

Title (en)
Low nickel containing chromium-nickel-manganese-copper austenitic stainless steel

Title (de)
Austenitischer rostfreier CrNiMnCu Stahl mit niedrigem Nickel-Gehalt

Title (fr)
Acier inoxydable austénitique CrNiMnCu à basse teneur en nickel

Publication
EP 1431408 A1 20040623 (EN)

Application
EP 02028526 A 20021219

Priority
EP 02028526 A 20021219

Abstract (en)
An austenitic stainless steel includes (a) 0.03wt% to 0.12wt% of C, (b) 0.2wt% to 1.0wt% of Si, (c) 7.5wt% to 10.5wt% of Mn, (d) 14.0wt % to 16.0wt% of Cr, (e) 1.0wt% to 5.0wt% of Ni, (f) 0.04wt% to 0.25wt% of N, (g) 1.0wt% to 3.5wt% of Cu, (h) trace amount of Mo, and the balance being Fe and incidental impurities. The austenitic stainless steel has a delta - ferrite content less than 8.5 and equal to $6.77\text{\AA}(d)+(h)+1.5(b)\text{\AA}-4.85\text{\AA}(e)+30(a)+30(f)+0.5(c)+0.3(g)\text{\AA}-52.75$. <IMAGE>

IPC 1-7
C22C 38/58; **C22C 38/42**; **C22C 38/54**

IPC 8 full level
C22C 38/42 (2006.01); **C22C 38/54** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP)
C22C 38/42 (2013.01); **C22C 38/54** (2013.01); **C22C 38/58** (2013.01)

Citation (search report)

- [X] ES 2142756 A1 20000416 - ACERINOX SA [ES]
- [X] US 3756807 A 19730904 - HOSHINO K, et al
- [X] GB 2359095 A 20010815 - JINDAL STRIPS LTD [IN]
- [A] US 4946644 A 19900807 - SCHUMACHER WILLIAM J [US], et al
- [A] GB 2075550 A 19811118 - ARMCO INC
- [A] GB 995068 A 19650610 - ALLEGHENY LUDLUM STEEL
- [X] DATABASE CA [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SANCHEZ, R. ET AL: "Properties of an austenitic stainless with less than 2% nickel", XP002232037, retrieved from STN Database accession no. 124:152049
- [X] PATENT ABSTRACTS OF JAPAN vol. 010, no. 314 (C - 380) 24 October 1986 (1986-10-24)
- [A] PECKNER D ET AL: "HANDBOOK OF STAINLESS STEELS", MCGRAW-HILL, NEW YORK, ISBN: 0-07-049147-X, XP002053955 & INNOVATION STAINLESS STEEL, EUROPEAN STAINLESS STEEL CONFERENCE, 1ST, FLORENCE, OCT. 11-14, 1993 (1993), VOLUME 2, 2.231-6 PUBLISHER: ASSOCIAZIONE ITALIANA DI METALLURGIA, MILAN, ITALY., XP001135086

Cited by
EP2566994A4; CN112593059A; EP2163659A1; US8608873B2; US8540933B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)
EP 1431408 A1 20040623; **EP 1431408 B1 20061122**; AT E346174 T1 20061215; DE 60216304 D1 20070104; DE 60216304 T2 20070621; DK 1431408 T3 20070312; ES 2277611 T3 20070716; PT 1431408 E 20070228; SI 1431408 T1 20070630

DOCDB simple family (application)
EP 02028526 A 20021219; AT 02028526 T 20021219; DE 60216304 T 20021219; DK 02028526 T 20021219; ES 02028526 T 20021219; PT 02028526 T 20021219; SI 200230469 T 20021219