

Title (en)
Copper-Tin-Titanium alloy

Title (de)
Kupfer-Zinn-Titan-Legierung

Title (fr)
Alliage comprenant étain, titane et cuivre

Publication
EP 0926251 A1 19990630 (DE)

Application
EP 98123159 A 19981204

Priority
DE 19756815 A 19971219

Abstract (en)
A titanium-containing tin-bronze, of specific composition, is new. new copper-tin-titanium alloy has the composition (by wt.) 12-20% Sn, 0.002-1% Ti, balance Cu and impurities. ADDITIONALLY CLAIMED ARE: (i) a casting produced from the above alloy and exhibiting a segregated coarse phase content of less than 10 vol. , an undetectable content of segregated particles of greater than 50 microns cross-sectional size, a cold deformability of $\geq 20\%$ (w.r.t. cross-sectional change) and up to 10 vol. micro-segregation with a typical linear distribution of less than 20 microns width; and (ii) production of strip, wire, profile or tubular semifinished products of the above alloy by thin strip casting or spray compacting, followed by hot and/or cold working optionally with intermediate anneals.

Abstract (de)
Die Erfindung betrifft eine Kupfer-Zinn-Titan-Legierung, die aus 12 bis 20 Gew.-% Zinn, 0,002 bis 1 Gew.-% Titan, Rest Kupfer und üblichen Verunreinigungen besteht. Der Zusatz weiterer Elemente ist möglich. Halbzeug aus der erfindungsgemäßen Kupfer-Legierung wird vorzugsweise durch Dünnbandgießen oder Sprühkompaktieren hergestellt. Aufgrund einer besonders günstigen Kombination von hohen mechanischen Festigkeiten bei exzellenter Duktilität, kombiniert mit guter Korrosionsbeständigkeit, findet Halbzeug aus der erfindungsgemäßen Kupfer-Legierung vielfältige Verwendungsmöglichkeiten.

IPC 1-7
C22C 9/02

IPC 8 full level
B22F 3/115 (2006.01); **C22C 1/04** (2006.01); **C22C 9/02** (2006.01)

CPC (source: EP US)
B22F 3/115 (2013.01 - EP US); **C22C 1/0425** (2013.01 - EP US); **C22C 9/02** (2013.01 - EP US)

Citation (search report)
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• [X] CHEMICAL ABSTRACTS, vol. 122, no. 26, 26 June 1995, Columbus, Ohio, US; abstract no. 327909, SVERDLOV, V. YA. ET AL: "Critical currents of multifilamentary Nb₃Sn superconductors manufactured by using Cu-16%Sn and Cu-13%Sn-1%Ti bronzes" XP002098368 & PROC. INT. WORKSHOP CRIT. CURR. SUPERCOND., 7TH (1994), 585-8. EDITOR(S): WEBER, HARALD W. PUBLISHER: WORLD SCI., SINGAPORE, CODEN: 60VFAS
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Designated contracting state (EPC)
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EP 0926251 A1 19990630; **EP 0926251 B1 20030402**; DE 19756815 A1 19990701; DE 19756815 C2 20030109; DE 59807730 D1 20030508; ES 2196465 T3 20031216; PT 926251 E 20030829; US 6136103 A 20001024

DOCDB simple family (application)
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