

Title (en)

Liquid metal directional casting apparatus and process

Title (de)

Direktionale Gussvorrichtung für Flüssigmetall und Verfahren

Title (fr)

Appareil et procédé de moulage directionnel à métal liquide

Publication

EP 2060342 A1 20090520 (EN)

Application

EP 08168814 A 20081111

Priority

- US 94219607 A 20071119
- US 94219807 A 20071119

Abstract (en)

A process for directionally casting liquid metal to form an article is disclosed. The process includes compressing a seal member (40) intermediate a mold chill plate (12) and a mold assembly, wherein the seal circumscribes a shell mold (18) in the mold assembly; filling the shell mold (18) in the mold assembly (10) with molten metal; immersing the mold assembly (10) into a liquid metal cooling bath (36) from a bottom portion to a top portion of the mold assembly; and transmitting heat from the mold assembly (10) to the liquid metal cooling bath (36) to solidify the molten metal from the bottom portion to the top portion of the mold assembly. An apparatus for directionally casting liquid metal to form articles is also provided.

IPC 8 full level

B22D 27/04 (2006.01)

CPC (source: EP)

B22D 27/045 (2013.01)

Citation (search report)

- [XA] EP 0477136 A1 19920325 - SULZER AG [CH]
- [XA] US 6367538 B1 20020409 - GHOSH ASISH [US], et al
- [A] US 2004079510 A1 20040429 - GARLOCK ROBERT M [US], et al
- [A] DE 19647313 A1 19980514 - SIEMENS AG [DE], et al
- [A] US 4673021 A 19870616 - GRAHAM LAWRENCE D [US], et al
- [A] EP 1321208 A2 20030625 - MITSUBISHI HEAVY IND LTD [JP]
- [A] US 2005045300 A1 20050303 - HUANG SHYH-CHIN [US], et al

Cited by

FR3062588A1

Designated contracting state (EPC)

CH DE GB LI

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2060342 A1 20090520; JP 2009125809 A 20090611

DOCDB simple family (application)

EP 08168814 A 20081111; JP 2008293970 A 20081118