

ABSTRACT

5 A C-containing FePt-based sputtering target for forming a magnetic recording film, wherein a ratio of an X-ray diffraction peak intensity of a graphite (002) plane in a cross section perpendicular to a sputtering surface relative to an X-ray diffraction peak intensity of a graphite (002) plane in a plane horizontal to a sputtering surface is 2 or more. A magnetic recording layer is configured from a magnetic phase such as an Fe-Pt alloy and a nonmagnetic phase that separates the magnetic phase, and the sputtering target is a ferromagnetic material sputtering target in which carbon is used as a nonmagnetic phase material. When sputtered, the ferromagnetic material sputtering target is effective in preventing the generation of particles caused by an abnormal discharge originating from carbon, which is prone to aggregate.

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Fig. 6