

## The Use of Simulation Programmes for the Structural Analysis and Engineering Optimization of Gating System Structures for Use with High Pressure Die Casting Technology

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**A properly designed and engineered gating system for use with high pressure die casting technology will produce castings with excellent mechanical properties. The gating system must secure the fast and continuous filling of the cavity. An appropriately designed and structured gating system can reduce the length of the die casting process, thereby increasing the effectiveness of production, reducing the amount of waste, and delivering cost savings. This article focuses on the structural analysis and optimization of runners and their impact on the mould casting of a specific light-weight casting made of AlSi alloy.**

**Keywords:** die casting, simulation analysis and modelling, optimization

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