

Steven Fielding

President, Fielding Manufacturing – Zinc Die Casting Inc.



Steven Fielding, president of Fielding Manufacturing, has been the leader of his company for 34 years. His father was a mold maker, so he grew up in the die casting industry. He learned mold making, mold design and tooling engineering and then became a degreed mechanical engineer. He first worked as manufacturing process engineer at Martin Marietta in Tennessee for three years before returning to start the zinc die casting business in 1985 as Fielding expanded from plastics molding.

What drew Fielding to die casting was that it was fun. He enjoys serving a lot of different markets and doing a lot of different applications.

"That to me is fun," he said. "To me, there's always something new to learn. It's applied learning. You get the satisfaction of seeing something tangible come from an idea."

Here are some of Fielding's thoughts and ideas about his company, his management and the die casting industry.



What does your business do?

Fielding: Founded in 1962, Fielding Manufacturing specializes in the manufacture of high-precision miniature die cast and injection molded components. The company provides a full-service solution that begins with design for manufacturability, rapid prototyping, tool design and reliable parts production, and extends through a complete range of secondary operations and finishing. Fielding Manufacturing has a strong reputation for quality, service and dependability, and offers a wealth of experience in a wide range of industrial markets, including telecommunications, fiber optics, hardware, electronics/electrical, automotive, fasteners/threaded components, appliance and consumer.



What are the main products and processes offered by your company?

Fielding: We offer four-slide zinc die casting, focusing on intricate OEM applications. We say we're "the miniature parts specialists," but these days we're getting more and more involved in micro parts, those that can fit within a 1/2" cube. But, we handle plating, finishing, secondary operations, light assembly and light packaging as value-added services for our customers. Taking responsibility for these things makes their lives easier.

Your company has specialized in miniature zinc die casting since 1985. What advantages has this process brought to your company, and to the die casting industry as a whole?



Fielding: The advantage of adding zinc die casting is that we were able to leverage our tool engineering capabilities across a similar process — in that both plastics and zinc use hardened steel tools — for high volume parts production. However, the market is slow to change, and it took probably seven or eight

years of selling both for customers to realize the benefits. But from the mid-90s on, we've really seen a crossover. Recently, for example, there was a project where there were both zinc and plastic parts in an assembly and the customer was having issues with fits and drafts using multiple suppliers. We were able to handle all the required tooling adjustments, and we made sure the parts fit and were functional. In many engineered applications, there are such issues where our dual capability can add value. As for the industry, we offer another source for small parts. In a consolidating industry, maybe one of the advantages we offer as an American manufacturer is that we're still standing! But, one of the nice things about making small complex parts is that we can make 5k or 10k of parts and ship them in a small box anywhere in the country. We even sell fiber optic and other electronic components into China. With FedEx and UPS being what it is, within a day or two, the product can be in China.



How is business now?

Fielding: Business is challenging now, as it is with most manufacturers, given the global economic recession. But, we're trying to reposition ourselves, strengthen our team, by doing 5S lean manufacturing initiatives and that kind of thing. We're also in the process of installing a new MRP package, so that when things do turn back around, we'll be a stronger team and business.



What are the plans for the future of your business?

Fielding: Keep trying to get better at what we do: improve lead times, responsiveness. More than anything today, speed and responsiveness are key. We're a manufacturer, but I like to preach within the company that we're really a service provider. That's what differentiates us from China and Mexico. We should be able to communicate more effectively — communicate correctly and with fewer errors. That has to be our competitive advantage.

Location: Cranston, Rhode Island
Number of People:
Number of Plants:

Main Products and Processes Offered: Telecommunications, Fiber Optics, Hardware, Electronics/Electrical, Automotive, Fasteners/Threaded Components, Appliances



Where does your biggest competition come from? Can you rate the impact each has had on your business?

Fielding: Competition is really global now. But, I also think internal factors are at work: our attitudes and mindset too frequently make us compete against ourselves. You can't allow yourself to be your own competition. An example is these internet auctions for vendors: many times somebody is just trying to use pricing to beat up on their existing vendor. As the saying goes, the guy who sets the lowest price is the dumbest vendor...the guy who really doesn't know his costs. So we work very hard on knowing when to say "No." You can't be all things to all people, but I think too many companies hurt themselves by chasing things they shouldn't.

