Title (en)

THIN STEEL SHEET FOR AUTOMOBILE EXCELLENT IN NOTCH FATIGUE STRENGTH AND METHOD FOR PRODUCTION THEREOF

Title (de)

DÜNNES STAHLBLECH FÜR AUTOS MIT HERVORRAGENDER KERBDAUERFESTIGKEIT UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

FEUILLE MINCE D'ACIER A RESISTANCE DE FATIGUE D'ENTAILLE EXCELLENTE, DESTINEE A UNE AUTOMOBILE, ET PROCEDE DE PRODUCTION

Publication

EP 1362930 A1 20031119 (EN)

Application

EP 02700640 A 20020220

Priority

- JP 0201498 W 20020220
- JP 2001049012 A 20010223
- JP 2001247306 A 20010816

Abstract (en)

The present invention provides a thin steel sheet, for automobile use, excellent in notch-fatigue strength, and a method for producing said steel sheet. Specifically, the present invention is a thin steel sheet for automobile use excellent in notch-fatigue strength, said steel sheet containing, in mass, 0.01 to 0.3% C, 0.01 to 2% Si, 0.05 to 3% Mn, 0.1% or less P, 0.01% or less S and 0.005 to 1% Al, with the balance consisting of Fe and unavoidable impurities, characterized in that, on a plane at an arbitrary depth within 0.5 mm from the surface of said steel sheet in the thickness direction thereof, the average of the ratios of the X-ray diffraction strength in the orientation component group of ä100ü<011> to ä223ü<110> to random X-ray diffraction strength is 2 or more and the average of the ratios of the X-ray diffraction strength in the three orientation components of ä554ü<225>, ä111ü<112> and ä111ü<110> to random X-ray diffraction strength is 4 or less and that the thickness of said steel sheet is in the range from 0.5 to 12 mm, and a method for producing said steel sheet by subjecting a steel slab containing aforementioned chemical components to rolling at a total reduction ratio of 25% or more in a temperature range of the Ar3 transformation temperature + 100 DEG C or lower. <IMAGE>

IPC 1-7

C22C 38/00; C22C 38/02; C22C 38/04; C22C 38/06; C21D 8/02; C21D 9/46

IPC 8 full level

B21B 1/26 (2006.01); **C21D 8/02** (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 38/58** (2006.01); **C23C 2/02** (2006.01); **C23C 2/40** (2006.01)

CPC (source: EP KR US)

C21D 8/02 (2013.01 - KR); **C21D 8/0226** (2013.01 - EP US); **C21D 8/0273** (2013.01 - EP 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 US); **C23C 2/02** (2013.01 - EP KR US); **C23C 2/0224** (2022.08 - EP KR US); **C23C 2/024** (2022.08 - EP KR US); **C23C 2/40** (2013.01 - EP US)

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Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

EP 1362930 A1 20031119; **EP 1362930 A4 20041124**; CA 2438393 A1 20020829; CN 1221680 C 20051005; CN 1492938 A 20040428; JP 2002322533 A 20021108; JP 3927384 B2 20070606; KR 100572762 B1 20060424; KR 20030077018 A 20030929; US 2004069382 A1 20040415; WO 02066697 A1 20020829

DOCDB simple family (application)

EP 02700640 A 20020220; CA 2438393 A 20020220; CN 02805402 A 20020220; JP 0201498 W 20020220; JP 2001247306 A 20010816; KR 20037010529 A 20030809; US 46894503 A 20030822