

Title (en)
PROVIDING A CATLYST FREE DIAMOND LAYER ON DRILLING CUTTERS

Title (de)
BEREITSTELLUNG EINER KATALYSATORFREIEN DIAMANTSCHICHT AUF BOHRSCHEIDERN

Title (fr)
DISPOSITION D'UNE COUCHE DE DIAMANT EXEMPT DE CATALYSEUR SUR DES ORGANES COUPANTS DE FORAGE

Publication
EP 2928589 A1 20151014 (EN)

Application
EP 12816548 A 20121205

Priority
US 2012067931 W 20121205

Abstract (en)
[origin: WO2014088569A1] A method of making a polycrystalline diamond compact including providing a layer of graphene on top of a sintered PCD and transforming the graphene at high pressure and temperature into diamond that is free of metal catalyst. A method of making PCD by providing a layer of graphene powder (38) on top of a layer of diamond powder (36) and a substrate (20) and sintering at high pressure and temperature to transform the graphene into diamond that is free of metal catalyst at the surface. A cutting element for a tool comprising a substrate, a PCD table and a diamond volume that is substantially free of catalytic material. The PCD is between the substrate and the diamond volume.

IPC 8 full level
B01J 3/06 (2006.01); **E21B 10/46** (2006.01)

CPC (source: EP US)
B01J 3/062 (2013.01 - EP); **E21B 10/567** (2013.01 - EP US); **B01J 2203/0605** (2013.01 - EP); **B01J 2203/0615** (2013.01 - EP); **B01J 2203/062** (2013.01 - EP); **B01J 2203/0655** (2013.01 - EP); **B01J 2203/068** (2013.01 - EP); **B01J 2203/0685** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2014088569 A1 20140612; CN 104837546 A 20150812; EP 2928589 A1 20151014

DOCDB simple family (application)
US 2012067931 W 20121205; CN 201280077539 A 20121205; EP 12816548 A 20121205