

Title (en)

Method and apparatus for controlled low pressure casting under vacuum for aluminium- or magnesium alloys

Title (de)

Vorrichtung und Verfahren zum gesteuerten Niederdruckgiessen unter Vakuum für Aluminium oder Magnesiumlegierungen

Title (fr)

Procédé de coulée pilotée sous basse pression d'un moule sous vide pour alliages d'aluminium ou de magnésium et dispositif pour sa mise en oeuvre

Publication

**EP 0624413 B1 19990303 (FR)**

Application

**EP 94401035 A 19940510**

Priority

FR 9305580 A 19930510

Abstract (en)

[origin: EP0624413A1] Method for low-pressure casting in which use is made of a mould (5) intended for casting a component, a leaktight smelting furnace (1), a tube (4) immersed in a crucible (3) of the furnace (1) and emerging in the mould (5), a bell (35) covering over the mould (5), means for injecting a pressurised fluid into the furnace (1) and for creating a vacuum over the furnace and the bell, characterised in that it consists in forming a vacuum in the furnace and the bell then in injecting a gas into the furnace and in measuring the difference in pressure between the furnace and the mould, then the bell, in measuring the depth of the metal in the crucible at any moment and the temperature of the metal at the entry of the mould and in automatically controlling the furnace/mould or furnace/bell pressure difference, in observing the predetermined values by taking account of the depth of the metal in the crucible and the temperature of the metal on entry into the mould. The method applies essentially to the casting of components made from metal alloys, including aluminium and magnesium, to the impregnation of fibre preforms using a metal alloy, and to the casting of organic polymers. <IMAGE>

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