

Title (en)
CERAMIC STEEL MATERIAL AND PREPARATION METHOD THEREOF

Title (de)
KERAMIKSTAHL MATERIAL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
MATÉRIAU À BASE D'ACIER ET DE CÉRAMIQUE ET SON PROCÉDÉ DE PRÉPARATION

Publication
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Abstract (en)
This invention discloses Cerasteel materials, which are composed of ceramic phase and metal phase. Thereinto, said ceramic phase is the boride consisted of Fe, Co, Ni, and one or more metal elements of IVB, VB and VIB of the fourth, fifth and sixth periodic metals. And said metal phase is an alloy composed of Mo and one or more metal elements of Fe, Co, Ni. Cerasteel materials in this invention have properties of high hardness, excellent wear resistance, corrosion resistance and high temperature resistance and can be used for producing knives, cutting tools, and all kinds of wear resistant, corrosion resistant, high temperature resistant materials and all kinds of structural components composed of them. Moreover, Cerasteel materials have good weldability with steel and other metal materials, which can meet people's daily needs and application in industry, agriculture, machining and medical apparatus and instruments and so on. Moreover, the invention provides a method for preparing Cerasteel materials.

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