

## **COOLING RATE DEPENDANCE ON MOULD THICKNESS FOR ALUMINUM ALLOY CASTING**

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**Abstract:** In recent years, numerical simulation software are being permanently developed to simulate the solidification process of the cast parts. Numerical modeling of the casting process is more and more used in order to predict the solidification path of the casting parts. The cooling rate, defined as the rate at which the temperature decreases with time immediately after the completion of hyperthermia phase, certainly influences the microstructure of the cast part and the thickness of the air gap which is formed at the part/mould interface. Solidification of the cast metal could be controled also by cooling rate. This paper presents a study of cooling rate dependance on the variation of mould thickness by numerical simulation of the hollow cylinder casting part.

**Keywords:** numerical simulation, cooling rate variation, aluminum alloy casting.