

# When it Comes to Electropolishing, This Baltimore Jobshop Has it All Together

Like many other metal finishing companies, Pier-Sol, Inc., Baltimore, MD, was started as a small electropolishing jobshop in 1957 by George Pierpont. Today, it occupies a 19,000 ft<sup>2</sup> building and has diverse capabilities to finish a wide range of parts. The company only does one thing—electropolishing of stainless steel. But, it does it very well.



*Tom Pierpont, left, is president of Pier-Sol, Inc. Electropolishing. His father, George, started the company in 1957.*

## Electropolishing—A Different Kind of Finishing

Electropolishing is the opposite of electroplating, explained Tom Pierpont, George's son, who now serves as president of the company. "We don't put a deposit on. We take the surface off, to make it better in looks and function. And, we only do one metal—300 series stainless steel."

The types of parts processed include electronic components, medical tools, pharmaceutical items, and parts for aerospace and defense, as well as some automotive components.

The company builds its own racks with copper, because those used for electropolishing must be built differently from those used for plating. "A good, strong electrical connection is crucial for electropolishing," Tom said. "The parts have to fit tight on the racks to get a strong connection. So, we build our racks to get a good fit for the parts we're processing."

The shop experienced tremendous growth during the 1990s. It grew so fast that there were times when the company ran three shifts every day just to keep up with the work.

At the height of the boom, Pier-Sol employed 17 full-time people, but has trimmed to 12 since the downturn in the economy.

## Diversified Finishing Lines

The shop now has six electropolishing lines, and is capable of processing a wide range of small and large parts. Some critical parts that require the use of deionized water are also finished on the smallest line operated at the shop, which is located in an environmentally controlled room.

Most of the tanks are 600 to 700 gal. A 1,300 gal tank is used for processing very large parts.

Four of the lines were installed using extra strong I-beams so that any growth or automation could be easily added to the lines in the future. These four lines now share two hand-operated hoists for large loads and large parts. Tom has plans to completely automate one or two of the lines in the near future.

## Waste Treatment

"Electropolishing requires relatively simple waste treatment for the acidic rinse waters left behind, which have highly concentrated metals," according to Tom. The waste stream is processed using neutralization and flocculation through a slant plate clarifier and a final polish filter. The sludge collected is pressed and dried using a filter press, then shipped off-site for recycling.

## Company History

When George Pierpont started Pier-Sol, Inc., the shop had only one customer called Memtec, which is now a part of USFilter Corporation. At the time he was working for Armco Steel, where he spent 26 years in research, and another 11 years in safety and health.

Electropolishing was relatively new when Pier-Sol started. A part of George's job at Armco was to help set up electropolishing shops, and to teach operators how to do it correctly. Success was not always easy when he was trying to get new operators started, so he started his own shop in a garage that was once a livery stable.

With an outstanding reputation in the finishing industry, it didn't take long for companies in need of electropolishing to find George and his newly opened jobshop. He ran the shop as a part-time venture for years, completing most of the work at night, because he kept the full-time job at Armco.

**"Always give the customer a better finish than what is expected."**



*The shop processes only 300 series stainless steel, such as oven liners and special containers.*

George purchased his first computer for Pier-Sol, Inc. while he was still working for Armco. "That really helped Margaret and me shorten the time necessary for administrative duties," he said. His wife, Margaret, was performing the financial work for the company at the time.

It's ironic, however, that George decided to retire from Armco because of the arrival of the computer age. "They told me I had to learn how to use a computer to do my job," he said. "I didn't want



*Tom installed a small electropolishing line in a control room to finish critical parts.*



*Parts are loaded carefully to ensure a snug fit on the racks.*



*Hand-operated hoists are available on four of the shop's six lines.*

to, so I retired." He then had to learn to use the computer at his own shop to gain better organization and increase efficiency.

When George's oldest son, Michael, graduated from college in 1977, the shop became full-time and had been relocated from the garage to the business district. Even though it was considered full-



*Racking is critical for electropolishing, because a strong electrical connection is essential for the process.*

time, the company used a lot of part-time employees at first, so most of the work had to be completed after regular working hours. The business took off, however, and the increase in the amount of work and number of customers enabled the company to expand.

George's youngest son, Tom, joined the company in the early 1980s. When Michael left the company to pursue other interests, Tom became head of Pier-Sol, Inc. George's daughter, Kris, joined the company in the late 1980s, and continues to handle many of the daily administrative duties.

With a continued growth in business, Tom decided to move the company in 1996 as part of a plan for the shop's future. Under his guidance, the shop was relocated to the current building, which is several times larger than the former location. It took him eight months to move and get the shop up and running. During that time, he spent almost every night of the work week at the new location, working long hours into the night to get the lines and equipment set up. He ate and slept at the shop during the week, and spent weekends at home with the family.

George joined the AESF Baltimore-Washington Branch in 1958. He, Michael and Tom have all served as president of the branch, and have been active in most branch activities since. George is now retired, but Tom continues to be active in the branch and other civic organizations.

## The Future

No one really knows what the future holds, but with careful planning and attention to detail, Pier-Sol, Inc. is set to continue to expand as the electropolishing business grows. "It's a growing industry," Tom said. "It's an important part of many different segments of manufacturing, and we're large enough now to take on a lot more business."

Tom's philosophy is simple. "Always give the customer a better finish than what is expected," he said. This simple philosophy and attention to quality assurance has resulted in Pier-Sol, Inc. earning a reputation as one of the best electropolishing jobshops in the nation. **P&SF**