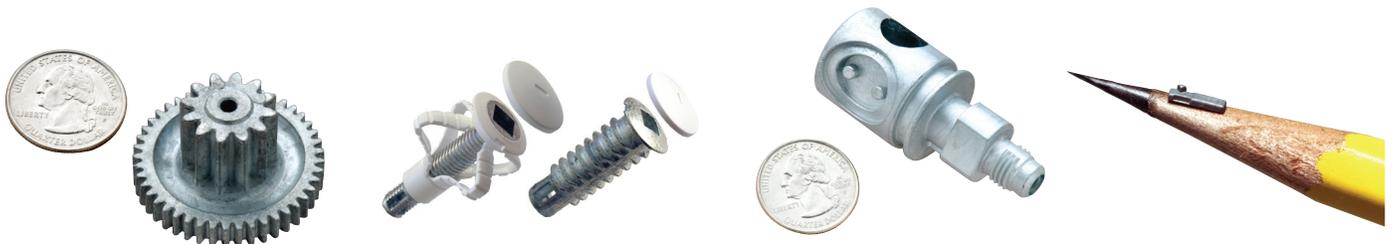
When somebody tells me, "So and so can do it for x ," I say, "Good, give me his name and I'll start buying parts from him as well. That way, he'll be out of business that much faster." A lot of the competition is just ignorance. Companies don't accurately track their cost of doing business and then, when the economy goes into a downturn, they respond by trying to increase sales in any way they can. But, the trick is not just to increase sales, but to increase profitable sales.

A good example of how not to proceed can be seen in the automotive industry. We now do only about 10% of our business in automotive. At one time it was almost half, but in the mid-90s, we made a conscious decision to move away from that business, primarily because of their behavior. That was a market that created a "dumb competitor" model of vendors who would cut any price for volume even if it meant cutting their own throats. And in many cases, it did. They were asking companies that had nearly non-existent margins to begin with to sign on for 5% cost reductions for the life of the program, year after year. It doesn't take a rocket scientist to see that's a recipe for disaster. That's where we compete against ourselves.

We can beat China and Mexico with a good organization and progressive systems, technology and people — and, by knowing what applications to go after. We keep hear-

ing that all manufacturing is dying in the U.S., and it's not true. There are many of what I call "old line manufacturing" operations that are dying out. These are operations where they are not reinvesting in people and technology. But then there are also many progressive manufacturers that are doing well. These shops are doing things like getting ISO certification, so they've got strong systems to work with. They are investing in new technology, investing in their people. But, when kids in school read that manufacturing is dying in the U.S., they decide not to go into it. That's a big challenge for manufacturers like us and for the country because these are still the jobs paying significantly higher on average than the service sector. We try to circumvent that disconnect with training. All of our employees have their own personalized training plan. They have to get reviewed on an annual basis, and they have to take responsibility and accountability for their continuing education. We support this as a company, but what we're looking for is people who want to learn and understand that it's important for them to achieve their own job security. It's mindset. We can't provide job security for them. What we try to build is a culture of responsiveness and an organization that has a sense of urgency...China has a sense of urgency. They're very responsive: they're hungry! They've got nowhere to go but up. In the U.S., we've got nowhere to go but down. So, our challenge is to work smart as well as hard.

But, we also have a competitive advantage. We can compete if we keep our labor component lean and if we have a workforce that's flexible, adaptive, well-educated and responsive to the customer. For example, communication barriers between countries and cultures can be huge. And, problems usually happen over the simplest things, the things you don't think about. But even if you get nine out of 10 things right and that 10th thing is a small item, it can still take incredible time and resources to resolve. There's also the matter of size. Big companies going offshore get more response than small companies. Small companies often get burned because they get put on the back burner. The vendor says four weeks, but it's really eight. A responsive U.S. component manufacturer can take advantage of that.





How has your company changed to respond to the global competition?

Fielding: By continuing to be lean and driving processes that reduce or don't require manual labor — bulk processes. And service, things that add value: bringing in mating parts, drilling or tapping another hole. A lot of value can sometimes be in a common mold with a lot of interchangeable inserts, so one tool can make five different parts. Keeping track of those parts can be difficult, but it pays a benefit to the customer in lower costs. Our quality and information systems allow us to take advantage of niche opportunities as well as stay flexible and adaptive, even on low and intermediate volume applications.

Providing more value engineering is also important, listening to the customer. I get more involved now in looking at whole assemblies, in failure mode analysis, trying to help design our components, offering ideas on other manufacturing methods. So, offering more to your customers means helping them where they're lean — where they might have had 10 people from a variety of disciplines working on a system, now they might have three. So they don't know as much, and they start to lean more on their vendor base. They're looking for a creative vendor base — people who have experience and knowledge in a number of different areas and can help them look at problems from differing perspectives.

