

ABSTRACT

WAFER PRODUCING METHOD

Disclosed herein is a wafer producing method for producing a wafer from an ingot having an end surface. The wafer producing method includes an end surface measuring step of measuring undulation present on the end surface of the ingot and a separation plane 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 end surface, which depth corresponds to the thickness of the wafer to be produced, after performing the end surface measuring step, and next applying the laser beam to the end surface of the ingot as relatively moving the focal point and the ingot to thereby form a separation plane containing a modified layer and cracks extending from the modified layer. In the separation plane forming step, the height of an objective lens for forming the focal point of the laser beam is controlled so that the focal point is set in the same plane to form the separation plane, according to the numerical aperture NA of the objective lens, the refractive index N of the ingot, and the undulation present on the end surface of the ingot as measured in the end surface measuring step.

(Figure 12)