

Title (en)

High strength and high toughness stainless steel and method of manufacturing the same.

Title (de)

Hochfester rostfreier Stahl mit guten Zähigkeitseigenschaften, und Verfahren zu seiner Herstellung.

Title (fr)

Acier inoxydable à haute résistance et haute ténacité, et procédé pour sa fabrication.

Publication

**EP 0498105 A1 19920812 (EN)**

Application

**EP 91308914 A 19910930**

Priority

- JP 3914791 A 19910208
- JP 13756090 A 19900528

Abstract (en)

A high strength, high toughness stainless steel consisting, by weight percent of: 0.16 to 0.25% C, up to 2.0% Si, up to 1.0% Mn, up to 2.0% Ni, 11 to 15% Cr, 12 to 21% Co, 0.5 to 3.0% Mo, at least one of the two following elements 0.1 to 0.5% V and up to 0.1% Nb, the balance being Fe and incidental impurities. This steel is produced by a method comprising the steps of: preparing a stainless steel having the above-described composition, subjecting the steel to a solution heat treatment at a temperature of 950 to 1150 DEG quenching the steel; subjecting the steel to a sub zero treatment at a temperature of -50 to -100 DEG C; and subjecting the steel to a tempering at a temperature of 120 to 450 DEG C.

IPC 1-7

**C22C 38/52**; **C22C 38/30**

IPC 8 full level

**C21D 6/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/30** (2006.01); **C22C 38/52** (2006.01)

CPC (source: EP)

**C22C 38/30** (2013.01); **C22C 38/52** (2013.01)

Citation (search report)

- [X] GB 833240 A 19600421 - FIRTH VICKERS STAINLESS STEELS LTD
- [A] GB 882187 A 19611115 - UNITED STEEL COMPANIES LTD
- [X] NL 7201424 A 19730807
- [AD] US 3756808 A 19730904 - WEBSTER D
- [AD] US 3873378 A 19750325 - WEBSTER DONALD
- [A] US RE26225 E 19670620

Cited by

CN109023077A; CN102527892A; EP0664342A1; CN102990313A; WO2004024970A1

Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

**EP 0498105 A1 19920812**; **EP 0498105 B1 19950215**; DE 69107439 D1 19950323; DE 69107439 T2 19950622; JP 3342501 B2 20021111; JP H04214844 A 19920805

DOCDB simple family (application)

**EP 91308914 A 19910930**; DE 69107439 T 19910930; JP 3914791 A 19910208