

DESCRIPTION

~~BONDED WAFER MANUFACTURING METHOD~~

TECHNICAL FIELD

[0001]

The present invention relates to a method of producing a bonded wafer by using an ion implantation separation method, and typically to a method of producing a bonded wafer by bringing a silicon wafer in which ions such as hydrogen ions are implanted into close contact with a support wafer and then performing a heat treatment on these wafers to separate the silicon wafer.

BACKGROUND ART

[0002]

A method of producing SOI wafers by separating ions-implanted wafers after bonding, i.e., the ion implantation separation method (an art also referred to as the Smart Cut method (registered trademark)), has attracted attention as a method for producing SOI wafers.

In this method, for example, an oxide film is formed on at least one of two silicon wafers, and gas ions, such as hydrogen ions or rare gas ions, are implanted from a front surface of one of the silicon wafers (a bond wafer) to form a layer of the implanted ions (also referred to as a micro bubble layer) in the interior of the wafer.

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The oxide film is then interposed between the surface from which the ions have been implanted and the other silicon wafer (a base wafer) so that these wafers

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