

Title (en)

PROCESS FOR PRODUCING DIAMOND PARTICLES HAVING A SELECTED MORPHOLOGY.

Title (de)

VERFAHREN ZUR HERSTELLUNG VON DIAMANTTEILCHEN MIT AUSGEWÄHLTER MORPHOLOGIE.

Title (fr)

PROCEDE DE PRODUCTION DE PARTICULES DE DIAMANT PRESENTANT UNE MORPHOLOGIE SELECTIONNEE.

Publication

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Application

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Priority

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Abstract (en)

[origin: WO8304408A1] A process for producing diamond particles having predetermined sizes and shapes. This process involves the formation of silicon carbide particles, or particles convertible to silicon carbide, that are then subjected to a non-decomposable halocarbon gas at temperatures between about 800 and 1200<o> C whereby the silicon carbide is converted through a metathesis step to the corresponding diamond particle. The resultant diamond particles have sizes from a few microns to several hundreds of microns and a range of shapes including needles, fibers, bulky materials as well as porous diamond particles depending upon the shapes of the silicon carbide particles. Preferably, the silicon carbide should be the beta phase form to increase the efficiency of the reaction. Several alternative methods are described for the initial preparation of the silicon carbide particle that is used in the conversion.

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