

SPUTTERING TARGET CONTAINING Co OR Fe

ABSTRACT

5 The present invention provides a sintered sputtering target, of which structure observed on a polished surface of the target is configured from nonmagnetic material grains having an average grain diameter of 1.8 μm or less, a metal phase containing Co or Fe in which nonmagnetic material grains are dispersed and metal grains containing Co or Fe; and in which nonmagnetic material grains having a difference of 0.7 μm or less between a maximum diameter and a minimum diameter is 60% or more of nonmagnetic material grains in a structure observed on the polished surface of the target, defining a maximum diameter as the greatest value of distances between any two points on the outer periphery of the nonmagnetic material grain and a minimum diameter as the smallest value of distances between two parallel lines when the two lines sandwich the grain, and in which one or more metal grains having a sum of the maximum diameter and the minimum diameter of 30 μm or more are present on average in 1 mm^2 field of view, defining a maximum diameter as the greatest value of distances between any two points on the outer periphery of the metal grain, and a minimum diameter as the smallest value of distances between two parallel lines when the two lines sandwich the metal grain. The sintered sputtering target of the present invention can suppress an abnormal discharge due to a nonmagnetic material which may cause particle generation during sputtering.

25 Fig. 1