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Badger Metal
Tech, Inc.

MetaLife® NEWS ThermalLife®

Improving the Flow for Magnesium Castings

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Badger Metal
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A recent article in Die Casting Engineer magazine (Sept 2004 p40) discusses the problem facing magnesium die casters relating to cavity fill. In the article, solidification analysis is discussed along with its relationship to trapped gases that affect porosity levels. These trapped gases negatively affect the casting quality and integrity.

Magnesium is the metal of the future **NOW**. More automotive components and parts are being made from this plentiful material to reduce vehicle weight without reducing strength.

As a member of the magnesium die

casting community, we want to make you aware of two benefits that MetaLife® provides that relate directly to this problem.

The MetaLife® resultant die's topography provides a mechanism that enhances metal flow and at the same time helps break up the trapped gases in the molten magnesium metal.

Magnesium castings, in most instances, are thinner than aluminum. Magnesium pour temperature is also lower, which is a benefit in reducing thermal cracking.



As the metal flows into a magnesium die, the lower temperature causes the molten magnesium to solidify at a faster rate with the trapped gases causing porosity problems.

After a MetaLife® application, however, the molten metal flow is equalized, and interrupted so that any trapped gases that are present are broken down by the micro topography into smaller and more homogeneous levels.

Many in the die casting community have been using this benefit to their advantage for years.

We had thought that this was common knowledge to the general magnesium die casting industry.

From the article, however, we see that many still struggle with the porosity problem. That is the reasoning behind our doing a follow-up to the Die Casting Engineer magazine article.

By clicking on the side bar, more information can be found on our website. Call us to discuss your particular problem or to receive a quotation.



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