

Title (en)
METHOD OF CASTING

Publication
EP 0059550 B1 19870701 (EN)

Application
EP 82300767 A 19820216

Priority
US 23914381 A 19810227

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.

IPC 1-7
B22D 27/04

IPC 8 full level
B22D 27/04 (2006.01)

CPC (source: EP)
B22D 27/045 (2013.01)

Cited by
US7152659B2; EP0711215A4; GB2472544A; EP0637476A1; US5611670A; CN1061123C; CN111451485A; US10675678B2; WO2009148726A1

Designated contracting state (EPC)
BE CH DE FR GB IT LI SE

DOCDB simple family (publication)
EP 0059550 A2 19820908; EP 0059550 A3 19840328; EP 0059550 B1 19870701; CA 1196470 A 19851112; DE 3276658 D1 19870806; IL 65013 A0 19820430; IL 65013 A 19860831; JP S57199558 A 19821207

DOCDB simple family (application)
EP 82300767 A 19820216; CA 397152 A 19820226; DE 3276658 T 19820216; IL 6501382 A 19820215; JP 3048582 A 19820226