CLAIMS

[Claim 1] A sputtering target of chromium, molybdenum, or a chromium-molybdenum alloy comprising crystal grains, wherein the sputtering target has a content of an amorphous phase, as determined according to the description, of 3% by volume or less and the purity of the target, as determined according to the description, exceeds 99.6%,

wherein an oxygen content, as determined according to the description, is 100 mass ppm or less, and

wherein an average crystal grain size of the crystal grains, as determined according to the description, is 150 μm or less.

[Claim 2] The sputtering target according to claim 1, wherein the sputtering target has the content of an amorphous phase, as determined according to the description, of 1% by volume or less.

[Claim 3] The sputtering target according to claim 2, wherein a maximum deviation of the average crystal grain size of the crystal grains in a depth direction, as determined according to the description, is 30 μm or less.

[Claim 4] The sputtering target according to any one of claims 1 to 3, wherein a crystal orientation of the crystal grains is a random orientation.

[Claim 5] The sputtering target according to any one of claims 1 to 4, wherein a sputtering surface has an area, as determined according to the description, of 200 cm^2 or more.

[Claim 6] The sputtering target according to any one of claims 1 to 5, wherein an average KAM value, as determined according to the description, is 2° or less.

[Claim 7] The sputtering target according to any one of claims 1 to 6, wherein a relative density, as determined according to the description, exceeds 99.6%.

[Claim 8] The sputtering target according to any one of claims 1 to 7, wherein the crystal grains have an average aspect ratio, as determined according to the description, of 1 or more and 1.8 or less.

[Claim 9] A method for producing a sputtering film, the method comprising

performing sputtering using the sputtering target according to any one of claims 1 to 8 to produce a sputtering film.

[Claim 10] A method for producing the sputtering target according to any one of claims 1 to 8, the method comprising:

a refining step including a plastic working step of subjecting an ingot made of chromium, molybdenum or a chromium-molybdenum alloy to plastic working treatment to obtain a plastically worked product and a heat treatment step of subjecting the plastically worked product to heating treatment,

wherein the plastic working step is a rolling step,

the rolling temperature that is the temperature at which the rolling step is performed, is 600°C or higher and 900°C or lower,

wherein the rolling reduction ratio of an ingot or a rolled product in each rolling pass is 6% or more and 15% or less of the thickness of the ingot or the rolled product before the rolling pass,

wherein the total rolling reduction ratio of the ingot in the rolling step is 30% or more, and

wherein the relative density of the ingot in the rolling step is 99% or more.

[Claim 11] The method for producing the sputtering target according to claim 10, wherein the refining step is repeated.