

Title (en)

Method for reducing intermetallic compounds in matrix bit bondline

Title (de)

Verfahren zur Reduzierung intermetallischer Verbindungen in einer Matrixbit-Klebeschicht

Title (fr)

Procédé de réduction de composés inter-métalliques de collage de bits dans une matrice

Publication

EP 2899360 B1 20180110 (EN)

Application

EP 15152253 A 20150123

Priority

US 201414162501 A 20140123

Abstract (en)

[origin: EP2899360A2] An apparatus and method for manufacturing a downhole tool that reduces failures occurring along a bondline between a cemented matrix coupled around a blank. The cemented matrix material is formed from a tungsten carbide powder, a shoulder powder, and a binder material, wherein at least one of the tungsten carbide powder or the shoulder powder is absent of any free tungsten. The blank, which optionally may be coated, is substantially cylindrically shaped and defines a channel extending from a top portion and through a bottom portion of the blank. The absence of free tungsten from at least one of the tungsten carbide powder or the shoulder powder reduces the reaction with iron from the blank, thereby allowing the control and reduction of intermetallic compounds thickness within the bondline.

IPC 8 full level

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CPC (source: EP)

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