Claims

1. An Fe-Pt-oxide-BN-based sintered compact for a sputtering target,
wherein the sintered compact comprises a Fe-Pt alloy phase being a magnetic body, and a non-magnetic material consisting of BN and an oxide wherein the non-magnetic material is present between the Fe-Pt alloy phase;
wherein a mass ratio of N to B (N/B) is in a range of 1.30 ± 0.1; and
wherein a relative density measured by the Archimedes method is 92.0% or more.

2. The Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to claim 1, comprising 33 mol% or more and 60 mol% or less of Pt and 5 mol% or more and 40 mol% or less of BN and the oxide in total, with the balance being Fe and incidental impurities.

3. The Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to claim 1, comprising 33 mol% or more and 60 mol% or less of Pt, 5 mol% or more and 40 mol% or less of BN and the oxide in total, and 1 mol% or more and 15 mol% or less of one or more selected from Co, Zn, Ge, Rh, Ru, and Pd, with the balance being Fe and incidental impurities.

4. The Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to claim 1, comprising 33 mol% or more and 60 mol% or less of Pt, 5 mol% or more and 40 mol% or less of BN and the oxide in total, and 1 mol% or more and 15 mol% or less of C, with the balance being Fe and incidental impurities.

5. The Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to any one of claims 1 to 4, wherein the oxide is selected from Si oxide, Ti oxide, and Ta oxide.

6. A method of producing the Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to any one of claims 1 to 5, comprising: mixing a metal powder, an oxide powder, and a BN powder; and sintering at a temperature of 850°C or lower.

7. A method of producing the Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to any one of claims 1 to 5, comprising: mixing an Fe-Pt-based alloy powder with an oxide powder to form an oxide-alloy composite powder in which the oxide is finely dispersed within an Fe-Pt-based alloy; then adding a BN powder to the oxide-alloy composite powder to form a BN-containing oxide-alloy composite powder; and subsequently sintering the BN-containing oxide-alloy composite powder at a temperature of 850°C or lower.

8. A method of producing the Fe-Pt-oxide-BN-based sintered compact for a sputtering target according to any one of claims 1 to 5, comprising: strongly mixing an Fe-Pt-based alloy powder with an oxide powder to form an oxide-alloy composite powder in which the oxide is finely dispersed

within an Fe-Pt-based alloy; then adding a BN powder to the oxide-alloy composite powder and weakly mixing to form a BN-containing oxide-alloy composite powder; and subsequently sintering the BN-containing oxide-alloy composite powder at a temperature of 850°C or lower.