Abstract

Method for pulling a single crystal composed of silicon from a melt contained in a crucible, and single crystal produced thereby

The invention relates to a method for pulling a single crystal 9 composed of silicon from a melt 11 contained in a crucible 4, wherein the single crystal 9 is surrounded by a heat shield 2, wherein the internal diameter D_{HS} of the heat shield 2 at the lower end 3 thereof is at least 55 mm greater than the diameter D_{SC} of the single crystal 9, and wherein the radial width B_{HSU} of the heat shield 2 at the lower end 3 thereof is not more than 20% of the diameter D_{SC} of the single crystal 9.

The invention also relates to a single crystal - which can be produced by said method - composed of silicon having a diameter of at least 100 mm, wherein the concentration of voids having a diameter of at least 50 µm in the single crystal is not more than 50 m^{-3}.

Fig. 2