The Structure of the Aluminium Alloy and Its Influence on the Fatigue Properties

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The article will be focused on monitoring the influence of the structure on the fatigue properties of aluminium alloys for the casting of type Al-Mg, especially EN AC 51200 and EN AC 51500. These alloys were selected on the basis of the chemical composition, where the content of most alloying elements is comparable, only in the case of the concentration of magnesium are these alloys significantly different. Fatigue properties of aluminium alloys were tested by three-point bending cyclic loading. The fracture surface of the testing sample was examined using scanning electron microscopy (SEM), where samples were observed on various stages of the fatigue process, their characteristics and differences of fracture surfaces.

Keywords: Aluminium alloy, fatigue, structure

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