

Title (en)

Duplex steel alloy

Title (de)

Duplexstahllegierung

Title (fr)

Alliage d'acier duplex

Publication

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Application

EP 06113879 A 20020902

Priority

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Abstract (en)

[origin: WO03020994A1] The present invention relates to a stainless steel alloy, closer determined a duplex stainless steel alloy with ferritic-austenitic matrix and with high resistance to corrosion in combination with good structural stability and hotworkability, in particular a duplex stainless steel with a content of ferrite of 40-65% and a well balanced composition that imparts material corrosion properties, which makes it is more suitable for use in chloride-containing environments than earlier been considered being possible. The total PRE- or PREW-number exceeds 44 a PRE-number on at least between 46 and 50 in both the austenite phase and the ferrite phase, whereby $PRE = \%Cr + 3,3\%Mo + 16N$ and $PREW = \%Cr + 3,3(\%Mo + 0,5\%W) + 16N$, wherein % considers weight-% and ratio between PRE(W)-value for the austenite phase and PRE(W)-value for the ferrite phase lies between 0,90 and 1,15. These purposes are fulfilled according to the present invention with duplex stainless steel alloys which contain (in weight-%) up to 0,03% C, up to 0,5% Si, 24,0-30,0% Cr, 4,9-10,0% Ni, 3,0-5,0% Mo, 0,28-0,5% N, 0-3,0% Mn, 0-0,0030% B, up to 0,010%, 0-0,03% Al, 0-0,010% Ca, 0-3,0% W, 0-2,0% Cu, 0-3,5% Co, 0-0,3% Ru, balance Fe and inevitable impurities.

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