

Title (en)

Apparatus for die casting material having a high melting temperature

Title (de)

Vorrichtung zum Druckgiessen von Material mit hohem Schmelzpunkt

Title (fr)

Dispositif de moulage sous pression de matériaux a haut point de fusion

Publication

EP 1013363 A1 20000628 (EN)

Application

EP 99310240 A 19991220

Priority

US 11356698 P 19981223

Abstract (en)

A die casting apparatus for making articles composed of material having a melting temperature in excess of 2000 F, such as superalloys and titanium alloys includes a melting unit 24 for melting at least a charge of the material, and a multi part, die-cavity-defining die 36. A generally cylindrical shot sleeve 30 of the apparatus is in fluid communication with the die 36, and receives molten material from the melting unit 24. The sleeve 30 has outer and inner radii Ro, Ri. The apparatus also includes a plunger unit 40 in sealing and moveable engagement with the shot sleeve 30. The plunger 40 moves along a plunger stroke, for forcing material from the shot sleeve 30 into the die cavity 38. At least the radii and the ratio of the outer to inner radii are selected to minimize thermal distortion of the sleeve when molten material is poured into the sleeve. Preferably the inner radius Ri is at least 25 mm and the ratio Ro/Ri at least 1.3 Preferably, the shot sleeve 30 defines a volume that is at least 2 times the die cavity volume 38. <IMAGE>

IPC 1-7

B22D 17/20

IPC 8 full level

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CPC (source: EP)

B22D 17/2023 (2013.01)

Citation (search report)

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