

Title (en)
Method and apparatus for spraycasting

Title (de)
Verfahren und Anlage zum Aufsprühen

Title (fr)
Méthode et dispositif de moulage par pulvération

Publication
EP 0852976 A1 19980715 (EN)

Application
EP 97121374 A 19971205

Priority
US 76300896 A 19961210

Abstract (en)
Spraycasting method involves directing an atomized metal or alloy spray from a tundish quiescent chamber (A) at a collector (30) disposed in a spray chamber (B) and in-situ evacuating of the spray chamber (B) during spray deposition to maintain spray chamber gas partial pressure less than about 400 torr. The spray deposit leading edge region is oriented at a selected acute angle relative to horizontal to improve the quality of the spray deposit by reducing inner diameter fissure porosity. The collector (30) can be heated in-situ proximate the leading edge of the deposit at an initial deposition location. The collector is thermally insulated and capable of accommodating thermal expansion of the collector surface. In addition, the scan rate and distance of a scanning atomizer is slaved to the rotational speed of the collector such that actual atomizer dwell time (spraying time) is lessened as the collector rpm is increased. <IMAGE>

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B22D 23/00; **C23C 4/12**

IPC 8 full level
B22D 23/00 (2006.01); **B22F 3/115** (2006.01); **C23C 4/12** (2006.01)

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B22D 23/003 (2013.01); **C23C 4/123** (2016.01)

Citation (search report)
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