

Title (en)

Process for improving the flexibility of cuprous semi-finished products

Title (de)

Verfahren zur Verbesserung der Biegegeschwindigkeit von Halbzeug aus Kupferlegierungen

Title (fr)

Procédé pour améliorer la flexibilité de demi-produits en alliage de cuivre

Publication

EP 0552479 B1 19961002 (DE)

Application

EP 92121734 A 19921221

Priority

DE 4201065 A 19920117

Abstract (en)

[origin: EP0552479A1] The invention relates to a process for improving the fatigue strength under reversed bending stresses of semi-finished copper alloy products. In this case, the copper alloy is melted, a preform is produced and the end form is obtained from the preform by usual steps of hot- and cold-forming. In order to improve the fatigue strength under reversed bending stresses as compared with conventionally manufactured semi-finished products, it is proposed according to the invention that the preform is produced by the process of spray-compacting and that a copper alloy is used which contains nitride-forming elements (such as, for example, zirconium, titanium, magnesium, chromium, aluminium, manganese, boron, niobium, tantalum, vanadium) individually or in combination in a concentration range of from 0.001 to 3.0% in total.

IPC 1-7

C23C 4/12; **C22F 1/08**

IPC 8 full level

B22D 23/00 (2006.01); **B22F 3/115** (2006.01); **C22C 1/10** (2006.01); **C22C 9/00** (2006.01); **C22F 1/08** (2006.01); **C23C 4/12** (2006.01); **C23C 4/123** (2016.01)

CPC (source: EP)

C22F 1/08 (2013.01); **C23C 4/123** (2016.01)

Cited by

GB2315441A; US6024778A; GB2315441B; EP1801812A3; US8580383B2

Designated contracting state (EPC)

CH DE FR GB IT LI SE

DOCDB simple family (publication)

EP 0552479 A1 19930728; **EP 0552479 B1 19961002**; AU 3118793 A 19930722; AU 663143 B2 19950928; DE 4201065 A1 19930722; DE 4201065 C2 19941208; DE 59207289 D1 19961107; FI 104640 B 20000315; FI 930161 A0 19930115; FI 930161 A 19930718; JP 3479919 B2 20031215; JP H07166264 A 19950627

DOCDB simple family (application)

EP 92121734 A 19921221; AU 3118793 A 19930114; DE 4201065 A 19920117; DE 59207289 T 19921221; FI 930161 A 19930115; JP 1966493 A 19930112