

ABSTRACT

MAGNETORESISTANCE EFFECT FILM AND MAGNETORESISTANCE EFFECT TYPE HEAD

A spin valve type magnetoresistance effect film comprises a magnetic multilayered film including a non-magnetic metal layer, a ferromagnetic layer formed on one surface of the non-magnetic metal layer, a soft magnetic layer formed on the other surface of the non-magnetic metal layer, and an antiferromagnetic layer which is formed on a surface of the ferromagnetic layer remote from a surface thereof abutting the non-magnetic metal layer so as to pin a direction of magnetization of the ferromagnetic layer. The antiferromagnetic layer contains oxygen as impurities and a concentration of oxygen contained in the antiferromagnetic layer is set to 1 to 2,000 atomic ppm. With this arrangement, there can be provided a magnetoresistance effect film having a high-quality antiferromagnetic layer which is excellent in thermal stability, sufficiently high in blocking temperature and highly excellent in pinning effect. Further, there can be provided a magnetoresistance effect type head which is excellent in thermal stability, high in magnetic field sensitivity and large in MR change ratio.

Figure : None