

Title (en)

METHOD FOR THE PRODUCTION OF PELLETS OF SINTERED MATERIAL, SUCH AS BORON CARBIDE PELLETS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON PELLETS AUS SINTERMATERIAL, WIE ETWA BORCARBID-PELLETS

Title (fr)

PROCÉDÉ DE FABRICATION DE PASTILLES DE MATÉRIAU FRITTÉ, NOTAMMENT EN CARBURE DE BORE

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Application

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Abstract (en)

[origin: WO2019002777A1] The invention relates to a method for the production of pellets of sintered material, comprising the following successive steps: a) forming calibrated pre-compacts by means of the first uniaxial pressing of portions, of equal mass, of the material in powder form, said first pressing process being carried out at a first threshold below the maximum green density threshold that can be achieved by the powder material; b) providing a pressing tool set comprising a die having a plurality of cavities and pressure pistons that are intended to slide in the cavities; c) placing pre-compacts in the cavities of the die, with first and second sintered boron nitride disks, having a thickness in the millimetre range and a density greater than or equal to 90%, being disposed, respectively, in each cavity at a first end and a second end of each pre-compact; d) forming calibrated compacts by means of the second uniaxial pressing of the pre-compacts, said second pressing process being carried out in the die using pressure pistons at a second threshold greater than the first threshold, which is less than or equal to the maximum green density that can be achieved by the powder material; e) forming sintered compacts by applying pressure and a pulsed current to the pressing tool set, such as to bring about a rapid rise in temperature according to a temperature-, pressure- and duration-controlled SPS sintering cycle; f) extracting the sintered compacts from the die.

IPC 8 full level

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