



## Notes From The Chairman

### APC Prototypes Serve Function and Form in the Marketplace

A long-term customer was born when Maurie Petro, Manager, Advanced Engineering, Contech Division, SPX Corporation, Portage, MI, changed his mind about soft tooling. It was American Precision Casting's quality that made the difference.

Petro was very dissatisfied with the soft tooling supplier he had been using, and was at the point of advising his company not to buy plaster castings because they were "junk." An APC sales rep called and Petro said, "Well, show me." He agreed to try APC one time. The result was convincing proof to Petro that plaster castings can meet the quality specifications of customers.

Petro's company is a die caster serving the automotive industry, producing rack and pinion steering components, air conditioner parts for the pump housing, transmission housing parts and internal clutch housings. The Portage Advanced Engineering Group manages five die casting plants. Petro had not done soft tooling before, so when the Advanced Engineering Group started up, it was his first experience with the technique. As he said, "I didn't know good from bad." He assumed that maybe the "junk" he was getting from his first supplier was standard in the prototype castings industry. His customer set him straight. "I know this business," he said, "and I know there are better sources out there. You had better find another supplier." Petro realized that he and other customers had been settling for a lot less than the best, not realizing that they could get a lot better quality.

"The other casting looked something like the drawing," Petro commented, but dimensional accuracy was always a really serious problem. "APC's castings are a lot more accurate, more detailed; it looks a lot like a die casting coming out of a steel die rather than a sand casting. Sand castings, he added, "usually don't look very good." APC's castings "definitely look more like what I was expecting."

His first supplier's castings had gross porosity, he added; APC's do not. And APC stands out in the industry because it stands behind the job totally, reimbursing him for the cost of secondary machining as well as replacing a defective casting.

What Petro learned was that APC's prototype casting process "is acceptable." While it's not the same as an actual die casting, it's effective because you can get the parts quickly. The parts are a lot more expensive, but the tooling is cheaper. The main thing is timing. The ideal would be a real die casting in a very short period of time, but that is not possible even with the best of today's technology. So when the engineers need parts, I try to find out what they need them for, what they are going to do with them, and then look at the quantity and time frame available. Then I try to advise them on the best method, either hard tooling or soft tooling.

"Basically APC's parts are ideal for availability. We get them as quick as you can get a part. It's a good process for function and fit. We can get a casting, get it machined real quick, put it on, mount it and see if it's OK or if there will be problems with function and fit," he added.

Petro concluded that he would recommend American Precision Castings because we stand behind our product and we give him "good turnaround and good quality parts, both dimensionally and physically."

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In general, suppliers to industry believe that they meet customer specifications. They believe that as long as the product is "priced right," produced "to print," and delivered on time, customer satisfaction has generally been achieved. But this is not what our customers told us. Meeting specifications involves much more than providing what is on the print or in the CAD file. The customer's perception of "meeting specifications" may include the experience the supplier brings to the table before the work is begun, providing expert design review, helping to insure the program's cost-effectiveness, and being able to adjust when market conditions drive the customer to make modifications or meet unanticipated delivery needs.

Meeting specifications often requires finding a method to fit the customer's needs that is out of the ordinary-developing solutions outside of the box to get products to market faster, and presenting the customer with ideas and recommendations which improve the manufacturability of their product.

Consider these recent examples:

- Modification of metal chemistry and heat treat methods to simulate and isolate precise elongation properties in aluminum and magnesium so that destructive testing results during the prototype stage will duplicate the precise results which will be obtained in the production die casting.
- Duplicate and refine existing tooling to meet customer's accelerated delivery requirements.
- Design recommendations that result in the consolidation of several plastic, sheet metal or casting components into a single casting.
- Provide recommendations that enhance the component's cost-effectiveness in production.
- Offer one-source accountability for all secondary operations including machining, painting, assembly, coatings and testing. Today, meeting specifications involves much more than providing the customer with on-time delivery of what is on the print or in the CAD file. We develop a partnership with our customers to help them define specifications and bring new products to market in a timely and cost-effective manner. That's what APC means when we say we meet specifications.