

ABSTRACT

IRON-PLATINUM-BASED SPUTTERING TARGET AND METHOD FOR MANUFACTURING THE SAME

Provided is an iron-platinum-based sputtering target and a method for manufacturing the same. The iron-platinum-based sputtering target comprises iron, platinum, and carbon. Based on the total amount of the atoms of the iron-platinum-based sputtering target, the amount of carbon is equal to or greater than 15 at% and equal to or smaller than 45 at%. In addition, a carbon phase in the metallographic microstructure of the iron-platinum-based sputtering target has an average size equal to or smaller than 2 μm and has an average aspect ratio smaller than 3. By controlling the carbon content and limiting the type of the carbon phase in the metallographic microstructure, the present invention improves the distribution uniformity of the phase compositions of the iron-platinum-based sputtering target and refrains the black carbon particles from precipitation on the surface of the iron-platinum-based sputtering target.

Fig. 1