

Title (en)

DIE CASTING FURNACE SYSTEM WITH ULTRASONIC UNIT FOR IMPROVED MOLTEN METAL QUALITY

Title (de)

DRUCKGIESSOFENSYSTEM MIT ULTRASCHALLEINHEIT FÜR VERBESSERTE METALLSCHMELZEQUALITÄT

Title (fr)

SYSTÈME DE FOUR DE COULÉE SOUS PRESSION AVEC UNITÉ ULTRASONORE POUR AMÉLIORER LA QUALITÉ DU MÉTAL FONDU

Publication

EP 3638438 A4 20201209 (EN)

Application

EP 18818914 A 20180615

Priority

- US 201762520940 P 20170616
- US 2018037686 W 20180615

Abstract (en)

[origin: WO2018232201A1] A die casting furnace system includes a die casting holding furnace unit defining a cavity for holding a molten metal. A dosing unit is disposed within the cavity and defines a dosing area disposed in fluid communication with the cavity for receiving the molten material during a pressurization of the cavity. The cavity of said die casting holding furnace unit has a first storage capacity and the dosing area of said dosing unit has a second storage capacity being less than the first storage capacity. An ultrasonic unit is operably coupled with the finitely sized dosing area and is configured to introduce vibration into the received molten material for facilitating the removal of gases from the received molten material. The treatment of the finitely sized dosing area with the ultrasonic unit leads to improved metal cleanliness and accuracy that is not achievable with prior art systems.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [Y] JP 2007313554 A 20071206 - TOSHIBA MACHINE CO LTD
- [Y] US 2017056971 A1 20170302 - WANG QIGUI [US], et al
- [Y] US 5913358 A 19990622 - CHADWICK GEOFFREY ALLAN [GB]
- [Y] WO 2016071613 A1 20160512 - CONSTELLUM ISSOIRE [FR]
- [Y] US 2013112042 A1 20130509 - WANG QIGUI [US], et al
- See references of WO 2018232201A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

US 2018037686 W 20180615; CN 201880040112 A 20180615; EP 18818914 A 20180615; US 201816612991 A 20180615