

Title (en)
Top fill casting

Title (de)
Giessen von oben

Title (fr)
Moulage par le haut

Publication
EP 0737534 A1 19961016 (EN)

Application
EP 96108496 A 19920511

Priority
EP 92304196 A 19920511

Abstract (en)
There is disclosed an apparatus for casting comprising a pressure vessel (12) comprising a melt section (36) and a mold section (34) separated by a surface (52). The melt section (36) is disposed in the upper portion of the pressure vessel (12). The melt section (36) comprises a crucible (40) within which material is stored and melted, a first hole (42) disposed on the crucible's bottom surface and a second hole (54) disposed under said first hole (42) in the surface (52). There is also a plug lift system (46) comprising a plug (44) and a plug lifter (48) whereby the plug lifter (48) raises and lowers the plug (44) into and out of the first hole (42) such that when the plug (44) is lowered into the first hole (42), the melted material cannot flow out of the crucible (40). The mold section (34) is disposed in the lower portion of the pressure vessel (12). The mold section (34) is also comprised of a device for pressurizing the vessel (12). The pressurizing device is in fluidic connection with the vessel (12). There is a mold (20) having a passage (24) fluidically connecting said chamber (16) to the interior of the mold (20). The passage (24) includes a filter (26) such that a melted material is prevented from entering the interior of the mold (20) prior to pressurization. Additionally, there is a device (50) for heating material in the crucible (40) such that material is melted in the crucible (40) and stays melted as it flows downward into the chamber (16) of the mold section (34) as the plug lifter (48) lifts the plug (44) away from the hole (42) of the crucible (40). There is also a device for directionally solidifying the material.

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B22D 19/14; **B22D 27/13**; **B22D 27/04**; **C22C 1/10**

IPC 8 full level
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CPC (source: EP)
B22D 19/14 (2013.01); **B22D 27/045** (2013.01); **B22D 27/13** (2013.01); **C22C 1/1036** (2013.01)

Citation (search report)
• [Y] GB 2247636 A 19920311 - ATOMIC ENERGY AUTHORITY UK [GB]
• [Y] EP 0409197 A1 19910123 - NIPPON KOKAN KK [JP]

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