

DESCRIPTION

~~METHOD FOR MANUFACTURING LAMINATED WAFER~~

TECHNICAL FIELD

[0001]

The present invention relates to a method for manufacturing a bonded wafer by an ion-implantation delamination method, and particularly to a method for manufacturing an SOI wafer in which a silicon single crystal wafer being implanted with a hydrogen ion is bonded with a base wafer as a support wafer through an oxide film and is then delaminated.

BACKGROUND ART

[0002]

As a method for manufacturing an SOI wafer, especially for manufacturing a thin-film SOI wafer that can improve the performance of an advanced integrated circuit, a method for delaminating an ion-implanted wafer after bonding to manufacture an SOI wafer (an ion-implantation delamination method: technology that is also called the Smart Cut method (a registered trademark)) has been received attention.

[0003]

This ion-implantation delamination method is technology that forms an oxide film on at least one of two wafers, implants gas ions such as hydrogen ions or rare gas ions from an upper surface of one silicon wafer (a bond wafer), forms a micro bubble layer (a sealed layer) in the interior of the bond wafer, then adhering the surface from which the ions are implanted to the other silicon wafer (a base wafer) through the oxide

DESCRIPTION

METHOD FOR MANUFACTURING BONDED WAFER

TECHNICAL FIELD

[0001]

The present invention relates to a method for manufacturing a bonded wafer by an ion-implantation delamination method, and particularly to a method for manufacturing an SOI wafer in which a silicon single crystal wafer being implanted with a hydrogen ion is bonded with a base wafer as a support wafer through an oxide film and is then delaminated.

BACKGROUND ART

[0002]

As a method for manufacturing an SOI wafer, especially for manufacturing a thin-film SOI wafer that can improve the performance of an advanced integrated circuit, a method for delaminating an ion-implanted wafer after bonding to manufacture an SOI wafer (an ion-implantation delamination method: technology that is also called the Smart Cut method (a registered trademark)) has been received attention.

[0003]

This ion-implantation delamination method is technology that forms an oxide film on at least one of two wafers, implants gas ions such as hydrogen ions or rare gas ions from an upper surface of one silicon wafer (a bond wafer), forms a micro bubble layer (a sealed layer) in the interior of the bond wafer, then adhering the surface from which the ions are implanted to the other silicon wafer (a base wafer) through the oxide