

Title (en)

LOW-NI AUSTENITIC STAINLESS STEEL WITH EXCELLENT HOT WORKABILITY AND HYDROGEN EMBRITTLEMENT RESISTANCE

Title (de)

AUSTENITISCHER EDELSTAHL MIT NIEDRIGEM NI-GEHALT MIT HERVORRAGENDER HEISSVERARBEITBARKEIT UND
WASSERSTOFFVERSPRÖDUNGSBESTÄNDIGKEIT

Title (fr)

ACIER INOXYDABLE AUSTÉNITIQUE À FAIBLE TENEUR EN NI PRÉSENTANT D'EXCELLENTES PROPRIÉTÉS D'OUVRABILITÉ À CHAUD ET
DE RÉSISTANCE À LA FRAGILISATION PAR L'HYDROGÈNE

Publication

EP 3674434 A4 20200701 (EN)

Application

EP 18849053 A 20180806

Priority

- KR 20170105892 A 20170822
- KR 2018008871 W 20180806

Abstract (en)

[origin: EP3674434A1] The disclosure discloses low Ni austenitic stainless steel that improves hot workability and hydrogen embrittlement resistance that may occur due to a decrease in Mn and Ni content. In accordance with one aspect of the disclosure, an austenitic stainless steel includes: by weight percent, C: 0.05-0.15%, Si: 0.2-0.7%, Mn: 2.0-5.0%, Ni: 2.0-5.0%, Cr: 17.0-19.0%, P: less than 0.1%, S: less than 0.01% , Cu: 1.0-3.0%, N: 0.15-0.30%, and the remainder of Fe and other inevitable impurities, and a crack resistance index (CRN) value is 0 or more, and a Md30 value satisfies the range -30 to 0 °C.\

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

- [XI] US 2012034126 A1 20120209 - NYLOEF LARS [SE], et al
- [A] JP 2012172212 A 20120910 - NISSHIN STEEL CO LTD
- [A] US 2003102058 A1 20030605 - ISHIKAWA HANJI [JP], et al
- [A] US 2010047105 A1 20100225 - BERGSTROM DAVID S [US], et al
- [A] US 2009041613 A1 20090212 - SUZUKI SATOSHI [JP], et al
- See references of WO 2019039768A1

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

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JP 7117369 B2 20220812; KR 101952808 B1 20190228; WO 2019039768 A1 20190228

DOCDB simple family (application)

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