

CLAIMS

1. A copper alloy powder for additive manufacturing, used in producing an
additively manufactured article by any means selected from the group
consisting of a laser, electron beam and plasma, the copper alloy powder
containing:
more than 1.00 mass% and not more than 2.80 mass% of chromium,
with a balance consisting of copper and an incidental impurity element.
2. The copper alloy powder according to claim 1, containing not less than 1.22
mass% and not more than 2.60 mass% of chromium.
3. The copper alloy powder according to claim 1, containing not less than 1.22
mass% and not more than 1.78 mass% of chromium.
4. The copper alloy powder according to claim 1, containing not less than 1.22
mass% and not more than 1.46 mass% of chromium.
5. A method of producing an additively-manufactured article, comprising:
a first step of preparing the copper alloy powder according to any one of claims
1 to 4; and
a second step of producing an additively-manufactured article from the copper
alloy powder, the additively-manufactured article being produced such that
forming a powder layer including the copper alloy powder and solidifying the
copper alloy powder at a predetermined position in the powder layer to form a
shaped layer are sequentially repeated to stack such shaped layers to thus
produce the additively-manufactured article.
6. The method of producing an additively-manufactured article according to claim

5, further comprising a third step of heat-treating the additively-manufactured article.

5 7. The method of producing an additively-manufactured article according to claim 6, wherein in the third step, the additively-manufactured article is heat-treated at a temperature of not lower than 300°C.

10 8. The method of producing an additively-manufactured article according to claim 6 or 7, wherein in the third step, the additively-manufactured article is heat-treated at a temperature of not lower than 400°C.

15 9. The method of producing an additively-manufactured article according to any one of claims 6 to 8, wherein in the third step, the additively-manufactured article is heat-treated at a temperature of not higher than 700°C.

10. The method of producing an additively-manufactured article according to any one of claims 6 to 9, wherein in the third step, the additively-manufactured article is heat-treated at a temperature of not higher than 600°C.

20 11. An additively-manufactured article composed of a copper alloy, the additively-manufactured article containing more than 1.00 mass% and not more than 2.80 mass% of chromium, with a balance consisting of copper and an incidental impurity element, and having a relative density of not less than 96% and not more than 100% with respect to a theoretical density of the copper alloy and
25 having an electrical conductivity of not less than 10% IACS.

12. The additively-manufactured article according to claim 11, containing not less than 1.22 mass% and not more than 2.60 mass% of chromium.

13. The additively-manufactured article according to claim 11, containing not less than 1.22 mass% and not more than 1.78 mass% of chromium.
- 5 14. The additively-manufactured article according to claim 11, containing not less than 1.22 mass% and not more than 1.46 mass% of chromium.
- 15 15. The additively-manufactured article according to any one of claims 11 to 14, having an electrical conductivity of not less than 30% IACS.
- 10 16. The additively-manufactured article according to any one of claims 11 to 15, having an electrical conductivity of not less than 50% IACS.
- 15 17. The additively-manufactured article according to any one of claims 11 to 16, having an electrical conductivity of not less than 70% IACS.