

Title (en)

PROCESS FOR PRODUCING BATCH ANNEALED TAILOR ROLLED STRIP

Title (de)

VERFAHREN ZUR HERSTELLUNG MITTELS HAUBENGLÜHEN EINES MASSGESCHNEIDERTEN WALZBANDS

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE BANDE LAMINÉE SUR MESURE À RECUIT DISCONTINU

Publication

EP 3963114 A1 20220309 (EN)

Application

EP 20719642 A 20200421

Priority

- EP 19171939 A 20190430
- EP 2020061108 W 20200421

Abstract (en)

[origin: WO2020221628A1] The invention relates to a process for producing batch annealed tailor rolled steel strip is provided, comprising the following steps: a) casting a slab having a composition of (in wt%): C = 0 – 0.2; Mn = 2.0 – 4.0; Si ≤ 1.0; P = 0.001 – 0.05; S = 0.001 – 0.01; N ≤ 0.02; Al = 0.01 – 0.10; optionally: Ti ≤ 0.04; Nb ≤ 0.04; V ≤ 0.20; Mo ≤ 0.10; B ≤ 0.005; Cr ≤ 1.0; Ca ≤ 0.005, wherein Ti + Nb ≤ 0.05, wherein V + Mo ≤ 0.15, and wherein 2.0 ≤ Cr + Mn ≤ 4.0, the remainder being Fe and unavoidable impurities b) hot rolling the slab to a finish rolling temperature between 910 and 1100 °C c) cooling the hot rolled strip to a coiling temperature between 200 and 700 °C d) cold rolling the hot rolled strip with a reduction of at least 30% using differential rolling to produce different thicknesses within the strip, so as to produce a tailor rolled steel strip, to be cut into tailor rolled blanks e) batch annealing the differential cold rolled strip at a temperature between 650 °C and the Ac3 temperature of the strip, to obtain a batch annealed tailor rolled steel strip having a Rm of at least 570 MPa.

IPC 8 full level

B21B 37/26 (2006.01); **C21D 8/02** (2006.01); **C22C 38/04** (2006.01)

CPC (source: EP)

C21D 6/005 (2013.01); **C21D 6/008** (2013.01); **C21D 8/0226** (2013.01); **C21D 8/0236** (2013.01); **C21D 8/0273** (2013.01); **C21D 9/46** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/42** (2013.01); **C22C 38/44** (2013.01); **C22C 38/46** (2013.01); **C22C 38/48** (2013.01); **C22C 38/50** (2013.01); **C22C 38/54** (2013.01); **C22C 38/58** (2013.01); **C23C 2/06** (2013.01); **C23C 2/12** (2013.01); **C21D 1/673** (2013.01); **C21D 2211/002** (2013.01); **C21D 2211/005** (2013.01); **C21D 2211/008** (2013.01)

Citation (search report)

See references of WO 2020221628A1

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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020221628 A1 20201105; EP 3963114 A1 20220309

DOCDB simple family (application)

EP 2020061108 W 20200421; EP 20719642 A 20200421