

Title (en)

PRODUCTION METHOD FOR STEEL PRODUCT EXHIBITING EXCELLENT INTERNAL PROPERTIES

Title (de)

HERSTELLUNGSVERFAHREN FÜR EIN STAHLPRODUKT MIT HERVORRAGENDEN INTERNEN EIGENSCHAFTEN

Title (fr)

PROCÉDÉ DE PRODUCTION POUR UN PRODUIT D'ACIER PRÉSENTANT D'EXCELLENTE PROPRIÉTÉS INTERNES

Publication

**EP 2821152 A4 20150318 (EN)**

Application

**EP 13754965 A 20130215**

Priority

- JP 2012043682 A 20120229
- JP 2013053626 W 20130215

Abstract (en)

[origin: EP2821152A1] When a steel raw material of a round section is subjected to rolling at 3 or more passes to form a steel product of round section, the rolling is conducted by using a pair of upper and lower flat rolls at first pass, using a pair of upper and lower same or different caliber rolls at second or more passes until just before a last pass, and using a pair of upper and lower round caliber rolls at the last pass, under a condition that an area reduction in the first pass is within a range of less than a total area reduction from the raw material to the product. In this case, it is preferable that the area reduction in the first pass is not less than 50% of a total area reduction in the second or more passes.

IPC 8 full level

**B21B 1/00** (2006.01); **B21B 1/02** (2006.01); **B21B 1/16** (2006.01); **B21B 27/02** (2006.01)

CPC (source: EP US)

**B21B 1/02** (2013.01 - EP US); **B21B 1/16** (2013.01 - EP US); **B21B 1/22** (2013.01 - US)

Citation (search report)

- [XY] EP 1110630 A1 20010627 - KAWASAKI STEEL CO [JP], et al
- [Y] JP 2000197905 A 20000718 - DANIELI UNITED A DIVISION OF D, et al
- See references of WO 2013129128A1

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)

**EP 2821152 A1 20150107**; **EP 2821152 A4 20150318**; AR 090170 A1 20141022; CN 104136140 A 20141105; JP 2013180302 A 20130912; US 2015027191 A1 20150129; WO 2013129128 A1 20130906

DOCDB simple family (application)

**EP 13754965 A 20130215**; AR P130100597 A 20130227; CN 201380011180 A 20130215; JP 2012043682 A 20120229; JP 2013053626 W 20130215; US 201314382097 A 20130215