

Title (en)

METHOD OF FORMING POLYSTALLINE DIAMOND ELEMENTS, POLYCRYSTALLINE DIAMOND ELEMENTS, AND EARTH BORING TOOLS CARRYING SUCH POLYCRYSTALLINE DIAMOND ELEMENTS

Title (de)

VERFAHREN ZUR FORMUNG POLYKRISTALLINER DIAMANTELEMENTE, POLYKRISTALLINE DIAMANTELEMENTE UND ERDBOHRWERKZEUGE MIT SOLCHEN POLYKRISTALLINEN DIAMANTELEMENTEN

Title (fr)

PROCÉDÉ DE FORMATION D'ÉLÉMENTS EN DIAMANT POLYCRISTALLIN, ÉLÉMENTS EN DIAMANT POLYCRISTALLIN, ET OUTILS DE FORAGE DE TERRE PORTANT DE TELS ÉLÉMENTS EN DIAMANT POLYCRISTALLIN

Publication

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Application

EP 10810541 A 20100818

Priority

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- US 2010045878 W 20100818

Abstract (en)

[origin: US2011042149A1] Methods of forming polycrystalline diamond elements include forming a polycrystalline diamond element. A Group VIII metal or alloy catalyst is employed to form the polycrystalline diamond compact table at a pressure of at least about 6.5 GPa or greater. The catalyst is then removed from at least a portion of the table to a depth from a working surface thereof, and may be removed from the entirety of the table. Polycrystalline diamond elements include such polycrystalline diamond compact tables. Earth-boring tools include such polycrystalline diamond elements carried thereon and employed as cutting elements.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [X] US 2009173015 A1 20090709 - KESHAVAN MADAPUSI K [US], et al
- [X] US 5127923 A 19920707 - BUNTING JOHN [US], et al
- [X] US 2009152018 A1 20090618 - SANI MOHAMMAD N [US]
- [X] WO 2005110648 A2 20051124 - ELEMENT SIX PTY LTD [ZA], et al
- [E] EP 2262600 A1 20101222 - ELEMENT SIX PRODUCTION PTY LTD [ZA]
- [A] US 5335738 A 19940809 - WALDENSTROEM MATS G [SE], et al

Designated contracting state (EPC)

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