

## COMMERCIAL FINALIST-

*Tech Cast, Inc. Converts Aluminum Die Casting to Stainless Steel Investment Casting for Improved Performance*



The virtually unlimited choice of alloys in the investment casting process allowed the conversion of a die cast cross arm used in food processing from aluminum to stainless steel for improved performance.

The 6" X 3" X 1" component is manufactured by Tech Cast, Inc. of Myerstown, PA. The cross-arm supports pinchers and cutoff knife in an automatic sausage linker machine.

The conversion eliminated complete machine rebuilds due to the oxidation of the aluminum. Stainless steel construction allows the customer to rinse and sanitize their food processing equipment, thus decreasing down time and costs of component replacement.

The interior slot measures 3.25" X 7.75" X .070" wide. Interior slot tolerances are  $\pm .015$ ". Secondary operations include drilling of alignment holes in respect to the cross arm's position on the machine.

Every year hundreds of businesses like yours choose to make new tooling for a part or move tooling because of growth, economic reasons, labor issues, and more. Let Tech Cast, Inc. help you maneuver through the myriad of decisions to be made. We at Tech Cast Inc. are a full ferrous foundry with the capability to produce your parts to print complete with machining. Lead times of 4 to 6 weeks after approval of samples; 2 weeks longer if it requires machining. For a quote, forward to:

**TECH CAST INC.**

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*Aristo Cast Component Marked by Many Iterations and Rapid Response to Design Changes*

Many configuration iterations, and rapid response to design changes are reflected in an investment casting component produced by Aristo Cast Inc., Almont, MI. The end product is a tool used in auto repair.

Designed as an investment casting, the finished part is approximately 7.75" X 1.75" X .75" and is made from 4140 steel RC 37-45, and zinc plated.

Rapid response to design changes as the component developed was made possible by producing rapid prototypes. Turn-around was accomplished in a matter of days, and completed castings were tested for form, fit and function. Final design allowed mechanics to accomplish their task in 65% less time than previous method. Aristo Cast and the customer's design team came up with the idea of inserting a nylon insert into a cast dovetail pocket in the casting, thereby preventing any marring of painted surface.

On the production side, in order to simplify tool design for a die required to produce 10,000 parts, wax patterns were made in two pieces and sweat fit together. This eliminated loose inserts and dramatically reduced injection time. Secondary operations included heat treat, zinc plating and insertion of plastic inserts.

## Aristo Cast, Inc.

With quantities ranging from small lots of rapid prototypes to lots consisting of many thousands, we excel in speedy, on-time delivery, excellent surface finish and tight tolerances. The metal alloys produced are all grades of ferrous and nonferrous materials including zinc and magnesium. Aristo Cast, Inc. is a world-leading, award-winning, producer of investment castings.



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