

Title (en)
PROCESS FOR PREPARING POLYCRYSTALLINE SILICON

Title (de)
VERFAHREN ZUR HERSTELLUNG VON POLYKRISTALLINEM SILICIUM

Title (fr)
PROCÉDÉ DE PRODUCTION DE SILICIUM POLYCRISTALLIN

Publication
EP 3649078 A1 20200513 (DE)

Application
EP 16823183 A 20161214

Priority
EP 2016080900 W 20161214

Abstract (en)
[origin: WO2018108258A1] The invention relates to a method for producing polycrystalline silicon granulate in a fluidized bed reactor. The method comprises a fluidization of silicon seed particles by means of a fluidizing gas in a fluidized bed, which is heated by a heating device, wherein elemental silicon is deposited by pyrolysis on the silicon seed particles by the addition of a reaction gas containing hydrogen and silane and/or halosilane to form the polycrystalline silicon granulate. In a continuous process, waste gas is discharged from the fluidized bed reactor and hydrogen recovered from said waste gas is again supplied to the fluidized bed reactor as a circulating gas. The circulating gas has a nitrogen content of less than 1000 ppmv. The invention further relates to polycrystalline silicon granulate having a nitrogen content of less than 2 ppba.

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