

Title (en)
NICKEL-BASED SEMIFINISHED PRODUCT HAVING A CUBE RECRYSTALLIZATION TEXTURE, CORRESPONDING METHOD OF PRODUCTION AND USE

Title (de)
HALBZEUG AUF NICKELBASIS MIT EINER REKRISTALLISATIONSW RFELT EXTUR UND VERFAHREN ZU DESSEN HERSTELLUNG UND VERWENDUNG

Title (fr)
DEMI-PRODUIT A BASE DE NICKEL PRESENTANT UNE TEXTURE CUBIQUE DE RECRYSTALLISATION, PROCEDE DE PRODUCTION ET UTILISATION DE CE DEMI-PRODUIT

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Abstract (en)
[origin: WO2005024077A1] The invention relates to a nickel-based semifinished product having a cube recrystallization texture and to a corresponding method of production and use. The semifinished product can e.g. be used as a support for physicochemical coatings having a highly microstructured orientation. Such supports are e.g. suitable as substrates for ceramic coatings such as are used in the field of high-temperature superconductivity. In this case, the product is used in superconducting magnets, transformers, motors, tomographs and superconducting current paths. The aim of the invention is to provide a nickel-based semifinished product that has improved performance characteristics when used as a support for physicochemical coatings having a highly microstructured orientation. Especially the semifinished product should have a higher-grade, thermally more stable cube texture while substantially preventing the formation of grain boundary grooving. For this purpose, Ag in the microalloy range is added to the material of the semifinished product, said added Ag being not more than 0.3 atomic percent. The inventive semifinished product is e.g. suitable as a support for physicochemical coatings having a highly microstructured orientation.

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