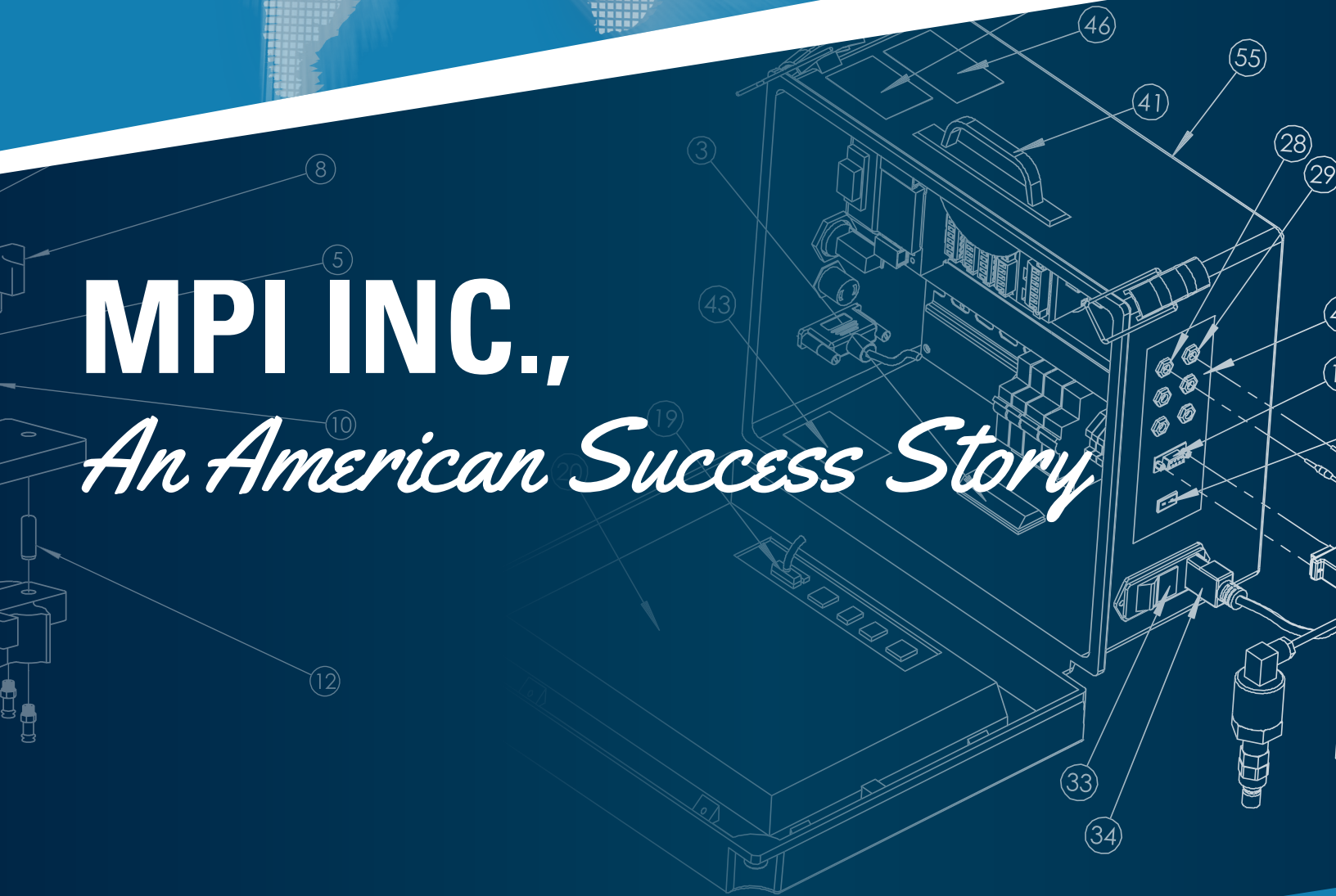




MPI INC.,

An American Success Story



MPI Inc., An American Success Story

MPI is a great American success story. Over the past forty plus years, MPI has become the global gold standard in wax-room equipment manufacturing. It's due in no small part to the determination, hard work, and commitment of President and Founder Bruce Phipps and the people with whom he surrounds himself.

From the moment you enter its recently expanded world headquarters in Poughkeepsie, New York, you understand what MPI is all about. The front lobby is beautiful, well-appointed, and functional without being pretentious. The décor reflects the company's commitment to innovation and challenging the status quo through both quality and efficiency.

