

Title (en)
Hot rolling method and apparatus

Title (de)
Verfahren und Einrichtung zum Warmwalzen

Title (fr)
Procédé et dispositif de laminage à chaud

Publication
EP 0730916 A1 19960911 (EN)

Application
EP 96103339 A 19960304

Priority
JP 4462095 A 19950303

Abstract (en)
Disclosed is a hot rolling method and a hot strip mill which can manufacture a thin strip easily, while attaining a low energy consumption and a high productivity. In a hot rolling method such that at least a continuous casting installation (7), a tunnel furnace (14), a rolling mill (10), a strip shear (11) and a down coiler (6) are arranged in sequence; a single slab manufactured by the continuous casting installation is kept warmed or heated by the tunnel furnace; the slab taken out of the tunnel furnace is rolled to a target strip thickness by the rolling mill; the rolled strip is coiled by the down coiler; and the rolled strip is cut off plural times so that the coiled rolled strip becomes a predetermined length, the target strip thickness on the outgoing side of the rolling mill is changed under rolling conditions, in order to manufacture a plurality of coils of different strip thicknesses from the same rolling plate. Further, when the rolling machine is composed of a roughing mill (12) and a finishing mill (13), the roughing and finishing mills are arranged close to each other; the slab kept warm or heated by the tunnel furnace is rolled to a bar having a target thickness by the roughing mill; the bar is continuously rolled to a target strip thickness by the finishing mill; and the bar thickness is changed in the roughing mill and/or the target strip thickness is changed in the finishing mill, under rolling conditions, in order to manufacture a plurality of coils of different strip thicknesses from the same rolling plate. <IMAGE>

IPC 1-7
B21B 37/26

IPC 8 full level
B21B 37/26 (2006.01); **B21B 1/46** (2006.01)

CPC (source: EP KR)
B21B 1/26 (2013.01 - KR); **B21B 15/00** (2013.01 - KR); **B21B 37/26** (2013.01 - EP); **B21B 1/463** (2013.01 - EP)

Citation (search report)
• [XAY] PATENT ABSTRACTS OF JAPAN vol. 8, no. 210 (M - 328) 26 September 1984 (1984-09-26)
• [Y] PATENT ABSTRACTS OF JAPAN vol. 8, no. 22 (M - 272) 31 January 1984 (1984-01-31)
• [XA] PATENT ABSTRACTS OF JAPAN vol. 7, no. 92 (M - 208) 16 April 1983 (1983-04-16)
• [A] PATENT ABSTRACTS OF JAPAN vol. 11, no. 131 (M - 584) 24 April 1987 (1987-04-24)
• [A] PATENT ABSTRACTS OF JAPAN vol. 5, no. 183 (M - 097) 21 November 1981 (1981-11-21)
• [A] PATENT ABSTRACTS OF JAPAN vol. 6, no. 76 (M - 128) 13 May 1982 (1982-05-13)
• [A] PATENT ABSTRACTS OF JAPAN vol. 11, no. 269 (M - 621) 2 September 1987 (1987-09-02)

Cited by
WO2016020134A1; US7967056B2; CN103071675A; EP0872288A3; RU2477661C2; US11167331B2; EP2982453A1; CN106536074A; RU2679321C2; US9138789B2; WO9924183A1; WO9904915A1; WO2007010565A1; US9314828B2; US8162032B2; WO2010049280A3; US10870139B2; EP2340133B2; EP3705198B1

Designated contracting state (EPC)
DE GB IT

DOCDB simple family (publication)
EP 0730916 A1 19960911; CN 1070393 C 20010905; CN 1137949 A 19961218; KR 100216641 B1 19990901; KR 960033577 A 19961022; TW 309456 B 19970701

DOCDB simple family (application)
EP 96103339 A 19960304; CN 96105790 A 19960303; KR 19960005545 A 19960304; TW 85106670 A 19960604