

Title (en)

Tool composition with an active part made of polycrystalline diamond.

Title (de)

Werkzeugzusammensetzung mit einem aktiven Teil aus polykristallinem Diamant.

Title (fr)

Outil composite comportant une partie active en diamant polycristallin.

Publication

EP 0398776 A1 19901122 (FR)

Application

EP 90401170 A 19900427

Priority

FR 8906435 A 19890517

Abstract (en)

[origin: US4984642A] The composite tool (1) comprises a sintered metal carbide support (2) and a polycrystalline diamond active part (3) having an inner surface (4) of metallurgical connection to the support (2) and an outwardly facing working surface (5). The working surface (5) comprises corrugations (7) which are substantially parallel to one another and form successive projecting zones (7) and hollow zone (8) on at least a part of the working surface (5). The composite tool is in particular intended for drilling to a great depth, such as drilling oil wells.

Abstract (fr)

L'outil composite (1) comporte un support (2) en carbure métallique fritté et une partie active (3) en diamant polycristallin présentant une surface interne (4) de liaison métallurgique au support (2) et une surface de travail (5) dirigée vers l'extérieur. La surface de travail (5) comporte des ondulations (7) sensiblement parallèles entre elles constituant des zones successives (7, 8) en saillie et en creux sur une partie au moins de la surface de travail (5). L'outil composite est en particulier destiné au forage à grande profondeur tel que le forage pétrolier.

IPC 1-7

E21B 10/56

IPC 8 full level

E21B 10/56 (2006.01); **E21B 10/567** (2006.01)

CPC (source: EP US)

E21B 10/5673 (2013.01 - EP US); **Y10T 407/26** (2015.01 - EP US)

Citation (search report)

- [X] GB 2047308 A 19801126 - CHRISTENSEN INC
- [A] EP 0133386 A2 19850220 - MEGADIAMOND IND INC [US]
- [A] EP 0312281 A2 19890419 - DE BEERS IND DIAMOND [ZA]
- [A] EP 0177466 A2 19860409 - STRATA BIT CORP [US]
- [A] BE 689970 A 19670502
- [AD] FR 2089415 A5 19720107 - GEN ELECTRIC
- [AD] FR 2380845 A1 19780915 - GEN ELECTRIC [US]

Cited by

CN103635653A; US9797200B2; US10428585B2

Designated contracting state (EPC)

BE CH DE ES GB IT LI SE

DOCDB simple family (publication)

EP 0398776 A1 19901122; **EP 0398776 B1 19931013**; DE 69003867 D1 19931118; DE 69003867 T2 19940210; ES 2047280 T3 19940216; FR 2647153 A1 19901123; FR 2647153 B1 19951201; IE 65002 B1 19951004; IE 901766 L 19901117; US 4984642 A 19910115

DOCDB simple family (application)

EP 90401170 A 19900427; DE 69003867 T 19900427; ES 90401170 T 19900427; FR 8906435 A 19890517; IE 176690 A 19900516; US 44174589 A 19891127