Abstract

Method for producing a semiconductor wafer

A method for producing a semiconductor wafer, comprising:
(a) rounding of the edge of the semiconductor wafer sliced from a crystal, by means of a grinding disk containing abrasives having an average grain size of 20.0 - 60.0 µm;
(b) simultaneous double-side material-removing processing of the semiconductor wafer between two rotating ring-shaped working disks, wherein each working disk comprises a working layer containing abrasives having an average size of 5.0 - 20.0 µm;
(c) simultaneous double-side material-removing processing of the semiconductor wafer between two rotating ring-shaped working disks, wherein each working disk comprises a working layer containing abrasives having an average size of 0.5 - 15.0 µm, wherein the grain size is less than the grain size used in step a);
(d) rounding of the edge of the semiconductor wafer by means of a grinding disk containing abrasives having an average grain size of 1.0 µm up to 20.0 µm, wherein the grain size is less than the grain size used in step a);
(e) treatment of both sides of the semiconductor wafer with an etching medium in conjunction with a material removal of not more than 1 µm per side of the semiconductor wafer;
(f) polishing of at least one side of the semiconductor wafer using a polishing pad containing abrasives having an average grain size of 0.1 - 1.0 µm;
(g) polishing of the edge of the semiconductor wafer;
(h) chemical mechanical polishing (CMP) of at least the front side.

No figure