

Title (en)

System and method for forming and heat treating metal castings

Title (de)

System und Verfahren zur Herstellung und Wärmebehandlung von Gussteilen

Title (fr)

Système et procédé de fabrication et de traitement thermique pour des pièces en métal coulées

Publication

**EP 2489452 A3 20130501 (EN)**

Application

**EP 12167544 A 20080327**

Priority

- EP 08744427 A 20080327
- US 90874307 P 20070329
- US 90904807 P 20070330

Abstract (en)

[origin: US2008236779A1] A system and method for forming and heat treating metal castings is provided with a vertical heat treatment unit positioned adjacent and downstream from a pouring station at which a series of molds are filled with a molten metal to form the castings. The vertical heat treatment unit includes a vertically oriented furnace chamber in which the castings are received, and which has a reduced footprint to reduce the manufacturing floor space required for the vertical heat treatment unit, and to enable the vertical heat treatment unit to be positioned in close proximity to the pouring station.

IPC 8 full level

**B22D 47/02** (2006.01); **C21D 9/00** (2006.01); **F27B 9/02** (2006.01); **F27B 9/10** (2006.01); **F27B 9/16** (2006.01); **F27B 9/24** (2006.01)

CPC (source: EP US)

**B22D 45/00** (2013.01 - US); **B22D 47/00** (2013.01 - US); **B22D 47/02** (2013.01 - EP US); **C21D 9/0006** (2013.01 - US); **C21D 9/005** (2013.01 - EP US); **F27B 9/16** (2013.01 - EP US); **F27B 9/243** (2013.01 - EP US)

Citation (search report)

- [XYI] WO 2006050209 A2 20060511 - CONS ENG CO INC [US]
- [Y] WO 2005121386 A2 20051222 - CONS ENG CO INC [US]
- [Y] EP 0716152 A1 19960612 - SCHMITZ & APELT LOI INDUSTRIEIO [DE]
- [Y] FR 823437 A 19380120 - FOURMENT & LADUREE
- [X] DE 4208485 C1 19930211
- [X] EP 0796920 A1 19970924 - IPSEN IND INT GMBH [DE]
- [X] DE 29713958 U1 19971002 - IPSEN IND INT GMBH [DE]

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**US 2008236779 A1 20081002**; CN 101678450 A 20100324; CN 101678450 B 20160309; EP 2139628 A2 20100106; EP 2139628 B1 20130227; EP 2489452 A2 20120822; EP 2489452 A3 20130501; US 2015343531 A1 20151203; WO 2008121671 A2 20081009; WO 2008121671 A3 20081218

DOCDB simple family (application)

**US 5635908 A 20080327**; CN 200880016418 A 20080327; EP 08744427 A 20080327; EP 12167544 A 20080327; US 2008058348 W 20080327; US 201514734173 A 20150609