CLAIMS

[Claim 1]

An alloy article, having a predetermined chemical composition comprising:

Co, Cr, Fe, Ni and Ti, each within a range of 5 atomic % or more and 35 atomic % or less;

Mo within a range of more than 0 atomic % and 5 atomic % or less;

an element with a larger atomic radius than the atomic radiuses of the Co, Cr, Fe and Ni within a range of more than 0 atomic % and 4 atomic % or less, the total content of the element with a larger atomic radius and the Mo being 6 atomic % or less; and

a balance of inevitable impurities.

[Claim 2]

The alloy article according to claim 1, wherein the element with a larger atomic radius is at least one from among Ta, Nb, Hf, Zr, and Y.

[Claim 3]

The alloy article according to claim 1 or 2, wherein the chemical composition comprises:

the Co within a range of 20 atomic % or more and 35 atomic % or less;

the Cr within a range of 10 atomic % or more and 25 atomic % or less;

the Fe within a range of 10 atomic % or more and 25 atomic % or less;

the Ni within a range of 15 atomic % or more and 30 atomic % or less; and

the Ti within a range of 5 atomic % or more and 15 atomic % or less.

[Claim 4]

The alloy article according to any one of claims 1 to 3, wherein the alloy article is a powder.

[Claim 5]

The alloy article according to any one of claims 1 to 3, wherein the alloy article is a formed article, and

wherein the formed article comprises:

matrix phase crystal grains and

ultrafine particles with an average particle size of 100 nm or less, the ultrafine particles being dispersedly precipitated in the matrix phase crystal grains.

[Claim 6]

The alloy article according to claim 5, wherein the ultrafine particles comprise crystalline particles in that

the Ni and the Ti are concentrated than in the matrix phase crystal grains.

[Claim 7]

The alloy article according to claim 6, wherein the ultrafine particles further comprise crystalline particles in that the element with a larger atomic radius is concentrated than in the matrix phase crystal grains.

[Claim 8]

The alloy article according to any one of claims 5 to 7, wherein a product of a half of the average particle size of the ultrafine particles and a volume ratio of the ultrafine particles to the matrix phase crystal grains is 16 nm or less.

[Claim 9]

The alloy article according to any one of claims 5 to 8,

wherein the matrix phase crystal grains are equiaxed crystals with an average crystal grain size of 150 μm or less and

wherein the equiaxed crystals comprises face-centered cubic crystals or a mixture of face-centered cubic crystals and simple cubic crystals.

[Claim 10]

A product formed of an alloy article,

wherein the alloy article is the alloy article according to any one of claims 5 to 9 and

wherein the product has a corrosion rate of less than 0.9 $g/m^2/h$ when the product is immersed in 5% boiling sulfuric acid at 375 K.

[Claim 11]

The product according to claim 10, wherein the corrosion rate is less than 0.5 $g/m^2/h$.

[Claim 12]

The product according to claim 10 or 11, wherein the product is an impeller of a fluid machine.

[Claim 13]

A fluid machine, incorporating the impeller according to claim 12.

[Claim 14]

The fluid machine according to claim 13, wherein the fluid machine is a compressor or a pump.