

Title (en)

Producing of a gradient-workpiece by layer-casting

Title (de)

Herstellen eines Gradientenwerkstücks durch Schichtgiessen

Title (fr)

Fabrication d'une pièce avec gradient par moulage en couches

Publication

EP 1477661 A3 20050914 (DE)

Application

EP 04010594 A 20040504

Priority

- DE 10320396 A 20030506
- DE 10331555 A 20030711
- DE 10342582 A 20030915

Abstract (en)

[origin: EP1477661A2] Method involves making the workpiece from cast iron containing graphite, using different graphite structures for different zones of the workpiece that are subject to different stresses. Cast iron charges and/or alloys that are cast in a mold contain or form the different graphite structures. An independent claim is also included for: (a) apparatus for implementing the inventive method (b) and a cast item, especially an engine or cylinder block or cylindrical crankcase of cast iron with graphite.

IPC 1-7

F02F 7/00; **B22D 19/16**

IPC 8 full level

B22D 1/00 (2006.01); **B22D 19/16** (2006.01); **B22D 27/20** (2006.01); **F02F 7/00** (2006.01)

CPC (source: EP)

B22D 1/007 (2013.01); **B22D 19/16** (2013.01); **B22D 27/20** (2013.01); **F02F 7/00** (2013.01); **F05C 2201/0439** (2013.01)

Citation (search report)

- [X] EP 0881019 A1 19981202 - WAERTSILAE NSD SCHWEIZ AG [CH]
- [X] AMBOS, EBERHARD ET AL: "Criteria for the selection of a material combination for the manufacture of gradient material cast components", GIESSEREI , 89(1), 43-45 CODEN: GIESAS; ISSN: 0016-9765, 2002, XP009051028
- [XA] STETS, W. (IFG INSTITUT FUR GIESSEREITECHNIK): "Material basics of compound casting of cast iron with steel.[Werkstoffkundliche Grundlagen des Verbundgiessens von Gusseisen mit Stahl.].", GIESSEREI 86, (8), 55-61, GRAPHS, PHOTOMICROGRAPHS, 30 REF. ISSN: 0016-9765, 1999, XP009051027
- [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 22 9 March 2001 (2001-03-09)
- [A] PATENT ABSTRACTS OF JAPAN vol. 012, no. 282 (M - 726) 3 August 1988 (1988-08-03)

Designated contracting state (EPC)

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DOCDB simple family (publication)

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