DESCRIPTION

~~METHOD FOR MANUFACTURING BONDED WAFER~~

TECHNICAL FIELD

[0001]

The present invention relates to a method of manufacturing a bonded wafer by an ion implantation separation method.

BACKGROUND ART

[0002]

A method of separating ions-implanted wafers after bonding to manufacture SOI wafers, i.e., an ion implantation separation method (a technique also referred to as the Smart Cut method (registered trademark)), has attracted attention as a method of manufacturing silicon on insulator (SOI) wafers, particularly a method of manufacturing thin-SOI wafers that enable improvement in performance of advanced integrated circuits.

[0003]

This ion implantation separation method is a technique to form an SOI wafer (See Patent Literature 1) in the following manner: an oxide film (an insulator film) is formed on at least one of two silicon wafers; 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 micro bubble layer (an enclosed layer) in the interior of the wafer; the surface from which the ions are implanted is then brought into close contact with the other silicon wafer (a base wafer) through the oxide film; a heat treatment

DESCRIPTION

METHOD OF MANUFACTURING BONDED WAFER

TECHNICAL FIELD

[0001]

The present invention relates to a method of manufacturing a bonded wafer by an ion implantation separation method.

BACKGROUND ART

[0002]

A method of separating ions-implanted wafers after bonding to manufacture SOI wafers, i.e., an ion implantation separation method (a technique also referred to as the Smart Cut method (registered trademark)), has attracted attention as a method of manufacturing silicon on insulator (SOI) wafers, particularly a method of manufacturing thin-SOI wafers that enable improvement in performance of advanced integrated circuits.

[0003]

This ion implantation separation method is a technique to form an SOI wafer (See Patent Literature 1) in the following manner: an oxide film (an insulator film) is formed on at least one of two silicon wafers; 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 micro bubble layer (an enclosed layer) in the interior of the wafer; the surface from which the ions are implanted is then brought into close contact with the other silicon wafer (a base wafer) through the oxide film; a heat treatment