

ABSTRACT OF THE DISCLOSURE

Co-Fe-Zr BASED ALLOY SPUTTERING TARGET MATERIAL
AND PROCESS FOR PRODUCTION THEREOF

The present invention relates to a Co-Fe-Zr based alloy target material for forming a soft magnetic film of the Co-Fe-Zr based alloy used in a perpendicular magnetic recording medium, and provides a Co-Fe-Zr based alloy target material having a low magnetic permeability and good sputtering characteristics and a process for producing this target material. A Co-Fe-Zr based alloy sputtering target material represented by the compositional formula based on the atomic ratio: $(\text{Co}_x\text{-Fe}_{100-x})_{100-(Y+Z)}\text{-Zr}_Y\text{-M}_Z$ ($20 \leq X \leq 70$, $2 \leq Y \leq 15$ and $2 \leq Z \leq 10$) in which the element(s) M is one or more elements selected from the group consisting of Ti, V, Nb, Ta, Cr, Mo, W, Si, Al and Mg, wherein a phase composed of HCP-Co and an alloy phase composed mainly of Fe are finely dispersed in the microstructure of the target material.

Figure 1