Title (en)

DIAMOND CUTTING ELEMENTS FOR DRILL BITS SEEDED WITH HCP CRYSTALLINE MATERIAL

Title (de)

DIAMANTSCHNEIDELEMENTE FÜR MIT KRISTALLINEM HCP-MATERIAL VERSETZTE BOHRKRONEN

Title (fr)

ÉLÉMENTS DE DÉCOUPE EN DIAMANT POUR TRÉPANS ENSEMENCÉS AVEC UNE MATIÈRE CRISTALLINE HCP

Publication

EP 2847413 A1 20150318 (EN)

Application

EP 13788488 A 20130509

Priority

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- US 2013040422 W 20130509

Abstract (en)

[origin: WO2013170083A1] A polycrystalline diamond compact (PDC), which is attached or bonded to a substrate to form a cutter for a drill bit, is comprised of sintered polycrystalline diamond interspersed with a seed material which has a hexagonal close packed (HCP) crystalline structure. A region of the sintered polycrystalline diamond structure, near one or more of its working surfaces, which has been seeded with an HCP seed material prior to sintering, is leached to remove catalyst. Selectively seeding portions or regions of a sintered polycrystalline diamond structure permits differing leach rates to form leached regions with differing distances or depths and geometries.

IPC 8 full level

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CPC (source: CN EP US)

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Designated contracting state (EPC)

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