MAGNETIC DISK DRIVE HAVING A FUNCTION FOR USING A THERMAL PROTRUSION AMOUNT FOR FLYING HEIGHT MANAGEMENT AND AN INSPECTION DEVICE HAVING SUCH A FUNCTION

[Name of Document] Abstract

[Abstract]

[Object]

Recently, it is observed that a write head's material having a great thermal expansion coefficient expands due to Joule heat resulting from a write current and a temperature rise dependent on high-frequency core loss, thereby causing the head's flying surface to protrude toward a magnetic disk. This phenomenon is called TPR (thermal protrusion). It is essential that the flying height be accurately determined and managed in consideration of TPR.

[Solving Means]

A magnetic disk drive for actual use or a magnetic disk drive that is in a testing process but similar to the one for actual use is used to measure TPR amount changes resulting from a write operation, store the resulting measured data in a memory or on the magnetic disk, and exercise flying height management with the stored measured data. Further, flying height management is exercised as needed in conjunction with a SMART function. The present invention makes it possible to exercise high-reliability flying height management.

[Selected Drawing] Fig. 3