

Title (en)

PROCESS AND APPARATUS FOR MANUFACTURING DISPERSION-STRENGTHENED SHAPED COPPER ARTICLES

Publication

EP 0387491 A3 19910724 (DE)

Application

EP 90100718 A 19900115

Priority

DE 3904494 A 19890215

Abstract (en)

[origin: CA2008371A1] Method and Device for Producing Dispersion-hardened Shaped Metal Parts Method and device for producing dispersion-hardened shaped metal, e.g. copper parts, wherein a copper melt is produced that is superheated by a maximum 300.degree.C, which melt is supersaturated with boron and one or several boride-forming elements of the groups IVA, VA and VIA in the periodic system and/or aluminium in such a way that a homogeneous, largely stable boride dispersion forms abruptly in the supersaturated melt, and wherein a given quantity of this boride-containing copper melt is either directly prepared in the female die or metered into it and, immediately after having been prepared or metered in, shaped by means of a male die, preferably applying compacting pressure, and caused to solidify before the finished or near-net-shape copper part is removed. The method is efficient and flexible, and it is possible to produce high-quality parts in simple devices that are easy to automate, making optimum use of the material.

IPC 1-7

C22C 32/00; **B22D 18/02**

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

- [Y] DE 1533193 A1 19700205 - BENDIX CORP
- [Y] US 4540546 A 19850910 - GIESSEN BILL C [US]
- [X] GB 2026363 A 19800206 - ITT
- [A] EP 0113249 A1 19840711 - ALCAN INT LTD [CA]
- [A] FR 1266582 A 19610717 - CENTRE NAT RECH SCIENT
- [A] US 3993478 A 19761123 - HAY DONALD A, et al
- [A] US 3037857 A 19620605 - CONANT LOUIS A
- [A] WO 8607613 A1 19861231 - BATTELLE INSTITUT E V [DE]
- [YP] WO 8909838 A1 19891019 - BATTELLE INSTITUT E V [DE]

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