CLAIMS

1. A method for manufacturing a magnetic-disk glass substrate, comprising edge surface processing for processing an edge surface of a glass substrate,

wherein the edge surface processing includes

first processing forming magnetic field lines using a magnetism generating means, holding a magnetic slurry containing a magnetic material and polishing abrasive particles with the magnetic field lines to form a mass of the magnetic slurry, and processing the edge surface of the glass substrate in a state in which the edge surface is brought into contact with the mass of the magnetic slurry, and

second processing performed as preprocessing of the first processing, and for using a grindstone having a groove shape formed so as to be capable of simultaneously processing both a side wall surface of the edge surface of the glass substrate and chamfered surfaces between the side wall surface and each main surface of the glass substrate to perform processing in a state in which the glass substrate is inclined with respect to a groove direction of the groove shape formed in the grindstone.

2. The method for manufacturing a magnetic-disk glass substrate according to claim 1,

wherein processing for forming the chamfered surface on the edge surface of the glass substrate is performed before the second processing.

3. The method for manufacturing a magnetic-disk glass substrate according to claim 2,

wherein the chamfered surface forming processing and the second processing are performed at different angles of a groove direction of the grindstone to the substrate from each other.

4. The method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 3,

wherein the edge surface of the glass substrate that has undergone the edge surface processing has a surface roughness of 0.2 μm or less in Rmax.

5. The method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 4,

wherein the glass substrate to be introduced into the edge surface processing has a thickness of 0.5 mm or less.

6. A method for manufacturing a magnetic disk comprising forming at least a magnetic recording layer on the magnetic-disk glass substrate manufactured by the method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 5.

CLAIMS

1. A method for manufacturing a magnetic-disk glass substrate comprising edge surface processing for processing an edge surface of a glass substrate,

wherein the edge surface processing includes

first processing forming magnetic field lines that extend in the thickness direction of the glass substrate, using a magnetism generating means, holding a magnetic slurry containing a magnetic material and polishing abrasive particles with the magnetic field lines to form a mass of the magnetic slurry, and polishing the edge surface of the glass substrate by pressing the edge surface of the glass substrate to the mass of the magnetic slurry, and

second processing performed as preprocessing of the first processing, and for using a grindstone having a groove shape formed so as to be capable of simultaneously processing both a side wall surface of the edge surface of the glass substrate and chamfered surfaces between the side wall surface and each main surface of the glass substrate to perform processing in a state in which the glass substrate is inclined with respect to a groove direction of the groove shape formed in the grindstone.

2. The method for manufacturing a magnetic-disk glass substrate according to claim 1,

wherein processing for forming the chamfered surface on the edge surface of the glass substrate is performed before the second processing.

3. The method for manufacturing a magnetic-disk glass substrate according to claim 2,

wherein the chamfered surface forming processing and the second processing are performed at different angles of a groove direction of the grindstone to the substrate from each other.

4. The method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 3,

wherein the edge surface of the glass substrate that has undergone the edge surface processing has a surface roughness of 0.2 μm or less in Rmax.

5. The method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 4,

wherein the glass substrate to be introduced into the edge surface processing has a thickness of 0.5 mm or less.

6. A method for manufacturing a magnetic disk comprising forming at least a magnetic recording layer on the magnetic-disk glass substrate manufactured by the method for manufacturing a magnetic-disk glass substrate according to any of claims 1 to 5.

7. A method for manufacturing a magnetic-disk glass substrate comprising edge surface processing for processing an edge surface of a glass substrate,

wherein the edge surface processing includes

first processing forming magnetic field lines that extend in the thickness direction of the glass substrate, using a magnetism generating means, holding a magnetic slurry containing a magnetic material and polishing abrasive particles with the magnetic field lines to form a mass of the magnetic slurry, and polishing the edge surface of the glass substrate by pressing the edge surface of the glass substrate to the mass of the magnetic slurry, and

second processing performed as preprocessing of the first processing, and for using a grindstone that is formed in a cylindrical shape and have a groove shape on the inner circumferential so as to be capable of simultaneously processing both a side wall surface of the edge surface of the glass substrate and chamfered surfaces between the side wall surface and each main surface of the glass substrate to perform grinding process by rotating both

the glass substrate and the grindstone while bringing the outer circumferential side edge surface of the glass substrate into contact with the inner circumferential side of the grindstone.