

CLAIMS

1. A method for manufacturing a magnetic-disk glass substrate comprising grinding processing for grinding a main surface of a glass substrate,
5 wherein

in the grinding processing, a main surface of the glass substrate is ground using a grinding tool including an assembled abrasive particle in which a plurality of grinding abrasive particles are bonded with a glass bonding material, and resin for bonding a plurality of the assembled abrasive particles, a protrusion
10 amount of the assembled abrasive particles on a grinding surface of the grinding tool from surrounding resin being higher than a maximum height of a surface shape obtained by measuring the grinding surface using a tracer type surface roughness meter.

2. A method for manufacturing a magnetic-disk glass substrate comprising dressing processing for a grinding tool and grinding processing for
15 grinding a main surface of a glass substrate, wherein

dressing processing is performed in advance such that a protrusion amount of an assembled abrasive particles on a grinding surface of the grinding tool from surrounding resin is greater than a maximum height of a surface shape
20 obtained by measuring the grinding surface using a tracer type surface roughness meter, and the main surface of the glass substrate is ground using the grinding tool that was subjected to the dressing processing, the grinding tool including the assembled abrasive particle in which a plurality of grinding abrasive particles are bonded with a glass bonding material, and resin for
25 bonding a plurality of the assembled abrasive particles.

3. The method for manufacturing a magnetic-disk glass substrate according to claim 1 or 2, wherein the grinding abrasive particles contain diamond abrasive particles.

4. The method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 3, wherein the grinding processing is performed on the glass substrate in a state in which the main surface is a mirror-finished surface.

5 5. A grinding tool for grinding a surface of a glass substrate, the grinding tool including an assembled abrasive particle in which a plurality of grinding abrasive particles are bonded with a glass bonding material, and resin for bonding a plurality of the assembled abrasive particles, wherein
a protrusion amount of the assembled abrasive particles on a grinding
10 surface of the grinding tool from surrounding resin is greater than a maximum height of a surface shape obtained by measuring a grinding tool surface using a tracer type surface roughness meter.

6. The grinding tool according to claim 5, wherein an average particle diameter of the assembled grinding particles is preferably 15 to 50 μm .

15 7. The grinding tool according to claim 5 or 6, wherein the plurality of grinding abrasive particles are diamond minute particles having an average particle diameter of 3.0 μm or less.

8. A method for manufacturing a glass substrate being a material for a magnetic-disk glass substrate comprising grinding processing for grinding a
20 main surface of a glass substrate, wherein

in the grinding processing, a main surface of the glass substrate is ground using a grinding tool including an assembled abrasive particle in which a plurality of grinding abrasive particles are bonded with a glass bonding material, and resin for bonding a plurality of the assembled abrasive particles, a protrusion
25 amount of the assembled abrasive particles on a grinding surface of the grinding tool from surrounding resin being higher than a maximum height of a surface shape obtained by measuring the grinding surface using a tracer type surface roughness meter.

9. A method for manufacturing a glass substrate being a material for a magnetic-disk glass substrate comprising dressing processing for a grinding tool and grinding processing for grinding a main surface of a glass substrate, wherein dressing processing is performed in advance such that a protrusion amount of an assembled abrasive particles on a grinding surface of the grinding tool from surrounding resin is greater than a maximum height of a surface shape obtained by measuring the grinding surface using a tracer type surface roughness meter, and the main surface of the glass substrate is ground using the grinding tool that was subjected to the dressing processing, the grinding tool including the assembled abrasive particle in which a plurality of grinding abrasive particles are bonded with a glass bonding material, and resin for bonding a plurality of the assembled abrasive particles.

10. The method for manufacturing the glass substrate being a material for a magnetic-disk glass substrate according to claim 8 or 9, wherein the grinding processing is performed on the glass substrate in a state in which the main surface is a mirror-finished surface.

11. A method for manufacturing a magnetic-disk glass substrate comprising performing at least polishing processing to the main surfaces of the glass substrate being a material for a magnetic-disk glass substrate manufactured with the method for manufacturing the glass substrate being a material for a magnetic-disk glass substrate according to any of claims 8 to 10.

12. A method for manufacturing a magnetic disk, wherein at least a magnetic recording layer is formed on a magnetic-disk glass substrate manufactured using the method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 4 and 11.