

Title (en)

Method for casting a directionally solidified or single crystal article

Title (de)

Giessereiverfahren zur Erzeugung metallischer Stücke mit orientierter Struktur bzw. einkristallischer Stücke durch richtungsabhängige Erstarrung

Title (fr)

Méthode de coulée à solidification directionnelle pour la production de pièces métalliques à structure orientée voire monocristallines

Publication

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Application

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Priority

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Abstract (en)

It is disclosed a method of casting a directionally solidified (DS) or single crystal (SX) article with a casting furnace comprising a heating chamber (4), a cooling chamber (5), a separating baffle (3) between the heating and the cooling chamber (4, 5). The method comprises the preheating a shell mould (12) within a separate preheating chamber (22), loading the shell mould (12) into the heating chamber (4), where liquid metal (6a) is fed into the shell mould (12), withdrawing the shell mould (12) from the heating chamber (4) through the baffle (3) to the cooling chamber (5) thereby directionally solidifying the liquid metal (15), and finally unloading the mould (12) to a separate cool-down chamber (23). <IMAGE>

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B22D 27/04

IPC 8 full level

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Citation (search report)

- [Y] FR 2443302 A1 19800704 - CHUMAKOV VASILY
- [Y] US 4362501 A 19821207 - WELTER JEAN-MARIE
- [A] US 5168916 A 19921208 - DORIATH JEAN-CLAUDE [FR], et al
- [A] US 3845808 A 19741105 - HIGGINBOTHAM G, et al
- [A] US 3601179 A 19710824 - TAYLOR KENDRICK C
- [A] US 3677324 A 19720718 - HIGGINBOTHAM GORDON JOHN SPENC, et al
- [A] US 5778961 A 19980714 - HUGO FRANZ [DE], et al
- [Y] DATABASE WPI Section PQ Week 8626, Derwent World Patents Index; Class P53, AN 1986-168564, XP002261978

Cited by

CN109434081A; EP2461925A4; EP3623078A1; WO2011019659A2

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