

Title (en)

Method for manufacturing castings with integrated components

Title (de)

Verfahren zur Herstellung von Gussteilen mit integrierten Bauteilen

Title (fr)

Procédé de fabrication de pièces de fonte dotées de composants intégrés

Publication

EP 2158988 B1 20151118 (DE)

Application

EP 08105119 A 20080825

Priority

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Abstract (en)

[origin: EP2158988A1] The method for producing cast parts with integrated components, which have a high surface hardness than the remaining cast part, comprises casting the integrated component simultaneously with the remaining cast part, and subjecting the integrated component to a surface treatment after casting process. The surface treatment comprises a surface hardening with a hardness of larger than 50 harmonic related carrier (HRC) and a surface coating with a hardness of larger than 50 HRC, and has a layer thickness of 0.1 mm. The surface treatment is produced by high-speed flame spraying. The method for producing cast parts with integrated components, which have a high surface hardness than the remaining cast part, comprises casting the integrated component simultaneously with the remaining cast part, and subjecting the integrated component to a surface treatment after the casting process. The surface treatment comprises a surface hardening with a hardness of larger than 50 harmonic related carrier (HRC) and a surface coating with a hardness of larger than 50 HRC, and has a layer thickness of 0.1 mm. The surface treatment is produced by high-speed flame spraying, and is carried out with a tungsten carbide containing metal powder with the composition of tungsten carbide-nickel-chromium-boron-silicon 67-33 (WC-NiCrBSi67-33). The cast part with the integrated component is produced from a cast iron alloy with spheroidal graphite.

IPC 8 full level

B22D 19/16 (2006.01)

CPC (source: EP)

B22D 19/16 (2013.01); **C23C 4/02** (2013.01); **C23C 4/06** (2013.01)

Citation (examination)

- DE 10130323 A1 20030102 - VOITH PAPER PATENT GMBH [DE]
- DE 102007007277 A1 20080821 - JOHN DEERE BRASIL LTDA [BR]

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