

Title (en)

FIRE-RESISTANT HIGH-STRENGTH ROLLED STEEL MATERIAL AND METHOD FOR PRODUCTION THEREOF

Title (de)

FEUERFESTES GEWALZTES STAHLMATERIAL MIT HOHER FESTIGKEIT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

MATÉRIAU RESISTANT AU FEU D'ACIER LAMINÉ À HAUTE RÉSISTANCE ET SON PROCÉDÉ DE PRODUCTION

Publication

**EP 1983069 A1 20081022 (EN)**

Application

**EP 07708393 A 20070208**

Priority

- JP 2007052658 W 20070208
- JP 2006030962 A 20060208

Abstract (en)

A fire resistant high strength rolled steel material superior in fire resistance and toughness used for a structural member of a building etc. containing, by mass%, C: 0.005% to less than 0.04%, Mn: 0.8 to 1.7%, Si: 0.05 to less than 0.4%, Nb: 0.02 to 1%, Ti: 0.005 to 0.02%, N: 0.005% or less, B: 0.0003 to 0.003%, and Al: 0.005% to 0.03%, and a balance of Fe and unavoidable impurities, and having the ratio Ti/N of 2 to 8, the value C-Nb/7.74 of 0.02% or less, and having the ratio of the 0.2% yield strength at 600°C to the yield strength at room temperature of 0.50 or more.

IPC 8 full level

**B21B 3/00** (2006.01); **C21D 8/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/14** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP KR US)

**B21B 3/00** (2013.01 - KR); **C21D 8/00** (2013.01 - EP US); **C21D 8/0263** (2013.01 - EP KR US); **C21D 8/0463** (2013.01 - EP KR US); **C22C 38/004** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - KR); **C22C 38/12** (2013.01 - EP KR US); **C22C 38/14** (2013.01 - EP KR US); **B21B 3/00** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1983069 A1 20081022**; **EP 1983069 A4 20110302**; CN 101379209 A 20090304; JP 5114743 B2 20130109; JP WO2007091725 A1 20090702; KR 101018055 B1 20110302; KR 20080077240 A 20080821; US 2009020190 A1 20090122; WO 2007091725 A1 20070816

DOCDB simple family (application)

**EP 07708393 A 20070208**; CN 200780004868 A 20070208; JP 2007052658 W 20070208; JP 2007557917 A 20070208; KR 20087016006 A 20070208; US 22369007 A 20070208