ABSTRACT

MAGNETIC TRANSFER METHOD FOR A HIGH-DENSITY MAGNETIC RECORDING MEDIUM

An accurate magnetic transfer to a high-density slave medium having two magnetic layers and utilizing antiferromagnetic coupling is performed. By applying a first magnetic field that causes both the first and second magnetic layers of the magnetic layer of a slave medium to reach saturation magnetization unidirectionally along the circumferential direction of the track, the first and second magnetic layers are magnetized uniformly in the same direction as the first magnetic field. Then, a second magnetic field that inverts the magnetization of the first magnetic layer and has no effect on the magnetization of the second magnetic layer is applied in the opposite direction, whereby only the magnetization direction of the first magnetic layer is inverted in the direction of the second magnetic field. Thereby, a favorable initial magnetization state in which the magnetization directions of the first and second magnetic layers are oriented antiparallel can be obtained.

Figure 1

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