But if you really want to understand what makes MPI tick, simply tour the facility with Bruce Phipps. His passion for this industry and the future he sees for it are obvious with

every step he takes. At the same time, while the company's size has more than doubled over the past three years, it still maintains a family atmosphere—a culture that Bruce has painstakingly nurtured over time. He knows his employees on a first-name basis, and everyone is glad that Bruce is steering the ship.

As you begin your journey through the 47,500-square-foot facility, you're immediately struck by the fact that everything is bright and clean; the 20-foot ceilings give it an open, spacious feel. Instead of workers parked at their stations working in isolation, there's a buzz of collective excitement among the employees. It's obvious that this is an organization that's greatest asset is its people. While the facility is extremely impressive now, it wasn't always that way.

The Early Years

Bruce Phipps fondly remembers the early years. MPI began in 1972 as a three-man manufacturing company with Bruce, partner Fred Mueller, and one employee. They purchased the business from Fred's uncle, who operated it in a 2,400-square-foot facility. As Bruce recalls, he and Fred decided to "buy Fred's uncle's business in Poughkeepsie—wherever that is—making wax injectors—whatever they are," and with that, MPI was born. Bruce bought out his partner in 1984, changed the name to MPI, Incorporated, and it has been his baby ever since.

Since that time, MPI has become the most technically advanced supplier of wax-room equipment in the investment casting industry. They offer the most sophisticated wax injection machines in the world, generating higher-casting yields, more patterns per hour, and increased productivity and throughput. To date, they have developed and introduced more systems and products than all of their competition combined.

Innovation

Much of MPI's growth has been fueled by their commitment to innovation, which is firmly embedded in their DNA. Driven by the idea that things are only "impossible" until they've been done, Bruce and the team at MPI have introduced many wax-room innovations over the years, to name a few, the first C-frame wax injector, the first programmable wax-flow device on a wax injector, and the first wax-conditioning reservoir capable of producing a cold-paste wax. Other significant innovations include Smart Controls™, automation in the wax room, remote internet support, and the

industry's leading global customer support team, including service, spare parts, and training. Bruce has a well-documented history of believing he can solve problems, and he loves working with his team to develop creative solutions.

While MPI has always been committed to developing new products, over the past ten years, the company has taken innovation to a whole new level by incorporating automation into the wax room.



"I was always confident of what our people were capable of, even if we'd never done it before. We were fortunate enough to have customers who believed in us and gave us the opportunity to develop new products for them."

- Bruce Phipps, President





Automation

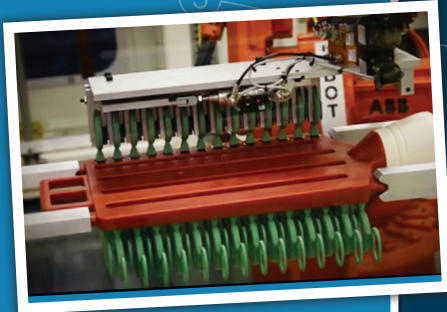
As you continue your tour of the facility, you enter into the area designated "MPI Automation." MPI has developed fully automated robotic cells for both wax injection and pattern assembly. MPI originally collaborated with Rensselaer Polytechnic Institute and the New York State Energy Research and Development Authority (NYSERDA) in 1999 to create a prototype for the first-generation system. They recently introduced their second-generation automated pattern assembly system. Watching this machine in action is something to behold.

It is built on MPI's patented wax-welding process and has the flexibility to perform high-quality, precision robotic assemblies from the simplest commercial jobs to the most complex and demanding projects found in the

medical and aerospace industries—including single-crystal turbine blades. It incorporates the use of versatile six-axis robots that can easily handle larger, multi-plane, multi-part assemblies. These robots operate with such speed and precision that it's like watching a synchronized ballet.

MPI automated injection cells are equipped with an MPI wax injector along with a variety of secondary systems including a pattern/core conveyor, automatic tool change station, and six-axis robot. MPI has incorporated the best process controls into every automated function from inserting ceramic cores, wax injection, and pattern removal to pattern setting, injection runner trimming and inspection, and so on.

MPI has consistently proven that an automated process can outperform operator-controlled injection and assemblies in accuracy, repeatability, and efficiency.



