Influencing the crystallization of secondary alloy AlSi6Cu4 with strontium

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This work deals with modification of aluminum alloy AlSi6Cu4 with strontium in graduated amounts. Submited article examines modification influence on the mechanical properties such as tensile strength (Rm), elongation (A5) and Brinell hardness (HBW). Article also includes analysis of alloy microstructure modified by strontium and analyzes the impact of strontium on the gas content of the melt. This work deals with finding the optimal amount of strontium to achieve changes in the shape of the coarse eutectic silicon plates to fine rounded AlSi6Cu4 alloy rods. Durin experiment was found, that optimum amount of the used modifier with respect to the mechanical properties of the surveyed sample is 2000 ppm AlSr5. But with the increasing amount of modifier in the alloy decreases fludity.

Keyword: AlSi6Cu4 Alloy, modification, strontium, mechanical properties, microstructure

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