

Title (en)

Method for directional solidification casting of a titanium aluminide.

Title (de)

Methode zum Giessen mit gerichteter Erstarrung eines Titanaluminides.

Title (fr)

Méthode pour la coulée par solidification directionnelle de l'aluminure de titane.

Publication

EP 0530968 A1 19930310 (EN)

Application

EP 92306862 A 19920728

Priority

US 73875991 A 19910829

Abstract (en)

A method for directional solidified vacuum or protective atmosphere casting of gamma titanium aluminide alloys in a mold comprised of a chill and a sidewall means extending from the chill to form a cavity for holding a molten metal, the method comprising, forming a melt of the gamma titanium aluminide alloy in the cavity, the melt being comprised of a metal from the group consisting of niobium, tantalum, tungsten, and molybdenum in an effective amount to reduce oxygen pickup in the melt, the sidewall means having at least an inner liner of a calcia refractory facing the melt. The melt is heated in a thermal gradient sufficient to cause directional solidification of the melt from the chill. <IMAGE>

IPC 1-7

B22D 27/04; **C22C 1/02**; **C22C 14/00**; **C22C 21/00**

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [A] EP 0406638 A1 19910109 - GEN ELECTRIC [US]
- [AD] US 4294615 A 19811013 - BLACKBURN MARTIN J, et al
- [AD] US 4710481 A 19871201 - DEGAWA TORU [JP], et al
- [A] EP 0092496 A1 19831026 - UNITED TECHNOLOGIES CORP [US]

Cited by

DE102012222745A1; DE102005015862A1; CN107962170A; CN114406246A; EP0761831A1; GB2294001A; GB2294001B; US5925199A; EP0554198A1; CN112760527A; US8042599B2; US9802243B2; US9803923B2; US10391547B2; US10421121B2

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