# Influence of Surface Refinement on Microstructure of Al-Si Cast Alloys Processed by Welding Method

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**In most cases, construction materials are selected so as to attain the optimal technological properties at the lowest possible weight and cost. Studies on the improvement of the properties of casting alloys have been continuously conducted over the recent years. Both the microstructure and properties of alloys may be altered via modification with chemical components, optimization of the crystallization process, heat treatment or a combination of these methods. While searching for alternative methods of improving the engineering surface properties of hypo- and hypereutectic Al-Si alloy, an attempt was made to modify its microstructure with the use one of a heat sources. This paper presents the results of an experiment investigating the microstructure and the hardness of the Al-9%SiMg and Al-20%SiMg alloys processed by TIG welding method.**

**Keywords:** silumin, microstructure, hardness, modification, welding method

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