ABSTRACT

The present invention is designed to provide an annealing method for silicon single crystal wafers, which makes it possible to increase the number of silicon single crystal wafers processed during a single annealing process under a variety of annealing performed on silicon single crystal wafers, such as oxygen outer diffusion annealing for forming a DZ layer, annealing that generates and controls BMD for providing IG functions, and annealing that endeavors to improve and enhance GOI characteristics by eliminating wafer surface layer COP, and internal grown-in defects, and also enables the suppression of dislocation and slip in elevated temperature annealing environments. [It calls for] annealing to be performed by stacking up around 10 wafers, treating this group as a unit, placing this group, either horizontally or slightly inclined at [an angle of] roughly 0.5~5°, into a boat, which makes contact with and supports the periphery of the wafers at a plurality of locations, and then stacking up a plurality of these groups [of wafers] into numerous stacks [inside the boat]. As indicated in the embodiments, [this method] enables a variety of annealing to be applied to silicon single crystal wafers, making it possible to prevent dislocation and slip, and to provide the same annealing effect uniformly to all wafers.