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(54) Title: CU-NI-ZN-MN ALLOY

(57) Abstract: Precipitation hardened alloy on the basis of copper, zinc, nickel and manganese exhibiting a high strength and ductility with values similar to those of stainless steels in combination with excellent machinability. The inventive alloy family is characterized by fine fibre-like or globular precipitates that emerge during intermediate temperature annealing treatments, which in case of the unleaded variations significantly improves the machinability. The alloy of invention is particularly suited for free machining applications such as the production of pen tips and reservoirs for writing implements of reduced tip dimensions, where conventional Cu-Ni- Zn-Mn alloys fail due to lack of strength and where the corrosion resistance in gel-based inks is insufficient without restriction to other fields of application.

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. C22C9/04 C22C30/06
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
C22C C22F B43K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	CH 693 948 A5 (SWISSMETAL BOILLAT SA [CH]) 14 May 2004 (2004-05-14) cited in the application p. 3, "Tableau 2", l. 47-52; p. 4, "Tableau 3" -----	1-4, 15-20,22
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X	JP 1 177327 A (SANPO SHINDO KOGYO KK) 13 July 1989 (1989-07-13) p. 186, table 1, no. 1, 9, 20 ----- -/--	1-10, 13-18

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See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Radeck, Stephanie
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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INTERNATIONAL SEARCH REPORT

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