

Award-Winning Investment Casting is Evidence of Nontraditional Marketing Niche for Aristo Cast, Inc.

One strategy for building business in tough economic times is to find a market niche and serve it well.

An award-winning investment casting manufactured by Aristo Cast, Inc. is evidence of that strategy.

The thin-wall intricate magnesium casting is a telescopic trailer tow mirror mount for a pickup truck. Recognized as Best in Class in the 2003 AFS Casting Contest, it was designed as a prototype for a part which will be produced in large volumes as a die casting.

Aristo Cast Chief Engineer Larry Blum indicated the company is one of only a handful of investment casting companies that works in magnesium. That, added to a sizeable investment in rapid prototyping technology, is a winning combination for the Almont, MI investment caster.

Blum said the niche represents a relatively small number of components, but is quite significant in terms of sales dollars.

"We're only trying to fill the gap from initial design to final casting design prior to building a die casting mold. This fulfills a valuable need not only to automotive companies but manufacturers of gas engines or whatever," Blum said.

"We have the capability of giving the customer the material, form, fit and function prior to finalizing the design and investing in expen-



Aristo Cast's telescopic trailer tow mirror mount for a pickup truck was one of nine components recently recognized as Best in Class in the 2003 AFS Casting Contest.

sive dies. The customer has the component to go on the vehicle, and it can be tested in every way that will be done to the final product.

The award-winning mirror mounts were produced for Schefenacker Vision Systems, Marysville, MI, which recently won a contract to supply telescopic trailer tow exterior mirrors for an auto maker's full size pickup truck.

Because of the late release of the program, the auto maker required a short lead time prototype of the mirror.

To accommodate this tight schedule, Schefenacker called upon Aristo Cast to develop a highly accurate, short lead time investment cast mirror mount that would closely model the structural and physical attributes of the

die cast production part. The mirror mount casting, which supports the wires and electrical components in the mirror, mounts directly to the truck body.

If the short lead time wasn't troublesome enough, the castings had to be made from magnesium. This material, chosen for its strength and weight savings of 30% less than aluminum and 60% less than steel per mirror, is not a commonly investment cast material, which complicated its production. Further complicating the situation was the intricate, thin-wall nature of the casting.

The Schefenacker/Aristo Cast team worked to overcome these obstacles. During a four-week period, Aristo Cast ran its three, 3D

Systems thermojet wax model machines, 24 hours a day, seven days a week to produce the patterns that met all required dimensional and physical criteria. In all, 19 sets were produced on time that met all structural requirements for durability testing and product prove out. The reliability of the 3D units allowed Aristo Cast to run "lights out" without any equipment down time.

This telescopic trailer tow mirror represents Schefenacker's first program with magnesium content. The new mirrors will be produced at the company's Marysville facility beginning this summer.

Aristo Cast, a member of the Investment Casting Institute, produces investment castings in ferrous and non-ferrous airmelt alloys including zinc and magnesium.

Blum said normal production runs range from quantities of 1-15 to 10-12,000 pieces.

In addition to its prototype market, Aristo Cast's light-weight magnesium castings are generally produced in short runs or "job shop" quantities.

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