

CLAIMS

1. A glass substrate for magnetic disk, the glass substrate having a circular hole provided in the center, a pair of main surfaces including a surface A and a surface B, and an outer circumferential end surface and an inner circumferential end surface each including a side wall surface and a chamfered surface that is formed between each main surface and the side wall surface,

wherein a measurement point is provided on the outer circumferential end surface every 30 degrees in the circumferential direction with reference to a center of each of the pair of main surfaces of the glass substrate, and ΔR is 0.003 mm or less, where a difference in curvature radius is determined with regard to a shape of a portion between the side wall surface and the chamfered surface between every two neighboring measurement points of each of the surface A and the surface B, an average value of the difference in the curvature radius is determined with regard to each of the surface A and the surface B, and the ΔR is defined as a difference in an absolute value between the average value of the surface A and the average value of the surface B.

2. The glass substrate for magnetic disk according to claim 1,

wherein the difference in the curvature radius between neighboring measurement points is 0.01 mm or less.

3. The glass substrate for magnetic disk according to claim 2,

wherein the difference in the curvature radius between neighboring measurement points is 0.005 mm or less.

4. The glass substrate for magnetic disk according to any one of claims 1 to 3,

wherein a measurement point is provided every 30 degrees in the circumferential direction with reference to the center of the glass substrate, and when a curvature radius of a shape of a portion between the main surface and the chamfered surface is determined at each measurement point as a second curvature radius, a difference in the second curvature radius between neighboring measurement points is 0.004 mm or less.

5. The glass substrate for magnetic disk according to any one of claims 1 to 4,

wherein the glass substrate has a thickness of 0.635 mm or less.

6. The glass substrate for magnetic disk according to any one of claims 1 to 5,
wherein the magnetic disk is used for energy-assisted magnetic recording.
7. A magnetic disk including: the glass substrate according to any one of claims 1 to 6, and at least a magnetic layer formed on the glass substrate.
8. An annular glass plate having a circular hole provided in the center, a pair of main surfaces including a surface A and a surface B, and an outer circumferential end surface and an inner circumferential end surface each including a side wall surface and a chamfered surface that is formed between each main surface and the side wall surface,
wherein a measurement point is provided on the outer circumferential end surface every 30 degrees in the circumferential direction with reference to a center of each of the pair of main surfaces of the annular glass plate, and ΔR is 0.003 mm or less where a difference in curvature radius is determined with regard to a shape of a portion between the side wall surface and the chamfered surface between every two neighboring measurement points of each of the surface A and the surface B, an average value of the difference in the curvature radius is determined with regard to each of the surface A and the surface B, and the ΔR is defined as a difference in an absolute value between the average value of the surface A and the average value of the surface B.
9. The annular glass plate according to claim 8,
wherein the difference in the curvature radius between neighboring measurement points is 0.01 mm or less.
10. The annular glass plate according to claim 9,
wherein the difference in the curvature radius between neighboring measurement points is 0.005 mm or less.
11. The annular glass plate according to any one of claims 8 to 10,
wherein a measurement point is provided every 30 degrees in the circumferential direction with reference to the center of the annular glass plate, and when a curvature radius of a shape of a portion between the main surface and the chamfered surface is determined at each measurement point as a second curvature radius, a difference in the second curvature radius between neighboring measurement points is 0.004 mm or less.
12. The annular glass plate according to any one of claims 8 to 11,

wherein the glass plate has a thickness of 0.635 mm or less.

13. The annular glass plate according to any one of claims 8 to 12, which is used for a glass substrate for magnetic disk.

14. The annular glass plate according to claim 13,
wherein the magnetic disk is used for energy-assisted magnetic recording.

15. A donut-shaped annular glass plate having a circular hole provided in the center, a pair of main surfaces, and an outer circumferential end surface and an inner circumferential end surface each including a side wall surface and a chamfered surface that is formed between each main surface and the side wall surface,

wherein a measurement point is provided on the outer circumferential end surface every 30 degrees in the circumferential direction with reference to a center of the annular glass plate, and when a curvature radius of a shape of a portion between the side wall surface and the chamfered surface is determined at each measurement point, a difference in the curvature radius between neighboring measurement points is 0.01 mm or less.

16. The annular glass plate according to claim 15,
wherein the difference in the curvature radius between neighboring measurement points is 0.005 mm or less.

17. The annular glass plate according to claim 15 or 16,
wherein a measurement point is provided every 30 degrees in the circumferential direction with reference to the center of the annular glass plate, and when a curvature radius of a shape of a portion between the main surface and the chamfered surface is determined at each measurement point as a second curvature radius, a difference in the second curvature radius between neighboring measurement points is 0.004 mm or less.

18. The annular glass plate according to any one of claims 15 to 17,
wherein the glass plate has a thickness of 0.635 mm or less.

19. The annular glass plate according to any one of claims 15 to 18, which is used for a glass substrate for magnetic disk.

20. The annular glass plate according to claim 19,
wherein the magnetic disk is used for energy-assisted magnetic recording.