

POLYCRYSTALLINE SILICON INGOT CASTING MOLD AND METHOD FOR PRODUCING SAME,
AND SILICON NITRIDE POWDER FOR MOLD RELEASE MATERIAL FOR POLYCRYSTALLINE
SILICON INGOT CASTING MOLD AND SLURRY CONTAINING SAME

Abstract

Provided are a polycrystalline silicon ingot casting mold, a method for producing a polycrystalline silicon ingot casting mold, a silicon nitride powder for a mold release material for the polycrystalline silicon ingot casting mold, and a slurry containing the silicon nitride powder for the mold release material, with which high-quality silicon ingots can be obtained at high yields by minimizing sticking of the surfaces of the silicon ingot with the mold, or losses and damages that occur when solidified silicon ingot is released from the mold. The method for producing a polycrystalline silicon ingot casting mold having a release layer is characterized by being provided with: a slurry forming step for forming a slurry by mixing a silicon nitride powder with water, the silicon nitride powder being obtained by blending a silicon nitride powder (A) having an average particle diameter along the short axis of 0.6 to 13 μm with a silicon nitride powder (B) having an average particle diameter along the short axis of 0.1 to 0.3 μm at a weight ratio of 5 : 5 to 9 : 1; a slurry coating step for coating the surface of the mold with the slurry; and a heating step for heating the mold at 800 to 1200°C in an atmosphere containing oxygen, after the slurry coating step.

(FIG. 1)