

Title (en)

USE OF AN AUSTENITIC STAINLESS ALLOY IN WELDABLE HIGH-PERFORMANCE STRUCTURAL ELEMENTS

Publication

EP 0154601 A3 19870429 (DE)

Application

EP 85730010 A 19850128

Priority

DE 3407305 A 19840224

Abstract (en)

[origin: US4584031A] Corrosionproof austenitic steel is made and used by providing a particular composition and cold working and recrystallize annealing the alloy to obtain an ultrafine grain structure with average linear intercept length of grains below 10 micrometers and an increased 0.2% offset yield strength at room temperature and higher. Parts thus made are welded together using a high strength nitrogen containing corrosion resistant steel or nickel alloy as filler and the ultrafine alloy as parent metal which will not fracture in the seam transition region of the welding.

IPC 1-7

C21D 8/00; **C22C 38/40**; **C21D 6/00**

IPC 8 full level

C21D 6/00 (2006.01); **C21D 8/00** (2006.01); **C22C 38/00** (2006.01)

CPC (source: EP US)

C21D 6/004 (2013.01 - EP US); **C21D 8/005** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **Y10T 428/12965** (2015.01 - EP US)

Citation (search report)

- [Y] US 3723193 A 19730327 - REIMANN G, et al
- [Y] GB 1061511 A 19670315 - INT NICKEL LTD
- [A] DE 1483041 A1 19690130 - ATOMIC ENERGY AUTHORITY UK
- [A] GB 1124287 A 19680821 - ATOMIC ENERGY AUTHORITY UK
- [A] GB 1169393 A 19691105 - UGINE KUHLMANN [FR]
- [YD] DEW-TECHNISCHE BERICHTe, Band 13, nr. 2, 1973, Seite 94-100; W.HEIMANN et al.: "Entwicklung und Eigenschaften eines nichtmagnetisierbaren rostfreien und seewasserbeständigen Stahles mit erhöhter 0,2-Grenze"
- [Y] SCANDINAVIAN JOURNAL OF METALLURGY, Band 6, 1977, Seiten 156-169, Stockholm, SE; R.SANDSTRÖM et a.: "Temperature dependence of tensile properties and strengthening of nitrogen alloyed austenitic stainless steels"

Cited by

EP0264357A3; US4981647A; EP0241553A4; FR2626893A1; GB2215737A

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