Abstract

Method for the simultaneous grinding of a plurality of semiconductor wafers

The invention relates to a method for the simultaneous double-side grinding of a plurality of semiconductor wafers, wherein each semiconductor wafer lies such that it is freely moveable in a cutout of one of a plurality of carriers caused to rotate by means of a rolling apparatus and is thereby moved on a cycloidal trajectory, wherein the semiconductor wafers are machined in material-removing fashion between two rotating ring-shaped working disks, wherein each working disk comprises a working layer containing bonded abrasive, wherein the form of the working gap formed between the working layers is determined during grinding and the form of the working area of at least one working disk is altered mechanically or thermally depending on the measured geometry of the working gap in such a way that the working gap has a predetermined form.

The invention also relates to a method in which the semiconductor wafers, during machining, temporarily with part of their area leave the working gap.

The invention additionally relates to a method in which the carrier is completely composed of a first material or a second material of the carrier is completely or partly coated with a first material in such a way that, during grinding, only the first material comes into mechanical contact with the working layer and the first material does not have any interaction with the working layer that reduces the sharpness of the abrasive.