Growing The Company

The company has grown steadily and has expanded on five separate occasions. In 2009, Bruce bought the entire complex they occupied at the time, which included 15,000 square-feet of additional space. In June of 2011, Bruce brought in Jeff Rich as Vice President and General Manager to handle the ever-expanding day-to-day operations and to help with the expansion. While there was some initial concern about someone new taking the operational reins from Bruce, the staff has embraced Jeff.

"Jeff has made a huge impact. He has taken things to a higher level in an empowering way. He has been able to maintain that family feeling while adding that corporate mentality we need."

- Bill Nichols, Plant Manager (16-year employee)

He was challenged with designing the new manufacturing and engineering space in the

15,000-square-foot addition they purchased. The expanded space now includes a fully functioning laboratory, showroom, and production facility to demonstrate the company's state-of-the-art wax-room equipment. A portion of the redesigned space is dedicated to providing their ever-expanding team of engineers with an interactive office platform where they can collaborate on MPI's highly technical equipment design.

"I love the new engineering setting—it's great for collaboration and communication. It allows everyone to work together in a high-productivity environment."

- Dan Phillips, Product Engineer (14-year employee)

The expansion has also created additional meeting space to accommodate ongoing training classes and seminars for their global customer base.

"With automation, injection and assembly variations are completely eliminated, which improves throughput and increases casting yields by up to 30%. Automation allows you to achieve cycle times that are two to five times faster than with operator-controlled processes, reduces scrap by an average of 50%, and achieve high-quality welds 100% of the time."

- Jeff Rich, VP/GM



Pattern Production And Assembly

At the far end of the new space, you will find MPI's pattern production and assembly department. This division allows customers interested in automation to see the benefits, which result in improved casting yields, all before they invest in automation for themselves. Because they have incorporated automated injection and assembly capabilities into the pattern and assembly department, MPI cost-effectively produces high-quality wax patterns and assemblies and ships them directly to customers.

Operating a fully automated pattern production facility has also given MPI the unique opportunity to gain firsthand knowledge and experience making wax patterns and assemblies on their own equipment. MPI believes there is nothing better than real-world experience to prove how cost-effective automation can be.

Committed to Education

So, how does a company like MPI stay on the cutting edge of an industry? The answer is through constant employee education. In addition to paying for external continuing education courses, MPI conducts seminars with guest lecturers as well as its own in-house training courses.

"I give personal foundry tours to our people—engineers, subassembly, and assembly—so they really understand what our customer base does with our products. They meet machine operators, department managers, engineers, and the service technicians who handle the problems. We exchange ideas and work together in a very positive environment. Those trips allow our employees to interact in a meaningful way."

- Bruce Phipps, President

MPI is proud of its substantial commitment to furthering education in the investment casting industry. In the summer of 2013, MPI donated a state-of-the-art, 25-ton wax injector to Pittsburg State University in Kansas, home to the only Investment Casting Institute (ICI) certification program in the world. The \$150,000 machine was installed in the metal casting lab at the Kansas Technology Center and was fully integrated into the investment casting curriculum. In addition, both Bruce and Jeff give of their time and expertise as volunteer instructors at the Investment Casting Institute's certification and process control courses.

The Future

MPI firmly believes that automation is the future of the industry. Outside-the-box thinking and constant innovation keep Bruce and the MPI team pushing through the early adopters and early majority into the mainstream of investment casters so that the entire industry begins to realize the benefits of new ways of implementing age-old concepts. While others may try to emulate their accomplishments, MPI always manages to stay one step ahead. As the company continues to work on new and emerging technology, MPI never loses sight of the need to maintain their position as the leading manufacturer of traditional wax-room equipment and to be the premier service provider in the industry. If the past few years are any sign of what is to come, it is going to be amazing!

"MPI made this investment in our pattern production facility for two important reasons. First, we wanted to offer our customers the best possible pattern services. Our customers find that our automation systems can produce patterns and assemblies at a price competitive to their in-house wax room. Just as importantly, we wanted to be in a position to gather real data on how our equipment is used in a production environment. This allows us to constantly evaluate and improve our performance levels."

*Aaron Phipps, Manager,
Pattern Production Department*



To View our American
Success Story Video,
Scan Here!



Linked in YouTube
www.mpi-systems.com

MPI Inc., 165 Smith Street, Poughkeepsie, N.Y. 12601 • (845) 471-7630