

Title (en)

FERRITIC STAINLESS STEEL WITH EXCELLENT OXIDATION RESISTANCE, GOOD HIGH TEMPERATURE STRENGTH, AND GOOD FORMABILITY

Title (de)

ROSTFREIER FERRITISCHER STAHL MIT EINER GUTEN FESTIGKEIT BEI HOHEN TEMPERATUREN, EINER GUTEN OXIDATIONSBESTÄNDIGKEIT UND EINER GUTEN VERFORMBARKEIT

Title (fr)

ACIER INOXYDABLE FERRITIQUE AYANT UNE EXCELLENTE RÉSISTANCE À L'OXIDATION, UNE BONNE RÉSISTANCE À HAUTE TEMPÉRATURE ET UNE BONNE FORMABILITÉ

Publication

EP 2890825 A1 20150708 (EN)

Application

EP 13759947 A 20130828

Priority

- US 201261695771 P 20120831
- US 201313837500 A 20130315
- US 2013056999 W 20130828

Abstract (en)

[origin: WO2014036091A1] Ferritic stainless steels with good oxidation resistance, good high temperature strength, and good formability are produced with Ti addition and low A1 content for room temperature formability resulting from equiaxed as-cast grain structures. Columbium (niobium) and copper are added for high temperature strength. Silicon and manganese are added for oxidation resistance. The ferritic stainless steels provide better oxidation resistance than ferritic stainless steels of 18Cr-2Mo and 15Cr-Cb-Ti-Si-Mn. In addition, they are generally less costly to produce than 18Cr-2Mo.

IPC 8 full level

C22C 38/02 (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/20** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01)

CPC (source: EP KR RU US)

C21D 6/002 (2013.01 - EP US); **C22C 38/001** (2013.01 - EP US); **C22C 38/004** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/28** (2013.01 - RU); **C22C 38/38** (2013.01 - KR); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C22C 38/46** (2013.01 - EP KR US); **C22C 38/48** (2013.01 - EP KR US); **C22C 38/50** (2013.01 - EP KR US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - KR); **C21D 8/0226** (2013.01 - EP US); **C21D 8/0236** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP US); **C21D 8/0273** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2014036091 A1 20140306; AU 2013308922 A1 20150305; AU 2013308922 B2 20160804; BR 112015004228 A2 20170704; CA 2882361 A1 20140306; CA 2882361 C 20190618; CN 104769147 A 20150708; CN 104769147 A8 20181009; CN 108823509 A 20181116; EP 2890825 A1 20150708; EP 2890825 B1 20190403; ES 2728229 T3 20191023; HR P20190864 T1 20190628; HU E043997 T2 20190930; JP 2015532684 A 20151112; JP 6194956 B2 20170913; KR 20150080485 A 20150709; KR 20200028502 A 20200316; MX 2015002677 A 20150512; MY 172722 A 20191211; PL 2890825 T3 20190930; RS 58807 B1 20190731; RU 2015108849 A 20161020; RU 2650467 C2 20180413; SI 2890825 T1 20190628; US 2014065005 A1 20140306; US 2014065006 A1 20140306; ZA 201502075 B 20160330

DOCDB simple family (application)

US 2013056999 W 20130828; AU 2013308922 A 20130828; BR 112015004228 A 20130828; CA 2882361 A 20130828; CN 201380045477 A 20130828; CN 201810791340 A 20130828; EP 13759947 A 20130828; ES 13759947 T 20130828; HR P20190864 T 20190509; HU E13759947 A 20130828; JP 2015529983 A 20130828; KR 20157008118 A 20130828; KR 20207006567 A 20130828; MX 2015002677 A 20130828; MY PI2015000506 A 20130828; PL 13759947 T 20130828; RS P20190532 A 20130828; RU 2015108849 A 20130828; SI 201331448 T 20130828; US 201313837500 A 20130315; US 201314010646 A 20130827; ZA 201502075 A 20150326