

Title (en)

Rolls for disposing at entry side or exit side of quenching zone of continuous annealing furnace and quenching zone unit using rolls

Title (de)

Rollen zum Verwenden in der Eingangs- oder Ausgangszone der Kühlstrecke eines Durchlaufglühofens und diese Kühlstrecke

Title (fr)

Rouleaux devant être installés dans l'entrée ou la sortie d'une zone de trempe d'un four de recuit continu et ledit zone de trempe

Publication

**EP 1167553 A1 20020102 (EN)**

Application

**EP 01305480 A 20010625**

Priority

JP 2000192378 A 20000627

Abstract (en)

A roll (20) that can be disposed before and/or after a quenching zone (4) of a continuous annealing furnace is provided. The roll (20) has a predetermined profile satisfying  $L_c \geq 0.7 \times W_{min}$ ;  $R = 0.1 \times 10^{-3}$  to  $+0.2 \times 10^{-3}$ ; and  $TR \geq 20$ , wherein  $L_c$  represents the length (mm) of a flat portion (22) in the center of the roll (20),  $W_{min}$  represents the minimum width (mm) of a steel strip (1),  $R$  represents the inclination of tapered portions (24) disposed at two sides of the roll (20), and  $TR$  represents the radius of curvature (m) of boundaries between the flat portion (22) and the tapered portions (24). The roll (20) can be used as a hearth roll (9) and/or a bridle roll (10) disposed at the entry side and/or the exit side of the quenching zone (4). <IMAGE>

IPC 1-7

**C21D 9/56**; **C21D 9/573**

IPC 8 full level

**C21D 1/00** (2006.01); **C21D 9/56** (2006.01); **C21D 9/573** (2006.01)

CPC (source: EP KR US)

**C21D 9/56** (2013.01 - KR); **C21D 9/563** (2013.01 - EP US); **C21D 9/573** (2013.01 - EP US)

Citation (search report)

- [A] EP 0036035 A2 19810923 - KAWASAKI STEEL CO [JP]
- [A] EP 0117083 A1 19840829 - NIPPON STEEL CORP [JP]
- [A] EP 0265700 A1 19880504 - KAWASAKI STEEL CO [JP]
- [X] F. WEBER ET AL: "Durchlauf-Glühanlage für Feinst- und Feinbleche bei der Rasselstein AG", STAHL UND EISEN., vol. 105, no. 6, 25 March 1985 (1985-03-25), VERLAG STAHL EISEN GMBH. DUSSELDORF., DE, pages 305 - 313, XP002182411, ISSN: 0340-4803
- [A] ELIAS A ET AL: "OPTIMIZATION OF THE MECHANICAL PROFILE OF ROLLS IN CONTINUOUS ANNEALING LINES", CAHIERS D'INFORMATIONS TECHNIQUES DE LA REVUE DE METALLURGIE, REVUE DE METALLURGIE. PARIS, FR, vol. 95, no. 7/8, 1 July 1998 (1998-07-01), pages 955 - 959, XP000785471, ISSN: 0035-1563

Cited by

WO2018172658A1; FR3063737A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 1167553 A1 20020102**; BR 0102581 A 20020205; CA 2351744 A1 20011227; CN 1340630 A 20020320; JP 2002003956 A 20020109; KR 20020001618 A 20020109; US 2002017747 A1 20020214

DOCDB simple family (application)

**EP 01305480 A 20010625**; BR 0102581 A 20010627; CA 2351744 A 20010626; CN 01125433 A 20010627; JP 2000192378 A 20000627; KR 20010036790 A 20010626; US 88397801 A 20010620