

Title (en)

High strength corrosion-resistant duplex alloy.

Title (de)

Hochfeste korrosionsbeständige Duplexlegierung.

Title (fr)

Alliage à structure duplex, à haute résistance mécanique et résistant à la corrosion.

Publication

EP 0455625 B1 19940706 (DE)

Application

EP 91890088 A 19910425

Priority

AT 100790 A 19900503

Abstract (en)

[origin: EP0455625A1] The invention relates to a readily weldable duplex alloy having excellent corrosion resistance and a high level of mechanical properties, coupled with good cutting properties. After forced cooling from a temperature between 1020 DEG C and 1150 DEG C, the alloy according to the invention contains ferrite and austenite in a ratio of 40 to 60 % and contains, in % by weight, essentially 0.15 - 0.55 Si, 2.0 - 2.9 Mn, 23.0 - 27.0 Cr, 3.0 - 5.0 Mo, 5.6 - 8.0 Ni, 0.5 - 1.0 W, 0.2 - 0.35 N and 0.04 - 0.25 V, the remainder being iron, the ratio value G of the nickel content to the manganese content being greater than 2.0 and smaller than 4.0, and the structure phase factor P, formed from $[2.9 \times (\% \text{ Cr}) + 2.9 \times (\% \text{ Mo}) + 1.4 \times (\% \text{ W}) + 4.4 \times (\% \text{ Si}) - 2.1 \times (\% \text{ Ni}) - 1.0 \times (\% \text{ Mn}) - 62.5 (\% \text{ N})]$ having a value greater than 40 and smaller than 65.

IPC 1-7

C22C 38/58

IPC 8 full level

C22C 38/58 (2006.01)

CPC (source: EP)

C22C 38/58 (2013.01)

Cited by

EP0937783A1; EP2947169A4; EP0864663A4; EA009108B1; EP0897018A1; AT405297B; EA009438B1; EP2684973A4; US9365914B2; WO03020995A1; WO03020994A1; US6174386B1; US9862168B2; US7892366B2; WO2004079027A1; WO2004079028A1; WO2009054799A1; EP2215421A4

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0455625 A1 19911106; EP 0455625 B1 19940706; AT 397515 B 19940425; AT A100790 A 19930915; AT E108220 T1 19940715; DE 59102100 D1 19940811

DOCDB simple family (application)

EP 91890088 A 19910425; AT 100790 A 19900503; AT 91890088 T 19910425; DE 59102100 T 19910425