

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

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

CPC (source: EP US)

**B22D 27/045** (2013.01 - EP US)

Cited by

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

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0749790 A1 19961227**; **EP 0749790 B1 20000823**; **EP 0749790 B2 20041103**; DE 19539770 A1 19970102; DE 59605783 D1 20000928; EA 000040 B1 19980226; EA 199600020 A2 19961230; EA 199600020 A3 19970331; JP 3919256 B2 20070523; JP H0910919 A 19970114; US 5921310 A 19990713

DOCDB simple family (application)

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