

ABSTRACT

To prevent dislocation of a silicon single crystal in an additional doping step in which a solid sub-dopant is charged in the middle of crystal pulling.

A method for producing single crystal silicon according to the present invention comprises a melting step of producing a silicon melt containing a main-dopant in a pulling furnace and a crystal pulling step of pulling a silicon single crystal from the silicon melt while feeding Ar gas into the pulling furnace. The crystal pulling step includes at least one additional doping step of charging a sub-dopant to the silicon melt. The additional doping step controls a flow velocity F_2 of the Ar gas passing through a gap between a lower end of a heat-shield body installed above the silicon melt and a liquid surface of the silicon melt to 0.75 m/s to 1.1 m/s.