

Title (en)
METHOD FOR PRODUCING A SINTER-JOINED COMPOSITE BODY

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES SINTERGEFÜGTEN VERBUNDKÖRPERS

Title (fr)
PROCÉDÉ DE FABRICATION D'UN CORPS COMPOSITE FRITTÉ

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Application
EP 19712673 A 20190308

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Abstract (en)
[origin: WO2019173855A1] The invention relates to a method for producing a sinter-joined composite body (3) made of hard metal: at least two hard-metal blanks (1, 2), which differ from one another with regard to a binder content and/or a grain size of the hard-material phase, being sinter-joined to form a composite body (3); the at least two hard-metal blanks (1, 2) being arranged with respect to one another, prior to the sinter-joining process, such that at least portions of a first hard metal blank (1) of the at least two hard-metal blanks (1, 2), which has a lower binder content and/or a smaller grain size, is located inside an opening (9) or a cavity (10) of the second hard-metal blank (2) of the at least two hard-metal blanks (1, 2); the at least two hard-metal blanks (1, 2) being arranged so as to have clearance with respect to one another prior to the sinter-joining process and such that, during the sinter-joining process, a liquid phase of the binder of the at least two hard-metal blanks (1, 2) is produced and maintained until, owing to diffusion of binders, the first hard-metal blank (1) of the at least two hard-metal blanks (1, 2) increases in volume, owing to the diffusion of binders, to such an extent and the second hard-metal blank (2) of the at least two hard-metal blanks (1, 2) shrinks, owing to loss of volume because of the diffused binder, to such an extent that, after the sinter-joining process, the at least two hard-metal blanks (1, 2) are materially bonded without clearance.

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