

Title (en)
DUPLEX STAINLESS STEEL MATERIAL

Title (de)
DUPLEXEDELSTAHL MATERIAL

Title (fr)
MATÉRIAU D'ACIER INOXYDABLE DUPLEX

Publication
EP 4019651 A4 20221102 (EN)

Application
EP 20853663 A 20200818

Priority
• JP 2019149844 A 20190819
• JP 2020031050 W 20200818

Abstract (en)
[origin: US2022145438A1] The duplex stainless steel material according to the present disclosure has a chemical composition consisting of, in mass %, C: 0.030% or less, Si: 0.20 to 1.00%, Mn: 0.50 to 7.00%, P: 0.040% or less, S: 0.0100% or less, Al: 0.100% or less, Ni: 4.20 to 9.00%, Cr: 20.00 to 28.00%, Mo: 0.50 to 2.00%, Cu: 1.90 to 4.00%, N: 0.150 to 0.350%, V: 0.01 to 1.50%, and one or more types of element selected from the group consisting of Ca: 0.0001 to 0.0200% and Mg: 0.0001 to 0.0200%, with the balance being Fe and impurities, and satisfying Formulae (1) and (2) described in the description, a microstructure consisting of 35.0 to less than 50.0% of ferrite in volume ratio and austenite as the balance, and a yield strength of 550 MPa or more.

IPC 8 full level
C22C 38/42 (2006.01); **C21D 1/18** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (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); **C22C 38/58** (2006.01)

CPC (source: EP US)
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Citation (search report)
• [X] EP 2754726 A1 20140716 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
• [XI] EP 2684973 A1 20140115 - NIPPON STEEL & SUMIKIN SST [JP]
• [A] WO 2017208946 A1 20171207 - NIPPON STEEL & SUMITOMO METAL CORP [JP]
• [A] US 2013312880 A1 20131128 - MOTOYA DAISUKE [JP], et al
• [A] US 2013315776 A1 20131128 - YAMADA KENTA [JP], et al

Designated contracting state (EPC)
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BA ME

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KH MA MD TN

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US 2022145438 A1 20220512; CA 3148069 A1 20210225; CA 3148069 C 20231024; EP 4019651 A1 20220629; EP 4019651 A4 20221102; JP 7173359 B2 20221116; JP WO2021033672 A1 20210225; WO 2021033672 A1 20210225

DOCDB simple family (application)
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