Effect of adding iron to the AlSi7Mg0.3 (EN AC 42 100, A356) alloy

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Iron is the most common and harmful impurity in aluminum casting alloys and has long been associated with an increase of casting defects. While the negative effect of iron is clear, itsmechanism is not fully understood. In generally,iron is associated with the formation of Fe-rich intermetallic phases. This article deals with different iron content in aluminum alloy A356. After castingswere in test samples observed intermetallic phases and influence of iron on another elements in alloy. This alloy was not inoculatedor modified. The negative influence of iron wasn't eliminated by "iron correctors". The main objective of this experiment was to determine of such iron content, which corresponds to the iron content of secondary aluminum alloy.

Keywords: iron, intermetallic phases, secondary aluminum alloy

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