

ABSTRACT

METHOD OF INSPECTING SILICON SINGLE CRYSTAL AND METHOD OF MANUFACTURING SILICON SINGLE CRYSTAL

An aspect of the present invention relates to a method of inspecting a silicon single crystal, which comprises: decorating with copper a surface of a sample cut out of a silicon single crystal ingot with an interstitial oxygen concentration, according to old American Society for Testing and Materials (old ASTM), of less than 12×10^{17} atoms/cm³ that has been grown by the Czochralski process; subjecting the decorated sample to a heating and cooling treatment comprising heating the sample for equal to or more than five minutes at a temperature region of equal to or higher than 700°C but less than 800°C followed by rapidly cooling the sample from the temperature region at a cooling rate exceeding 2.5°C/minute; selectively etching the surface of the sample following the heating and cooling treatment; and specifying an L/D region based on a localized state of pits on the surface of the sample following the selective etching. A further aspect of the present invention comprises specifying a B-band region based on a result of comparing two samples subjected to different treatments.

Figure 2