

Title (en)

ALLOYS WITH LOW COEFFICIENT OF THERMAL EXPANSION AS PDC CATALYSTS AND BINDERS

Title (de)

LEGIERUNGEN MIT GERINGEM WÄRMEAUSDEHNUNGSKOEFFIZIENTEN ALS PDC-KATALYSATOREN UND -BINDER

Title (fr)

ALLIAGES À FAIBLE COEFFICIENT DE DILATATION THERMIQUE EN TANT QUE CATALYSEURS ET LIANTS DE PDC

Publication

**EP 2593630 A1 20130522 (EN)**

Application

**EP 11807354 A 20110711**

Priority

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- US 2011043589 W 20110711

Abstract (en)

[origin: US2012012402A1] A cutting table includes a lattice structure and a catalyst material deposited within voids formed within the lattice. The catalyst material is deposited in the voids during a sintering process that forms the lattice. The catalyst material has a coefficient of thermal expansion that is less than that of cobalt. The catalyst material is any one of chromium, tantalum, ruthenium, an alloy of cobalt, an alloy of a Group VIII metal and at least one non-catalyst metal, an alloy of two or more Group VIII metals, or a eutectic alloy. In certain embodiments, the catalyst material has a thermal conductivity that is greater than that of cobalt. In certain embodiments, the cutting table is bonded to a substrate, which is formed from a substrate material and a binder material. In some embodiments, the binder material and the catalyst material are the same; while in others, they are different.

IPC 8 full level

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