

SiC WAFER PRODUCING METHOD

ABSTRACT OF THE DISCLOSURE

Disclosed herein is an SiC wafer producing method for producing an SiC wafer from an SiC ingot having an end surface. The SiC 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 SiC ingot inside the SiC ingot at a predetermined depth from the end surface, which depth corresponds to the thickness of the SiC wafer to be produced, and next applying the laser beam to the end surface of the SiC ingot as relatively moving the focal point and the SiC ingot to thereby form a modified layer parallel to the end surface and cracks extending from the modified layer, thus forming a separation start point. The separation start point forming step includes the steps of setting the numerical aperture of a focusing lens for forming the focal point to 0.45 to 0.9 and substantially setting the M^2 factor of the laser beam to 5 to 50 to thereby set the diameter of the focal point to 15 to 150 μm .

Figure 9