CLAIMS

1. A method for manufacturing a magnetic-disk glass substrate comprising performing grinding processing for grinding main surfaces of a glass substrate using a lubricant and upper and lower surface plates having a grinding surface respectively provided with a grindstone with fixed abrasive particles while the glass substrate is pressed by the upper and lower surface plates,

wherein the grindstone with fixed abrasive particles includes fixed abrasive particles contained in a supporting material,

a correlation between an average inter-abrasive-particle distance of the fixed abrasive particles on the grinding surface of the grindstone with fixed abrasive particles and a processing speed obtained when the glass substrate is ground using the grindstone with fixed abrasive particles is determined in advance, and

a grindstone with fixed abrasive particles having an average inter-abrasive-particle distance with which a desired processing speed can be obtained is selected based on the determined correlation, and the grinding processing is performed using the selected grindstone with fixed abrasive particles.

2. A method for manufacturing a magnetic-disk glass substrate comprising performing grinding processing for grinding main surfaces of a glass substrate using a lubricant and upper and lower surface plates having a grinding surface respectively provided with a grindstone with fixed abrasive particles while the glass substrate is pressed by the upper and lower surface plates,

wherein the grindstone with fixed abrasive particles includes fixed abrasive particles contained in a supporting material, and

the fixed abrasive particles have an average inter-abrasive-particle distance of 80 μm to 200 μm on the grinding surface of the grindstone with fixed abrasive particles.

3. The method for manufacturing a magnetic-disk glass substrate

according to claim 1, wherein the average inter-abrasive-particle distance is 80 μm to 200 μm.

4. The method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 3, wherein the fixed abrasive particles have an average particle diameter of 15 μm to 50 μm.

5. The method for manufacturing a magnetic-disk glass substrate according to claims 1 to 4, wherein the fixed abrasive particles include diamond abrasive particles.

6. The method for manufacturing a magnetic-disk glass substrate according to claims 1 to 5, wherein the fixed abrasive particles are constituted by abrasive particles or abrasive aggregates consisting of a plurality of abrasive particles held together with a binder.

7. The method for manufacturing a magnetic-disk glass substrate according to claims 1 to 6, wherein the main surface of the glass substrate is a mirror-finished surface at a start of the grinding processing.

8. The method for manufacturing a magnetic-disk glass substrate according to claims 1 to 7, wherein a processing load is 50 g/cm^2 to 200 g/cm^2.

9. A method for manufacturing a magnetic disk comprising forming at least a magnetic recording layer on the magnetic-disk glass substrate manufactured with the method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 8.

10. A method for manufacturing a glass substrate comprising performing grinding processing for grinding main surfaces of a glass substrate using a lubricant and upper and lower surface plates having a grinding surface respectively provided with a grindstone with fixed abrasive particles while the glass substrate is pressed by the upper and lower surface plates,

wherein the glass substrate is a material for a magnetic-disk glass substrate,

wherein the grindstone with fixed abrasive particles includes fixed abrasive particles contained in a supporting material, and

the fixed abrasive particles have an average inter-abrasive-particle distance of 80 μm to 200 μm on the grinding surface of the grindstone with fixed abrasive particles.

11. The method for manufacturing a glass substrate according to claim 10, wherein the fixed abrasive particles include diamond abrasive particles.

12. A method for manufacturing a magnetic disk comprising performing at least polishing processing to the main surfaces of the glass substrate manufactured with the method for manufacturing a glass substrate according to claim 10 or 11.

13. A grindstone with fixed abrasive particles provided with a grinding surface of each of upper and lower surface plates used for performing grinding processing for grinding main surfaces of a glass substrate while the glass substrate is pressed by the upper and lower surface plates,

wherein the grindstone with fixed abrasive particles includes fixed abrasive particles contained in a supporting material,

wherein the fixed abrasive particles include diamond abrasive particles, and

the fixed abrasive particles have an average inter-abrasive-particle distance of 80 μm to 200 μm on the grinding surface of the grindstone with fixed abrasive particles.

14. A grindstone with fixed abrasive particles according to claim 13, wherein the fixed abrasive particles are constituted by abrasive particles or abrasive aggregates consisting of a plurality of abrasive particles held together with

a binder.