

Title (en)

HIGHLY PROCESSABLE STEEL SHEET FOR THREE-PIECE WELDED CAN AND METHOD FOR PRODUCING SAME

Title (de)

HOCHVERARBEITBARES STAHLBLECH FÜR DREITEILIGE GESCHWEISSTE DOSE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TÔLE D'ACIER QUI PEUT ÊTRE TRÈS FACILEMENT TRAITÉE POUR UNE BOÎTE DE CONSERVE SOUDÉE EN TROIS PARTIES ET PROCÉDÉ DE FABRICATION ASSOCIÉ

Publication

**EP 2468909 A1 20120627 (EN)**

Application

**EP 10809987 A 20100812**

Priority

- JP 2009189970 A 20090819
- JP 2010063951 W 20100812

Abstract (en)

A practical high-workability steel sheet for three-piece welded cans contains, in percent by mass, more than 0.0015% to 0.0030% of carbon, 0.10% or less of silicon, 0.20% to 0.80% of manganese, 0.001% to 0.020% of phosphorus, 0.001% to 0.020% of sulfur, more than 0.040% to 0.100% of aluminum, 0.030% or less of nitrogen, and 0.0002% to 0.0050% of boron, the balance being iron and incidental impurities, and has a tensile strength of 400 MPa or more in a direction perpendicular to a rolling direction and a fracture elongation of 15% or more in the direction perpendicular to the rolling direction. This steel sheet can be produced by hot-rolling a steel having the above composition at a finish rolling temperature of the Ar 3 transformation temperature to 960°C and a coiling temperature of 560°C to 750°C; subjecting the steel sheet to first cold rolling at a rolling reduction of 89% to 93%; annealing the steel sheet at 600°C to 790°C; and subjecting the steel sheet to second cold rolling at a rolling reduction of more than 6.0% to less than 10.0%.

IPC 8 full level

**C21D 9/46** (2006.01); **C22C 38/06** (2006.01)

CPC (source: EP KR)

**C21D 8/0205** (2013.01 - EP); **C21D 8/0405** (2013.01 - EP); **C21D 8/0426** (2013.01 - EP); **C21D 8/0436** (2013.01 - EP); **C21D 8/0463** (2013.01 - EP); **C21D 8/0468** (2013.01 - EP); **C21D 9/46** (2013.01 - EP KR); **C21D 9/48** (2013.01 - EP); **C22C 38/001** (2013.01 - EP); **C22C 38/002** (2013.01 - EP); **C22C 38/004** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/06** (2013.01 - EP KR)

Cited by

EP2918695A4; US10392682B2; US10851434B2; US10655199B2

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 SE SI SK SM TR

DOCDB simple family (publication)

**EP 2468909 A1 20120627**; **EP 2468909 A4 20130529**; **EP 2468909 B1 20161123**; CN 102482748 A 20120530; JP 2011042816 A 20110303; JP 5018843 B2 20120905; KR 101390263 B1 20140429; KR 20120031509 A 20120403; WO 2011021646 A1 20110224

DOCDB simple family (application)

**EP 10809987 A 20100812**; CN 201080036897 A 20100812; JP 2009189970 A 20090819; JP 2010063951 W 20100812; KR 20127002592 A 20100812