Prototyping has been a big key to that for us, and we now offer 3D additive manufacturing prototyping in-house to help our customers with design concepts and to improve their designs, and help our toolmakers see exactly what they are going to produce with their process. So, the earlier we get involved with our customers in their design process, usually the more value we can offer to help keep their overall tooling and production costs down.



What are the top two problems confronting your business? How do each of these things impact your business?

Fielding: The biggest problem is what I call the Wall Street mentality. This short-term, quarter-to-quarter mindset has even gotten into education. We're not thinking of the next generation and what they're going to do. Now, we're starting to realize that, hey, maybe capital goods production really does mean something! But the U.S. perception of manufacturing as negative has already caused a huge problem. Thinking that the solution to everything is outsourcing is very short-term. Advocates say, "Don't worry, we'll still control design." Well, now we're beginning to see that's wrong as well. Those who control production will eventually control design, prototyping and all the rest. So, we're losing a lot of high-skill, high-wage jobs in this country. And, we're losing the skilled people to do them.

But this is also seen in the financial sector. Banks don't like to lend to the manufacturing community, and that's killing the goose that lays the golden egg. Progressive manufacturers need access to capital. If you're not investing in your business, you're not going to be around. That's what happened in automotive: they wanted their vendors to pay for their past mismanagement.

So, they took out any margin so their vendors couldn't continue to reinvest: they squeezed them so much, they killed them.



What sets Fielding Manufacturing apart from other die casting companies?

Fielding: What sets us apart is the size of the product we make. We've stayed niched in small, miniature and micro parts applications: precision parts that are highly engineered. We also handle value-added plating and finishing, so our customers don't get stuck in the middle. We try to mitigate risk for our customers. What also sets us apart is that for a small company, our ISO systems, our tracking, quality and measurement systems are really above average. I've had much bigger companies come and say, "We've got a heck of a lot more people and resources than you've got, yet you're doing things we should be doing!" But, those are the things that allow us to make better decisions, be more responsive and avoid competing against ourselves.



What has been the most beneficial service NADCA has made available to your company?

Fielding: NADCA has done an excellent job of disseminating information. Over the past eight to 10 years, they've adapted well to understanding how important marketing is and helping the industry market more effectively. They've done a very good job in changing their mission and role to spearhead these efforts in the face of a lot of downsizing. They've really stepped forward. They've also provided a lot of technical research which helps marketing efforts. They've been trying to show that the U.S. die casting industry has a lot of knowledge, a lot of technology and that as an industry, we're the best in the world. We're an industry you can trust. One example I've used a lot, is a NADCA blind survey of a number of companies that were bringing die cast product in from China. The study showed that 17% of the zinc material was out of specification on lead content. Too much lead leads to intergranular corrosion. So, they've been doing a very good job helping and speaking for the industry, trying to keep the playing field more level.



When you first started in die casting, what did you see as your biggest challenge? How has that changed?

Fielding: The biggest challenge/change I've seen is the tooling industry being basically usurped by China. As a willful strategy, that was brilliant for China, bad for the U.S. The other challenge is market speed. The American worker really struggles with this pace of change. This is the new reality, yet our educational system really doesn't support it. When you hire new people, you literally have to retrain them.



Is there a theory/method you use as a basis for your managing skills?

Fielding: Continual learning. Everybody who comes to work for us gets a book called *Danger in the Comfort Zone*,



by Judith M. Bardwick, Ph.D., which is subtitled, “From Boardroom to Mailroom — How to Break the Entitlement Habit That’s Killing American Business.” Good management has to root out people with entitlement mentalities. They think it’s about them. But, our business is about our customers. So my core management philosophy is that we as a team — myself included — have to earn the trust and business of our customers every day. We have to be a team that can communicate, that can work together, share responsibilities, share accountability, so that we can be responsive to our customers. We all have to come to work every day knowing we have to learn more. That’s our job security.



How have you learned from your mistakes?

Fielding: We all make mistakes. In fact, making mistakes by design is called R&D. But, the biggest mistake you can make is not to tell the truth and diminish trust within the organization. If you lie about a mistake, we’re going to work on correcting something that isn’t a cause. But we’ve been quite successful at learning from mistakes. As a result, we’ve been able to take on some pretty challenging applications that a lot of people didn’t think could be done.



Want to Learn More?

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