

Abstract

The invention relates to a device and a method for producing crystalline bodies by directional solidification. The device comprises a melting furnace (11) having a heating chamber (12) in which at least one supporting surface (13) for a crucible (8) and at least one gas purging device arranged above the supporting surface (13) and having a gas outlet facing the supporting surface (13) are defined. An embodiment of the device is characterized in that the gas outlet is defined by one or more openings in a lower plunger surface of a plunger-shaped element (2) which has a geometry adapted to the inner shape of the crucible (8), said shape allowing an at least partial insertion of the plunger-shaped body (2) into the crucible (8). The gas purging device and/or the supporting surface (13) comprise an adjusting mechanism or are designed to be adjustable in such a manner that they allow an adjustment of a perpendicular distance between the supporting surface (13) and the plunger-shaped body (2). The device and the corresponding method allow carbon- and oxygen-containing materials to be discharged from the melt more efficiently and in a controlled manner. The device and the method thus allow - within certain limits - a specific adjustment of the carbon and oxygen content of the crystalline bodies.

Fig. 1a