

Title (en)

Method of shaping semisolid metals

Title (de)

Verfahren zum Formen halbfester Metalle

Title (fr)

Procédé pour mettre des métaux semi-solides en forme

Publication

EP 0841406 A1 19980513 (EN)

Application

EP 97119554 A 19971107

Priority

- JP 29642096 A 19961108
- JP 31731396 A 19961128

Abstract (en)

In the improved method of shaping a semisolid metal, liquid alloy having crystal nuclei and at a temperature not lower than the liquidus temperature or a partially solid, partially liquid alloy having crystal nuclei and at a temperature less than the liquidus temperature but not lower than the molding temperature is poured into a holding vessel having a thermal conductivity of at least 1 kcal/mh DEG C, cooled at an average cooling rate of 0.01 DEG C/s - 3.0 DEG C/s and held as such until just prior to the start of shaping under pressure, whereby fine primary crystals are generated in said alloy solution and the alloy within said holding vessel is temperature adjusted by induction heating such that the temperatures of various parts of the alloy fall within the desired molding temperature range for the establishment of a specified fraction liquid not later than the start of shaping and the alloy is recovered from said holding vessel, supplied into a forming mold and shaped under pressure. Shaped parts having fine and spherical microstructures can be produced in a convenient, easy and inexpensive manner without relying upon agitation by the conventional mechanical and electromagnetic methods.

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C22C 1/00; B22D 17/00

IPC 8 full level

B22D 17/00 (2006.01); **C22C 1/00** (2006.01)

CPC (source: EP)

B22D 17/007 (2013.01); **C22C 1/12** (2023.01)

Citation (search report)

- [PX] EP 0745694 A1 19961204 - UBE INDUSTRIES [JP]
- [A] EP 0701002 A1 19960313 - UBE INDUSTRIES [JP]

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