

Title (en)

Apparatus for casting a directionally solidified article

Title (de)

Vorrichtung zur Herstellung eines gerichtet erstarrten Giesskörpers

Title (fr)

Appareil pour la fabrication par coulage d'une pièce solidifiée directionnellement

Publication

EP 0749790 B1 20000823 (DE)

Application

EP 96810192 A 19960326

Priority

- DE 19522266 A 19950620
- DE 19539770 A 19951026

Abstract (en)

[origin: EP0749790A1] In the prodn. of a casting (20) in a vacuum chamber (2), a mould (12) with molten alloy is transferred, through a hole (7) in a separating baffle (3), from a heating chamber (4) into a cooling chamber (5) in which the alloy solidifies in an oriented manner. The method is characterised by the fact that below the baffle(3) the mould is additionally cooled from outside by means of a gas flow. Also claimed is an appts. for implementation of the method. The appts. is characterised by the presence of means for producing and directing a gas flow in the cooling chamber below the baffle (3). The gas used for cooling the mould is an inert gas such as, in particular, argon or helium. The gas is introduced into the cooling chamber (5) after entry of the bottom of the mould (12). The gas is directed in the direction of the mould surface, and is then removed from the vacuum chamber (2). The gas is cooled, filtered and again introduced into the cooling chamber.

IPC 1-7

B22D 27/04

IPC 8 full level

F01D 5/12 (2006.01); **B22D 23/00** (2006.01); **B22D 27/04** (2006.01); **C22C 19/03** (2006.01)

CPC (source: EP US)

B22D 27/045 (2013.01 - EP US)

Cited by

EP1162016A1; DE10024302A1; CN113458381A; DE10038453A1; EP1375034A3; DE10060141A1; CN106734999A; EP2460606A1; CN112935186A; EP1076118A1; EP1173300A4; CN106424681A; EP1531020A1; EP1321208A3; CN111215605A; EP3785822A1; AT522892A1; US6998568B2; US7705264B2; US6435256B1; EP2727669A3; WO9912679A1; WO0126850A1; US7017646B2; US6868893B2; EP1211001A2; US6695036B2; EP1645347A1; US6412541B2; US7586061B2; US7169242B2; WO0230597A1; WO0107185A1; US6568456B1; US7225857B2; US7250088B2; US6311760B1; US10082032B2; US10711617B2

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EP 96810192 A 19960326; DE 19539770 A 19951026; DE 59605783 T 19960326; EA 199600020 A 19960426; JP 15256796 A 19960613; US 93870297 A 19970926