Title (en)

HIGH STRENGTH STEEL PLATE FOR NUCLEAR REACTOR CONTAINMENT VESSEL AND METHOD OF MANUFACTURING THE SAME

Title (de)

HOCHFESTE STAHLPLATTE FÜR EINEN FLÜSSIGKEITSBEHÄLTER EINES NUKLEARREAKTORS SOWIE VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)

PLAQUE D'ACIER À HAUTE RÉSISTANCE POUR ENCEINTE DE CONFINEMENT DE RÉACTEUR NUCLÉAIRE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 2370608 A2 20111005 (EN)

Application

EP 09835239 A 20091221

Priority

- KR 2009007647 W 20091221
- KR 20080134885 A 20081226

Abstract (en)

[origin: WO2010074473A2] There is provided a high strength steel plate including, by weight: 0.03% to 0.20% C, 0.15% to 0.55% Si, 0.9% to 1.5% Mn, 0.001% to 0.05% Al, 0.030% or less P, 0.030% or less S, 0.30% or less Cr, 0.2% or less Mo, 0.6% or less Ni, 0.07% or less V, 0.04% or less Nb, 5 ppm to 50 ppm Ca, 0.005% to 0.025% Ti, 0.0020% to 0.0060% N, 0.0005% to 0.0020% B, the balance of F and unavoidable impurities. The steel plate may be formed of tempered martensite, and conditions for cooling and recrystallization controlled rolling are optimized so as to control an average grain size of a microstructure and an aspect ratio of structure grains. Accordingly, a superior high- strength steel plate that can be used for an atomic plant, for example, an atomic plant rated at IOOOMW or more by having a tensile strength of at least 650 MPa and an impact toughness of at least 200 J at -5O°C, and a method of manufacturing the same can be provided.

IPC 8 full level

C22C 38/00 (2006.01); **C21D 8/02** (2006.01)

CPC (source: EP KR US)

C21D 8/0226 (2013.01 - EP KR US); **C21D 8/0263** (2013.01 - EP KR US); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/002** (2013.01 - KR); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/14** (2013.01 - EP US); **C22C 38/44** (2013.01 - KR); **C22C 38/46** (2013.01 - KR); **C22C 38/48** (2013.01 - KR); **C22C 38/50** (2013.01 - KR); **C22C 38/54** (2013.01 - KR); C21D 2211/008 (2013.01 - EP KR US)

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