

Title (en)
COMPOSITE WEAR PART

Title (de)
VERSCHLEISSTEIL AUS VERBUNDWERKSTOFF

Title (fr)
PIÈCE D'USURE COMPOSITE

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Application
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Abstract (en)
[origin: CA3185012A1] The present invention relates to a hierarchical wear part comprising a reinforced part which comprises zirconia or an alumina-zirconia alloy, the reinforced part also comprising centimetric inserts having a predefined geometry, the inserts comprising micrometric particles of carbides, nitrides, metal borides or borides made of intermetal compounds bound by a first metal matrix, the inserts being inserted into a reinforcing structure infiltrated with a second metal matrix, the reinforcing structure comprising a periodic alternation of millimetric zones with a high and low concentration of micrometric particles of zirconia or an alumina-zirconia alloy, the second metal matrix being different from the first metal matrix.

Abstract (fr)
La présente invention se rapporte à une pièce d'usure hiérarchique comportant une partie renforcée comprenant de l'alumine, de la zircone ou un alliage d'alumine-zircone, ladite partie renforcée comprenant également des inserts centimétriques de géométrie prédéfinie, lesdits inserts comportant des particules micrométriques de carbures, nitrures, borures métalliques ou en composés intermétalliques liées par une première matrice métallique, lesdits inserts étant insérés dans une structure de renfort infiltrée par une seconde matrice métallique, la structure de renfort comportant une alternance périodique de zones millimétriques à forte et à faible concentration de particules micrométriques d'alumine, de zircone ou d'un alliage d'alumine-zircone, la seconde matrice métallique étant différente de la première matrice métallique.

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Citation (applicant)
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