

Title (en)

DOUBLE-SIDED AND MULTI-LAYERED PCBN AND PCD ABRASIVE ARTICLES

Title (de)

ZWEISEITIGE, MEHRSCICHTIGE PCBN- UND PCD-SCHLEIFARTIKEL

Title (fr)

ARTICLE ABRASIF DOUBLE FACE ET MULTICOUCHE EN NITRURE DE BORE OU EN DIAMANT POLYCRISTALLIN

Publication

**EP 1877223 A4 20110511 (EN)**

Application

**EP 06737829 A 20060310**

Priority

- US 2006008691 W 20060310
- US 7799505 A 20050310

Abstract (en)

[origin: US2005210755A1] A doubled-sided PCBN and/or PCD compact can be produced using high pressure high temperature processes allowing for increased effective thickness of abrasive tools, decreased delamination, and increased useful service life. A polycrystalline compact can include a substrate having a first surface and a second surface which are non-contiguous. Additionally, a first polycrystalline layer can be attached to the first surface of the substrate and a second polycrystalline layer attached to the second surface of the substrate. The first and second polycrystalline layers can be attached to the substrate via an intermediate layer containing superabrasive particles. Such double-sided PCBN and PCD compacts allow for increased effective thickness of a tool without suffering from non-homogenous results typical of standard PCD and PCBN compacts, regardless of superabrasive particle size. Each polycrystalline layer can include superabrasive particles of varying particle sizes such that the final tool is tailored for specific abrading characteristics. Such doubled-sided PCBN and PCD compacts can be incorporated into a wide variety of abrasive tools for use in cutting, milling, grinding, polishing, drilling and other similar abrasive applications.

IPC 8 full level

**B22F 3/00** (2006.01); **B22F 7/00** (2006.01); **B22F 7/06** (2006.01); **B23B 27/14** (2006.01); **B24D 3/02** (2006.01); **C09C 1/68** (2006.01); **C09K 3/14** (2006.01)

CPC (source: EP US)

**B21C 3/025** (2013.01 - EP US); **B22F 7/008** (2013.01 - EP US); **B22F 7/06** (2013.01 - EP US); **B22F 7/062** (2013.01 - EP US); **B22F 7/08** (2013.01 - EP US); **B23B 27/141** (2013.01 - EP US); **B23B 27/148** (2013.01 - EP US); **B23P 15/28** (2013.01 - EP US); **B24D 3/06** (2013.01 - EP US); **B24D 18/00** (2013.01 - EP US); **C04B 35/5831** (2013.01 - EP US); **C22C 26/00** (2013.01 - EP US); **B22F 2005/001** (2013.01 - EP US); **B22F 2005/002** (2013.01 - EP US); **B22F 2998/00** (2013.01 - EP US); **B23B 2226/125** (2013.01 - EP US); **B23B 2226/315** (2013.01 - EP US); **B23B 2240/08** (2013.01 - EP US); **B23B 2270/54** (2013.01 - EP US); **C22C 2026/006** (2013.01 - EP US); **Y10T 428/24355** (2015.01 - EP US); **Y10T 428/30** (2015.01 - EP US)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 2006099194A2

Designated contracting state (EPC)

DE

DOCDB simple family (publication)

**US 2005210755 A1 20050929**; EP 1877223 A2 20080116; EP 1877223 A4 20110511; WO 2006099194 A2 20060921; WO 2006099194 A3 20071129

DOCDB simple family (application)

**US 7799505 A 20050310**; EP 06737829 A 20060310; US 2006008691 W 20060310