

Abstract

Method for Controlling the Diameter of a Single Crystal to a Set Point Diameter

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Method for controlling the diameter of a single crystal to a set point diameter during the pulling of the single crystal from a melt, which is contained in a crucible and forms a meniscus at a phase boundary on the edge of the single crystal, the meniscus having a height which corresponds to the distance between the phase boundary and a level of the surface of the melt outside the meniscus, comprising repeated conduct of the following steps:

- 15 determination of the diameter of a bright ring on the meniscus; calculation of a diameter of the single crystal while taking into account the diameter of the bright ring and while taking into account the dependency of the diameter of the bright ring on the height of the meniscus and on the diameter of the single
20 crystal itself; and calculation of at least one manipulated variable for controlling the diameter of the single crystal on the basis of the difference between the calculated diameter of the single crystal and the set point diameter of the single crystal.

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Drawing for the abstract: Fig. 3