

## The Effect of Casting Technology on Fe Intermetallic Phases in Al-Si Cast Alloys

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The most widely used technologies of founding Al-Si cast alloys are gravitation and semi-centrifugal casting, casting under pressure and so on. The contribution deals with influence of different casting method on changes of Fe intermetallic phases. Casting into metallic mould and sand mould were used for experimental work for comparison Fe-rich formation. Fe is a common impurity that leads to the formation of complex Fe-rich intermetallic phases. The dominant phase is plate-shaped  $\text{Al}_5\text{FeSi}$ . These phases are unwanted, because reduce properties of aluminium casting. The experimental materials have most common addition Mn. The addition of Mn may reduce  $\text{Al}_5\text{FeSi}$  phase and promote formation Fe-rich phases  $\text{Al}_{15}(\text{FeMn})_3\text{Si}_2$  in „skeleton like“ or „Chinese script“ form. This knowledge was confirmed. The present study is a part of larger research project.

**Keywords:** Aluminium Alloys, Casting Technology, Fe Intermetallic Phases, Quantitative Assessment

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