

Title (en)  
METHOD OF CASTING

Publication  
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Application  
**EP 82300767 A 19820216**

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Abstract (en)  
[origin: EP0059550A2] An improved method of casting an article decreases the time required to cast the article without affecting the quality of the article. When a directionally solidified (DS) casting is made, molten metal is poured into a mold cavity. One end of the mold cavity is exposed to a chill plate which initiates solidification of the molten metal. As the metal solidifies, a dendritic structure grows upwardly into the mold cavity. Molten metal is disposed in the interstices of the uppermost portions of dendritic structure. As the metal in the mold cavity cools, the molten metal in the interstices solidifies and the dendritic structure, including a region containing some molten metal in the interstices, continues to grow upwardly toward the upper end of the mold cavity. The directional solidification of the metal in the mold cavity is promoted by slowly withdrawing the mold from a furnace as the molten metal solidifies. In accordance with the present invention, when the upper end of the dendritic structure reaches the upper end of the mold cavity, the rate of withdrawal of the mold from the furnace is substantially increased to accelerate the solidification of the remaining molten metal.

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**B22D 27/04**

IPC 8 full level  
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Cited by  
US7152659B2; EP0711215A4; GB2472544A; EP0637476A1; US5611670A; CN1061123C; CN111451485A; US10675678B2; WO2009148726A1

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