

Title (en)

PROCESS AND APPARATUS FOR PRODUCTION OF GRANULAR POLYCRYSTALLINE SILICON

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG VON POLYKRISTALLINEM SILICIUMGRANULAT

Title (fr)

PROCÉDÉ ET DISPOSITIF POUR PRÉPARER DES GRANULÉS DE SILICIUM POLYCRISTALLIN

Publication

EP 3368203 A1 20180905 (DE)

Application

EP 17706794 A 20170223

Priority

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- EP 2017054177 W 20170223

Abstract (en)

[origin: CA3003661A1] The invention relates to a process for producing granular polycrystalline silicon in a fluidized bed reactor comprising a reactor tube and a heating apparatus outside the reactor tube, in which silicon seed particles are fluidized in the reactor tube by means of a gas flow in a fluidized bed which is heated up by means of the heating apparatus, and polycrystalline silicon is deposited by means of pyrolysis on the hot silicon seed particles by addition of a silicon-containing reaction gas to the fluidized bed, and the granular polycrystalline silicon thus formed is removed from the reactor tube, wherein the reactor tube has a fluidized bed region and an unheated region above the fluidized bed, and the reactor tube has a silicon coating on its inner wall, characterized in that the unheated region of the reactor tube above the fluidized bed has a wall temperature that has the effect that the silicon coating over the entire reactor tube has a maximum silicon layer thickness in a ratio of 7:1 to 1.5:1 to the average silicon layer thickness in the fluidized bed region after an operating time of 15 to 500 days.

IPC 8 full level

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Citation (search report)

See references of WO 2017144591A1

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