

CLAIMS

1. ~~A sputtering target material comprising~~consisting of in at. %: 10 to 50% of B; ~~0 to 20% in total of one or more elements selected from the group consisting of Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Re, Ru, Rh, Ir, Ni, Pd, Pt, Cu, and Ag;~~ and the balance of at least one of Co and Fe, and unavoidable impurities,

~~_____ wherein a hydrogen content of the sputtering target material is 20~~10 ppm or less,

~~_____ wherein the sputtering target material is a solidified molded product by using a powder, and~~

~~_____ wherein, in a particle size distribution of the powder, a cumulative volume of particles having a particle diameter of 5 μ m or less is 10% or less, and a cumulative volume of particles having a particle diameter of 30 μ m or less is 18% or more and 40% or less.~~

2. ~~The sputtering target material according to claim 1, wherein the sputtering target material comprises, in at. %, 5 to 20% in total of one or more elements selected from the group consisting of Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Re, Ru, Rh, Ir, Ni, Pd, Pt, Cu, and Ag.~~

2. A method of producing a sputtering target material, comprising:

_____ providing a powder, and

_____ sintering the powder,

_____ wherein the sputtering target material consists of in at. %: 10 to 50% of B; and the balance of at least one of Co and Fe, and unavoidable impurities,

_____ wherein a hydrogen content of the sputtering target material is 10 ppm or less, and

_____ wherein, in a particle size distribution of the powder, a cumulative volume of particles having a particle diameter of 5 μ m or less is 10% or less, and a cumulative volume of particles having a particle diameter of 30 μ m or less is 18% or more and 40% or less.

3. The sputtering target material according to claim 1,

_____ wherein the sputtering target material has a bending strength of

200 MPa or more, and

 wherein the bending strength is measured by a three-point bending test conducted by using a specimen having a longitudinal length of 4 mm, a width of 25 mm, and a thickness of 3 mm.

4. The method according to claim 2,

 wherein the sputtering target material has a bending strength of 200 MPa or more, and

 wherein the bending strength is measured by a three-point bending test conducted by using a specimen having a longitudinal length of 4 mm, a width of 25 mm, and a thickness of 3 mm.