

Title (en)

Stainless austenoferritic steel with very low nickel content and showing high elongation under tensile load

Title (de)

Rostfreier austenoferritischer Stahl mit sehr niedrigem Nickelgehalt und hoher Zugverformung

Title (fr)

Acier inoxydable austénoferrique à très bas nickel et présentant un fort allongement en traction

Publication

EP 0889145 B1 20030319 (FR)

Application

EP 98401308 A 19980602

Priority

FR 9708180 A 19970630

Abstract (en)

[origin: EP0889145A1] A novel austenitic-ferritic stainless steel, with low nickel content and high tensile elongation, has the composition (by wt.) less than 0.04% C, 0.4-1.2% (exclusive) Si, 2-4% (exclusive) Mn, 0.1-1% (exclusive) Ni, 18-22% (exclusive) Cr, 0.05-4% (exclusive) Cu, less than 0.03% S, less than 0.1% P, 0.1-0.3% (exclusive) N and less than 3% Mo. The steel has a two phase structure containing 30-70% austenite and has a Creq/Nieq ratio of 2.3-2.75, where Creq = Cr% + Mo% + 1.5Si% and Nieq = Ni% + 0.33Cu% + 0.5Mn% = 30C% + 30N%. The austenite stability of the steel is controlled by an IM index of 40-115, where IM = 551 - 805(C + N)% - 8.52Si% - 8.57Mn% - 12.51Cr% - 36Ni% - 34.5Cu% - 14Mo%.

IPC 1-7

C22C 38/58; **C22C 38/00**

IPC 8 full level

C22C 38/00 (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP US)

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Cited by

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