, medical, computer and automotive industries. Its gold can be found on an array of military and space hardware, including NASA's Hubble Space Telescope and Geostationary Operational Environmental weather satellites, the Joint Strike Fighter engine, the TOW anti-tank missile and the Keck Observatory, the world's largest telescope.

The privately owned, 38-employee company had record revenue of $7 million in the fiscal year ended Mar. 31, with about three-quarters of sales coming from aerospace and defense customers such as BAE Systems, Ball Aerospace, Boeing, GKN Aerospace, ITT Industries, Lockheed Martin, Northrop Grumman and Raytheon.

Because gold is highly reflective in the infrared spectrum, it is used to coat optical mirrors in spacecraft, satellites, lasers and missile countermeasure systems. Its low emissivity is also employed to maintain the thermal stability of spacecraft instruments.

However, the challenge is making gold, which in its pure form is very fragile, strong enough to withstand harsh environments and maintain reflectivity after multiple cleanings. Epner Technology uses a proprietary electrochemical process to make its gold both reflective and durable.

Epner Technology is headquartered in an industrial building in Greenpoint, an old Brooklyn neighborhood that mirrors the company's decline and resurgence. A public housing project looms over one side of the building, while $700,000 condominiums have sprouted on the other.

Like the neighborhood, the 74-year-old Epner is a study in contrasts, mixing complex discussions about metallurgy with colorful language (he refers to one of his business partners as a "redneck junkyard dog"). His favorite nearby dining spot looks likes a set for *The Godfather*—and, as it turns out, scenes for *The Sopranos*, the popular mobster television series, were filmed there.

EPNER TECHNOLOGY

David Epner holds a cryo-radiator that was gold-coated by his company for the Canadian Space Agency's Atmospheric Chemical Experiment satellite. The spacecraft was built by Ball Aerospace.

But Epner's salt-of-the-earth style is just fine with his customers, who appreciate his hands-on approach, disdain for red tape and passion for tackling problems. Joe DeMartino, vice president of programs at GKN Aerospace Structures, hired Epner Technology to copper-plate electrothermal components that GKN is supplying to Pratt & Whitney for the Joint Strike Fighter's engine.

"We asked them to move into an inventive environment of uncharted territory related to plating and they've done very well," says DeMartino. "They were able to help us solve a big problem."

Epner also has won kudos from NASA for its gold-plating work on the Mercury Laser Altimeter, an instrument on the Messenger spacecraft designed to measure the topography of the Northern Hemisphere of Mercury. In a letter to Epner shortly before Messenger was launched in 2004, NASA program officials praise the company's performance. "Not only was the gold-plating and masking on this critical component flawless, but it was delivered on time against an 'impossible' schedule," they wrote.

And a program manager at a large aerospace company commends Epner's commitment. "The guy is a fanatic—he wants everything to be right," says the executive, who asked not to be named because he was not authorized to be interviewed. "I even got a phone call a couple of months after they had finished to ask me if everything was still OK. Very few companies will do that."