

Title (en)

METHOD OF MATERIAL FORMING PROCESSES IN PREHEATED OR MELTED STATE TO STRONGLY REDUCE THE PRODUCTION COST OF THE PRODUCED PARTS

Title (de)

VERFAHREN FÜR MATERIALFORMUNGSPROZESSE IM VORGEWÄRMTEN ODER GESCHMOLZENEN ZUSTAND ZUR ERHEBLICHEN REDUZIERUNG DER HERSTELLUNGSKOSTEN DER HERGESTELLTEN TEILE

Title (fr)

PROCÉDÉ POUR PROCESSUS DE FORMAGE DE MATÉRIAU À L'ÉTAT PRÉCHAUFFÉ OU FONDU PERMETTANT DE RÉDUIRE FORTEMENT LE COÛT DE PRODUCTION DES PIÈCES PRODUITES

Publication

EP 2872273 A1 20150520 (EN)

Application

EP 13741707 A 20130719

Priority

- EP 12382281 A 20120713
- EP 2013065275 W 20130719
- EP 13741707 A 20130719

Abstract (en)

[origin: EP2684627A1] A method to manufacture a forming tool, which method can be used in material shaping processes involving heat transference from the shaped part into the forming tool and from the latter to a cooling medium, through the provision of a permanent or semi-permanent isolating and/or releasing layer over the in-cavity surface of the die in combination with the use of high thermal conductivity materials for the die. This method allows to severely reduce the manufacturing cost of the produced part through productivity/durability optimization and continuous monitoring of the process. The system is applicable for all material forming processes involving the heat transfer from the formed part to the forming tool and cooling down of this later during the consecutive forming cycles, in particular for High pressure die casting, semi-solid die casting, squeeze casting, hot forging, hot glass forming and tube manufacturing amongst others.

IPC 8 full level

B21J 3/00 (2006.01); **B22C 9/06** (2006.01); **B22D 17/22** (2006.01); **B29C 33/56** (2006.01); **C09D 1/00** (2006.01)

CPC (source: EP)

B22C 9/061 (2013.01); **B22D 17/2209** (2013.01); **B29C 33/38** (2013.01); **B29C 33/56** (2013.01); **C09D 1/00** (2013.01); **B21J 1/06** (2013.01); **B21J 13/02** (2013.01); **B29K 2995/0013** (2013.01); **B29K 2995/0015** (2013.01)

Citation (search report)

See references of WO 2014009571A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2684627 A1 20140115; EP 2872273 A1 20150520; WO 2014009571 A1 20140116; WO 2014009571 A8 20140821

DOCDB simple family (application)

EP 12382281 A 20120713; EP 13741707 A 20130719; EP 2013065275 W 20130719