

Title (en)
CASTING METHOD AND CAST ARTICLE

Title (de)
GIESSVERFAHREN UND GUSSARTIKEL

Title (fr)
PROCÉDÉ DE MOULAGE ET ARTICLE MOULÉ

Publication
EP 3335817 A1 20180620 (EN)

Application
EP 17205764 A 20171206

Priority
US 201615383384 A 20161219

Abstract (en)
A casting method (100) and cast article (300) are provided. The casting method (100) includes providing a casting furnace (200), the casting furnace (200) including a withdrawal region (205) in a lower end (201), positioning (120) a mold (210) within the casting furnace (200), positioning (130) a molten material (220) in the mold (210), partially withdrawing (140) the mold (210) a withdrawal distance (217) through the withdrawal region (205) in the casting furnace (200), the withdrawal distance (217) providing a partially withdrawn portion (213), then reinserting (150) at least a portion of the partially withdrawn portion (213) into the casting furnace (200) through the withdrawal region (205), and then completely withdrawing (160) the mold (210) from the casting furnace (200). The reinserting (150) at least partially re-melts a solidified portion (215) within the partially withdrawn portion (213) to reduce or eliminate freckle grains (214). The cast article (300) includes a microstructure and occurrence of freckle grains (214) corresponding to being formed by a process comprising partially withdrawing, reinserting, and completely withdrawing (160) of a mold (210) from a casting furnace (200) to form the cast article (300).

IPC 8 full level
B22D 27/04 (2006.01); **B22D 27/20** (2006.01)

CPC (source: EP)
B22D 27/045 (2013.01); **B22D 27/20** (2013.01)

Citation (search report)
• [X] EP 2902135 A2 20150805 - GEN ELECTRIC [US]
• [A] US 2013022803 A1 20130124 - SCHAEFFER JON CONRAD [US], et al
• [A] EP 1076118 A1 20010214 - ABB SCHWEIZ AG [CH]
• [A] WO 2015130371 A2 20150903 - UNITED TECHNOLOGIES CORP [US]

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

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