

Title (en)

METHOD TO PREPARE METAL STRUCTURE SUITABLE FOR SEMI-SOLID METAL PROCESSING

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER METALLSTRUKTUR FÜR DIE HALBFESTE METALLBEARBEITUNG

Title (fr)

PROCEDE DE PREPARATION DE STRUCTURE METALLIQUE APPROPRIEE POUR UN TRAITEMENT DE METAL SEMI-SOLIDE

Publication

EP 1981668 B1 20130116 (EN)

Application

EP 07763446 A 20070131

Priority

- US 2007002503 W 20070131
- US 76434806 P 20060202

Abstract (en)

[origin: WO2007092203A2] A method for forming a semi-solid metal or alloy having non-dendritic grain structures using gas bubbles, includes heating metal or alloy above a melting temperature thereof to provide liquid metal or alloy, flowing gas bubbles through at least one solid medium inserted into or accommodates therein the liquid metal or alloy thereby cooling the liquid metal or alloy to a temperature below the melting temperature thereof while agitating the liquid metal or alloy with the gas bobbles and forming solid fractions therein, and stopping flowing the gas bubbles therethrough when the solid fraction of solid reaches a range of 0.01-0.5 by weight thereby providing the semisolid metal or alloy having non-dendritic grain structures.

IPC 8 full level

B22D 23/00 (2006.01)

CPC (source: EP)

B22D 17/007 (2013.01); **C21C 7/072** (2013.01); **C22C 1/12** (2023.01)

Cited by

CN104232953A; CN104043792A; JP2017521255A; US10675676B2; WO2015174937A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007092203 A2 20070816; WO 2007092203 A3 20080306; WO 2007092203 B1 20080424; DK 1981668 T3 20130415; EP 1981668 A2 20081022; EP 1981668 A4 20100310; EP 1981668 B1 20130116; ES 2403369 T3 20130517; JP 2009525192 A 20090709; JP 5242416 B2 20130724

DOCDB simple family (application)

US 2007002503 W 20070131; DK 07763446 T 20070131; EP 07763446 A 20070131; ES 07763446 T 20070131; JP 2008553303 A 20070131