

Title (en)

Method for producing a component from a metallic alloy containing an amorphous phase

Title (de)

Verfahren zur Herstellung eines Bauteils aus einer Metalllegierung mit amorpher Phase

Title (fr)

Procédé de fabrication d'un composant en alliage métallique comportant une phase amorphe

Publication

EP 2944401 B1 20190313 (DE)

Application

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Priority

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Abstract (en)

[origin: WO2015173211A1] The invention relates to a method for producing a component from an at least partially amorphous metal alloy, having the steps of: preparing a powder of an at least partially amorphous metal alloy, wherein the powder consists of spherical powder particles and the powder particles have a diameter of less than 125 µm; pressing the powder into the desired shape of the component to be generated; compressing and sintering the powder by means of a heat treatment of the powder during pressing or after pressing at a temperature between the transformation temperature and the crystallisation temperature of the amorphous phase of the metal alloy, wherein the duration of the heat treatment is chosen such that the component is sintered after heat treatment and has an amorphous fraction of at least 85 percent. The invention also relates to a component made of a pressed, sintered, spherical, amorphous metal alloy powder, wherein the component has an amorphous fraction of at least 85 percent, and to the use of such a component as gear wheel, abrasive wheel, wear-resistant component, housing, watch casing, part of a gearing or semi-finished product.

IPC 8 full level

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