

Title (en)

CUTTING TOOL MADE OF WC-BASED CEMENTED CARBIDE

Title (de)

SCHNEIDWERKZEUG AUS ZEMENTIERTEM CARBID AUF WC-BASIS

Title (fr)

OUTIL DE COUPE RÉALISÉ EN CARBURE CÉMENTÉ À BASE DE CW

Publication

EP 4129540 A1 20230208 (EN)

Application

EP 21776329 A 20210312

Priority

- JP 2020056624 A 20200326
- JP 2021010161 W 20210312

Abstract (en)

A cutting tool made of WC-based cemented carbide and having a cutting edge comprises 8.0 to 14.0 mass% Co; 0.1 to 1.4 mass% Cr₃/sub>C₂/sub>; and 0.6 to 4.0 mass% at least one selected from the group consisting of TaC, NbC, TiC, and ZrC; the balance being WC and incidental impurities, wherein the following expressions hold: $R=L_1/L_1+L_2$; $R\geq 0.76-0.059\times D\times 10/V-V_\gamma\times 0.06$; and $1.0\leq D\leq 4.0$, where L1 is a total interfacial length between WC grains, L2 is a total interfacial length between the WC grains and binder phases and between the WC grains and γ phases, V is an area rate (%) of the binder phases; D is a mean diameter (μm) of the WC grains; V_γ is a theoretical volume rate of the γ phases; and R is a WC-WC interfacial length ratio.

IPC 8 full level

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CPC (source: EP)

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C-Set (source: EP)

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