

## Abstract

### A Method of Welding Single Crystals

A method of single crystal welding is provided for the production of a single crystal region (1) on a surface (2) of a monocrystalline substrate (3) by means of an energy beam (4). The method of single crystal welding includes the supply of a coating material (5), the formation of a melt (6) by melting the coating material (5) by means of the energy beam (4) and the melting of a surface layer (71, 72) of the single crystal substrate (3) by the energy beam (4). The characteristic (8) of the energy distribution in the energy beam (4) is set, in this connection, such that the lateral thermal flow ( $H_1$ ) from the melt into the single crystal substrate (3) is minimised.

(Fig. 4)

