

Title (en)

PROCESS FOR PRODUCING HIGH-STRENGTH COLD-ROLLED STEEL PLATE FOR PRESS WORKING.

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER HOCHFESTERN KALT GEWALZTEN STAHLPLATTE FÜR PRESSFORMEREI.

Title (fr)

PROCEDE DE PREPARATION DE TOLE D'ACIER LAMINEE A FROID A HAUTE RESISTANCE POUR LE TRAVAIL A LA PRESSE.

Publication

EP 0016846 A4 19801114 (EN)

Application

EP 79901046 A 19800325

Priority

JP 10417278 A 19780826

Abstract (en)

[origin: EP0016846A1] A process for producing a high-strength cold-rolled steel plate for press working having a tensile strength of 35-45 kg/mm<2> and a yield ratio of 0.4-0.6, which comprises hot-rolling steel comprising 0.005-0.080% of C, not more than 0.30% of Si, 1.6-3.5% of Mn, 0.02-0.08% of sol. Al, 0.005-0.020% of N, and balance of Fe and unavoidable impurities, and, after cold-rolling, annealing at 660-750 DEG C for not shorter than 30 minutes.

IPC 1-7

C21D 9/46

IPC 8 full level

C21D 8/02 (2006.01); **C22C 38/00** (2006.01); **C21D 9/46** (2006.01); **C21D 9/48** (2006.01); **C22C 38/04** (2006.01)

CPC (source: EP)

C21D 8/0236 (2013.01); **C21D 9/48** (2013.01); **C22C 38/04** (2013.01); **C21D 8/0226** (2013.01); **C21D 8/0273** (2013.01)

Citation (search report)

- US 4062700 A 19771213 - HAYAMI SATOHIRO, et al
- SHEET METAL INDUSTRIES, Vol. 55, No. 2, February 1978, Redhill GB M. GRUMBACH: "High strength cold rolled sheet for deep drawing", page 180-190.
- JOURNAL OF METALS, Vol. 30, No 3, March 1978, New York US J. MORROW et al.: "Molybdenum in intercritically annealed dual-phase steel strip", pages 16-19.

Cited by

KR101147975B1; US9718883B2; US10280219B2

Designated contracting state (EPC)

FR

DOCDB simple family (publication)

EP 0016846 A1 19801015; EP 0016846 A4 19801114; EP 0016846 B1 19830817; DE 2953072 C1 19850321; GB 2039951 A 19800820; GB 2039951 B 19821006; IT 1121469 B 19860402; IT 7968708 A0 19790824; JP S5531159 A 19800305; WO 8000456 A1 19800320

DOCDB simple family (application)

EP 79901046 A 19800325; DE 2953072 A 19790825; GB 8013072 A 19790825; IT 6870879 A 19790824; JP 10417278 A 19780826; JP 7900227 W 19790825