

ABSTRACT

WAFER PRODUCING METHOD

A wafer producing method for producing a hexagonal single crystal wafer from a hexagonal single crystal ingot is disclosed. The wafer producing method includes a separation start point forming step of setting the focal point of a laser beam having a transmission wavelength to the ingot inside the ingot at a predetermined depth from the upper surface of the ingot, which depth corresponds to the thickness of the wafer to be produced, and next applying the laser beam to the upper surface of the ingot as relatively moving the focal point and the ingot to thereby form a modified layer parallel to the upper surface of the ingot and cracks extending from the modified layer, thus forming a separation start point. The laser beam is applied to form the modified layer in a condition where the relation of $-0.3 \leq (d - x)/d \leq 0.5$ holds, where d is the diameter of a focused spot of the laser beam and x is the spacing between adjacent focused spots of the laser beam.

(Figure 9)