

Title (en)
CU-CONTAINING LOW ALLOY STEEL HAVING EXCELLENT BALANCE BETWEEN STRENGTH AND LOW-TEMPERATURE TOUGHNESS AND METHOD FOR PRODUCING SAME

Title (de)
CU-HALTIGER NIEDRIGLEGIERTER STAHL MIT HERVORRAGENDER BALANCE ZWISCHEN FESTIGKEIT UND NIEDRIGTEMPERATURBESTÄNDIGKEIT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
ACIER FAIBLEMENT ALLIÉ À TENEUR EN CU PRÉSENTANT UN EXCELLENT ÉQUILIBRE ENTRE RÉSISTANCE ET TÉNACITÉ À BASSE TEMPÉRATURE ET SON PROCÉDÉ DE PRODUCTION

Publication
EP 3421630 A1 20190102 (EN)

Application
EP 17756207 A 20170208

Priority
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• JP 2017004617 W 20170208

Abstract (en)
Provided is a Cu-containing low alloy steel having excellent balance between strength and low-temperature toughness. The Cu-containing low alloy steel has a chemical composition comprising, by mass%, C: 0.01 to 0.08%, Si: 0.10 to 0.40%, Mn: 0.80 to 1.80%, Ni: 0.80 to 2.50%, Cr: 0.50 to 1.00%, Cu: 0.80 to 1.50%, Mo: 0.20 to 0.60%, Al: 0.010 to 0.050%, Nb: 0.030 to 0.080%, and N: 0.005 to 0.020%, and further comprising Ca: 0.010% or less as needed, and consisting of Fe and inevitable impurities as the balance; has a 0.2% yield strength of 525 MPa or higher. The Cu-containing low alloy steel has a ductile-brittle fracture appearance transition temperature (FATT) as measured by the 2 mm V-notch Charpy impact test of -70°C or less.

IPC 8 full level
C22C 38/00 (2006.01); **C21D 1/19** (2006.01); **C21D 6/00** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/48** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)
C21D 1/18 (2013.01 - KR); **C21D 1/19** (2013.01 - EP US); **C21D 1/78** (2013.01 - KR); **C21D 6/00** (2013.01 - EP US); **C21D 6/002** (2013.01 - EP US); **C21D 6/004** (2013.01 - KR); **C21D 6/005** (2013.01 - EP US); **C21D 6/008** (2013.01 - EP US); **C21D 8/0205** (2013.01 - EP US); **C21D 9/46** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C22C 38/48** (2013.01 - EP KR US); **C22C 38/58** (2013.01 - EP KR US)

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