

DESCRIPTION

~~METHOD FOR POLISHING SILICON WAFER AND METHOD FOR PRODUCING EPITAXIAL WAFER~~

TECHNICAL FIELD

[0001]

The present invention relates to a method of polishing a silicon wafer and a method of producing an epitaxial wafer.

BACKGROUND ART

[0002]

It has been known that irregularities of an epitaxial layer that are created in an epitaxial growth process of a semiconductor silicon wafer are due to its scratches or its polishing induced defects (PIDs) that occur in a previous mirror-polishing process.

[0003]

The scratches of a surface of the wafer after the mirror polishing are accompanied with dislocations, which are crystal defects. If epitaxial growth is performed on this wafer with the scratches, then the dislocations are propagated to the epitaxial layer to create dislocations also in the epitaxial layer, resulting in inferior quality of the epitaxial layer. It is therefore important that the wafer before the epitaxial growth after the mirror polishing has no scratch.

[0004]

FIG. 7 shows captured epitaxial defects in an epitaxial layer that are generated in the epitaxial growth on a wafer (a polished wafer) after mirror

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