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Use Properties of the AlSi9Mg Alloy With Exothermical Modifier

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The improvement in mechanical properties generally has been attributed of the morphology and size of the α- and β-phase. Chemical elements and compounds, both added to the alloy and formed as a result of exothermic reactions, "pass" into the alloy, changing the course of its crystallization. Selection of the mixture components allows – to a degree – to decide about the starting moment of crystallization and change the range of solidification of alloy or its individual phases. Control over crystallization by acceleration or deceleration of the equilibrium process enables to affect the alloy structure. Another advantage may be addition of the desired components. Properly selected, they can influence crystallization and after alloy solidification – play an important role in its further use. This work present results modification AlSi9Mg alloy with modifier contained Na, F and Cl. It modifier was has taken down was with components: $NaCl$, Na_3AlF_6 i NaF. The influence of modifier in reference to pulp of worked alloy on elongations, Brinell hardness, impact strength was introduced in graphic method. The analysis modification process of eutectic alloy AlSi9Mg with compound modifier showed the modifying influence on studied proprieties of AlSi9Mg alloy.

Keywords: Al-Si alloy, silumin, mechanical properties, metallothermy

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