

Member Profile

Member Profile: MPI, Inc.

Year founded: 1965

Location: Poughkeepsie, NY

Number of employees: 35

Principle product: Wax injection equipment for the investment casting industry

Website: www.mpi-systems.com



realized that the domestic market for this niche product was not large enough to support the growth of the company.

He decided to expand his market beyond just North America and sell his wax injection equipment to the growing market overseas. The key to his success was in finding the right sales agent knowledgeable in the investment casting industry. MPI has sales agents in the United Kingdom, Europe, Israel, Japan, and China. The newest markets targeted India and Brazil. Each year Mr. Phipps does extensive traveling with his sales agents. The company is truly worldwide and actually has only three customers here in New York State. MPI services a very specific market and staying ahead of their competition is a full time endeavor. They accomplish this by providing world class service along with staying on the cutting edge of technology.

There are some manufacturing techniques that have been around for centuries; investment casting using the “lost wax” process has been around for millennia. It is a process that has produced fine bronze art work from the Shang Dynasty in China (1766 to 1122 B.C.), to gold jewelry by the Aztecs in Mexico, and aided numerous artisans who employed the process throughout the Renaissance period in Europe. To bring this process to the forefront of industry it took an over taxed machine tool industry in the United States during World War II, investment casting was able to provide a shortcut in manufacturing precision parts for arms and aircraft. The basic process has changed very little over the years, but the technology



Jim Faulkner removing a completed wax assembly from an APAS machine.

The company’s two engineering departments are busy keeping MPI a step ahead of the competition. The R&D department and product development department are constantly looking at ways to better control the wax injection process and capture

used to make this process more efficient and to increase its productivity has changed dramatically. MPI, Inc. has been leading the way by continually applying innovative techniques to their wax injection equipment that is at the heart of the investment casting process.

The process of investment casting has several steps, but is much simpler, faster and more precise than creating each product by hand. An artist creates the original pattern which can be quite intricate and detailed. A mold of this pattern is made and filled with wax. This is where it is important to be sure all the undercutting and fine detail is preserved. The wax pattern is then removed and dipped in plaster to create a smooth and highly accurate ceramic shell. The wax is then melted and removed from the shell and replaced with molten metal. The metal hardens and the shell is broken away to reveal the final product, an exact replica of the original pattern. MPI, Inc. produces the machines that control the wax injection process.

data during the process. The latest machines produced by MPI are connected to the internet so that MPI technicians can trouble shoot problems even if the machine is half way around the world. MPI has also taken advantage of grant funding offered by NYSERDA to develop their Auto Pattern Assembly System (APAS). This system was able to help a customer company increase their productivity and efficiency to a point where enough gains were made that they were able to keep their plant here in the USA instead of having to relocate to China to reduce costs. This is beneficial to the entire manufacturing community. MPI, Inc. is applying for another grant to help them improve the productivity and efficiency of their machines even more.

MPI, Inc. was founded in 1951 as Mueller Press, Bruce Phipps and his partner purchased the company in 1972. Eventually the partners had a difference of opinion. Mr. Phipps bought the company outright in 1984. Mr. Phipps

Though an ancient technology, investment casting has come a long way from the Shang Dynasty days. In recent years MPI, Inc. has led the way in advancing this process and manufacturers across the globe who rely on parts created through this process are the beneficiaries. MPI stands out as a creative innovative and successful Hudson Valley company.