CLAIMS

1. A method for pulling a single crystal composed of semiconductor material from a melt contained in a crucible, comprising

pulling the single crystal in a phase in which an initial cone of the single crystal arises until a phase in which the pulling of a cylindrical section of the single crystal is begun, comprising

measuring the diameter Dcr of the initial cone of the single crystal and calculating the change in the diameter dDcr/dt;

pulling the initial cone of the single crystal from the melt at a pulling rate vp(t) from a point in time t1 until a point in time t2, starting from which the pulling of the cylindrical section of the single crystal in conjunction with a target diameter Dcrs is begun, wherein, in the case of a predefined profile of the pulling rate vp(t) , the difference $\Delta t = t2 - t1$ is altered by means of an iterative computation process until the point in time t2 corresponds to the attaining of the target diameter Dcrs.

2. The method as claimed in claim 1, comprising

feeding heat to the phase boundary between the edge of the single crystal and the melt by open-loop control of the heating power LstR(t) of a ring-shaped heating device arranged above the melt, and

predetermining the profile of the heating power LstR(t) of the ring-shaped heating device from the point in time t1 until the point in time t2 by means of the iterative computation process, such that the growth rate of the single crystal at the point in time t2 is an intended growth rate vcrs.