MAGNETO-RESISTANCE EFFECT HEAD

ABSTRACT

A GMR head comprising a spin valve GMR film, which has a free layer containing a Co containing magnetic layer, and a hard magnetic biasing film for inputting a bias magnetic field to the spin valve GMR film. The hard magnetic biasing film is constituted of a film formed by laminating a hard magnetic layer on the magnetic under layer. The hard magnetic layer is disposed adjoining to edge portion of the spin valve GMR film through the magnetic under layer. The magnetic under layer has saturation magnetization Ms^{under} which satisfies at least one condition of $Ms^{under} \geqq Ms^{free}$ and $Ms^{under} \geqq Ms^{hard}$ when saturation magnetization of the free layer is Ms^{free} and saturation magnetization of the hard magnetic layer is Ms^{hard}. In a MR head of this abutted junction structure, even when the track width is narrowed, occurrence of Barkhausen noise can be effectively suppressed.

FIGURE 2

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