

ABSTRACT

REACTION FURNACE FOR PRODUCING POLYCRYSTALLINE SILICON
ROD, GAS SUPPLY NOZZLE, PRODUCTION METHOD OF5 POLYCRYSTALLINE SILICON ROD, AND POLYCRYSTALLINE SILICON
ROD

To provide a reaction furnace for producing a high-purity polycrystalline silicon rod with reduced contamination with impurity elements
10 such as metallic elements and carbon, and a method for producing a polycrystalline silicon rod using the reaction furnace. A reaction furnace for producing a polycrystalline silicon rod, the interior of which is hermetically sealed by a bell jar and a bottom plate, wherein the bottom plate is provided with a plurality of electrode pairs for holding a silicon core wire and energizing
15 the silicon core wire, and the bottom plate is further provided with a plurality of gas supply nozzles, each with a tip jet upward, for supplying a starting material gas for silicon deposition into the interior space of the bell jar, characterized in that at least a part of the surface of the gas supply nozzles in contact with the interior space of the bell jar is composed of quartz including
20 a roughened surface area having a ten point average roughness Rz of 1.0-5.0 μm .

[FIG. 1]