162162

ABSTRACT

The present invention provides a method for producing a bonded wafer by the ion implantation delamination method comprising at least a step of bonding a bond wafer having a micro bubble layer formed by gaseous ion implantation and a base wafer serving as a support substrate and a step of delaminating the bond wafer at the micro bubble layer as a border to form a thin film on the base wafer, wherein, after the delamination of the bond wafer, the bonded wafer is subjected to a heat treatment in an atmosphere of an inert gas, hydrogen or a mixed gas thereof, then the bonded wafer is subjected to thermal oxidation to form a thermal oxide film on the surface of the thin film, and then the thermal oxide film is removed to reduce thickness of the thin film. Thus, there is provided a method for producing a bonded wafer, which can surely remove damages or defects on a surface of a wafer produced by the ion implantation delamination method while maintaining the thickness uniformity of the bonded wafer, and which can also be sufficiently used as a technique for large scale production.

G00002