ABSTRACT

GLASS SUBSTRATE FOR A MAGNETIC DISK AND MAGNETIC DISK

Provided are a magnetic disc substrate and a method for manufacturing the same, wherein a magnetic disc substrate has significantly few defects existing on the front surface thereof at the level in the vicinity of 0.1 nm of an arithmetic average roughness (Ra) and is suitable for a high density recording magnetic disc substrate. The magnetic disc glass substrate is characterized in that the arithmetic mean roughness (Ra) on the main front surface of the glass substrate is 0.12 nm or less at a square of 2 [mu]m 2 [mu]m measured by using an atomic force microscope with the resolution of 256 256 pixels. The magnetic disc glass substrate is also characterized in that the number of defects which are detected to be 0.1 [mu]m - 0.6 [mu]m in size from a plan view and 0.5 nm - 2 nm in depth, as detected by using a deviation of wavelengths between incident light and reflective light in the case where helium neon laser light of the wavelength of 632 nm is swept while the laser light is being irradiated to the main front surface of the glass substrate, is less than 10 per 24 cm2.

The method of manufacturing a magnetic disc glass substrate is characterized in comprising a polishing step where a polishing liquid containing an additive is used, and a cleaning step where a cleaning liquid also containing the additive is used. Examples of the additive includes: carboxylic acid, polyvalent amine, amino acid, amino polycarboxylic acid, phosphonic acid, phosphinic acid, phosphoric acid, pyrophosphoric acid, tripolyphosphoric acid, amino trimethylene phosphoric acid, or their salts.

Figure 1

FEE FOR GRANT

Total Official Fees and Professional Fees payable: dependent on number of claims

FAST TRACK: The deadline to pay the fee for grant is within 42 months of the Relevant Date, i.e. by **42-MONTH DEADLINE**

SLOW TRACK: The deadline to pay the fee for grant is within 60 months of the Relevant Date, i.e. by **60-MONTH DEADLINE**

[Official Fee and Professional Fee: dependent on number of claims]

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