

Title (en)

Metal alloy with quasi-crystalline particles, powder, component, method and layer system

Title (de)

Metalllegierung mit Quasikristallpartikeln, Pulver, Bauteil, Verfahren und Schichtsystem

Title (fr)

Alliage métallique avec particules quasi-cristallines, poudre, composant, procédé et système de couche

Publication

**EP 2716779 A1 20140409 (DE)**

Application

**EP 12187151 A 20121004**

Priority

EP 12187151 A 20121004

Abstract (en)

Metal or metal alloy comprises quasicrystal particles. Independent claims are included for: (1) a component made from the metal or metal alloy or from a powder; (2) producing the component comprising utilizing the quasicrystal particles during the casting process; and (3) a layer system comprising a substrate.

Abstract (de)

Durch die Einbringung von Quasikristallen, die vergleichbare mechanische Eigenschaften wie Keramiken aufweisen, aber metallische Werkstoffe oder metallische Legierung angepasste thermische Ausdehnungskoeffizienten aufweisen, können verbesserte mechanische Eigenschaften erzielt werden.

IPC 8 full level

**C22C 19/03** (2006.01); **C22C 19/07** (2006.01); **C22C 21/00** (2006.01); **C22C 30/00** (2006.01); **C22C 30/02** (2006.01); **C22C 45/00** (2006.01)

CPC (source: EP)

**C22C 19/03** (2013.01); **C22C 19/07** (2013.01); **C22C 21/00** (2013.01); **C22C 30/00** (2013.01); **C22C 30/02** (2013.01); **C22C 45/00** (2013.01); **C22C 45/001** (2013.01); **C22C 45/04** (2013.01)

Citation (applicant)

- EP 1204776 B1 20040602 - SIEMENS AG [DE], et al
- EP 1306454 A1 20030502 - SIEMENS AG [DE]
- EP 1319729 A1 20030618 - SIEMENS AG [DE]
- WO 9967435 A1 19991229 - SIEMENS AG [DE], et al
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- EP 0892090 A1 19990120 - SULZER INNOTECH AG [CH]
- EP 0486489 B1 19941102 - SIEMENS AG [DE]
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Citation (search report)

[X] D. SHECHTMAN ET AL: "Metallic Phase with Long-Range Orientational Order and No Translational Symmetry", PHYSICAL REVIEW LETTERS, vol. 53, no. 20, 1 November 1984 (1984-11-01), pages 1951 - 1953, XP055059884, ISSN: 0031-9007, DOI: 10.1103/PhysRevLett.53.1951

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CN104167234A; WO2014067855A3

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2716779 A1 20140409**; WO 2014053419 A2 20140410; WO 2014053419 A3 20140807

DOCDB simple family (application)

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