

Title (en)

A METHOD OF PREPARING MAGNESIUM-ZINC-YTTRIUM QUASICRYSTAL AND BORON CARBIDE MIXED REINFORCED MAGNESIUM-BASED COMPOSITE MATERIAL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES MAGNESIUM-ZINK-YTTRIUM-QUASIKRISTALL UND BORCARBID-GEMISCHTEN VERSTÄRKTEN MAGNESIUM-BASIERTEN KOMPOSITMATERIALS

Title (fr)

PROCÉDÉ DE PRÉPARATION DE MATÉRIAU COMPOSITE À BASE DE MAGNÉSIUM RENFORCÉ MÉLANGE PAR DU MAGNÉSIUM-ZINC-YTTRIUM QUASI-CRISTAL ET DU CARBURE DE BORE

Publication

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Application

**EP 19153314 A 20190123**

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Abstract (en)

The present invention relates to a method of preparing magnesium-zinc-yttrium quasicrystal and boron carbide mixed reinforced Mg-based composite materials. Based on the situations that the Mg-based composite materials have poor mechanical properties, in the present invention, magnesium-zinc-yttrium quasicrystal and boron carbide mixed reinforced Mg-based composite materials are prepared by adopting the magnesium alloy as the substrate, the endogenous magnesium-zinc-yttrium quasicrystal and boron carbide as the reinforced phase, via smelting in the vacuum medium frequency induction melting furnace, bottom blowing argon, mechanical stirring, squeeze casting and heat-treatment. The preparation method has advanced process and strict procedures, wherein the data is accurate and detailed and the prepared Mg-based composite materials have 315MPa tensile strength, 7% elongation, 108Hv hardness, making it an advanced preparation method of mixed reinforced Mg-based composite materials.

IPC 8 full level

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Citation (search report)

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