

Possibilities of iron elimination in aluminium alloys by vanadium

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Presence of iron is a common problem in Al-Si based alloys. Due to iron influence, mechanical and foundry properties of alloys are decreasing, so it is necessary to balance the influence in a certain way. One of possible solutions is addition of alloying elements, also called correctors of iron, into the melt. In this paper, the influence of vanadium on decreasing negative effect of iron in secondary alloy AlSi6Cu4 is assessed. In experimental part, properties of alloy with various addition of vanadium are evaluated. Microstructural and EDX analysis of selected structural parts are also a part of the experimental measurements. Based on statements from realised measurements can be stated that vanadium is an element, which can be used to correct negative effect of iron in secondary alloy AlSi6Cu4.

Keywords: AlSi6Cu4 alloy, correction of iron, vanadium, iron based phases.

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