Study of the gas content in aluminum alloys

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This article deals with the gas content of aluminum alloys and prediction of gas content using the foundry simulation software. In the theoretical section summarizes the main causes of gas content of aluminum alloys, the effects of modifications and inoculation, as the survey gas content and the possibility of using simulation software for predicting the gas content. The experimental part is tested for gas content f the test castings and verificated by simulation program ProCAST. As an experimental alloy was used AlSi7Mg0,3. The specimens were evaluated using four methods: microscopically, macroscopically, using a stereomicroscope and by evaluating the density. This type of experiment was performed at the Department of Technological Engineering for the first time, simulation of the gas content and its verification by this method can be considered as a unique.

Keywords: gas content, porosity, simulation, aluminum alloys

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