

Title (en)  
Low cost apparatus and method for manufacture of light gauge steel strip

Title (de)  
Preisgünstige Vorrichtung und Verfahren zur Herstellung von dünnem Stahlband

Title (fr)  
Dispositif et procédé à faible coût pour fabriquer de bande d'acier mince

Publication  
**EP 0937512 A1 19990825 (EN)**

Application  
**EP 99300895 A 19990208**

Priority  
GB 9803409 A 19980219

Abstract (en)  
The invention relates to a method for the manufacture of light gauge steel strip comprising, sequentially, continually casting steel (1), cutting or shearing (2) the hot cast steel into slabs and charging into a furnace (3) which either reheats and/or homogenises the temperature and metallurgical quality of the material, descaling (4) the steel, and then reducing the steel in a roughing stand (5) and then rolling in a Steckel mill (7), or reducing directly in a Steckel mill (7) wherein the hot steel strip exits the Steckel mill (7) with a gauge of approximately 1 mm and is passed in tandem into a finishing mill (15). Zoned cooling units (14) are arranged between the Steckel mill (7) exit and the finishing mill to homogenise the temperature along the length and width of the strip and the cooling units may be adjusted to enable a wide range of entry temperatures of the strip to the finishing stand (15) such that the steel strip entering the finishing stand (15) may be in either the intercritical or ferritic phase. <IMAGE>

IPC 1-7  
**B21B 1/26**; **B21B 1/46**; **B21B 1/34**

IPC 8 full level  
**B21B 1/26** (2006.01); **B21B 1/34** (2006.01); **B21B 1/46** (2006.01); **C21D 8/02** (2006.01); **C21D 9/46** (2006.01)

CPC (source: EP)  
**B21B 1/26** (2013.01); **B21B 1/34** (2013.01); **B21B 1/466** (2013.01); **B21B 2201/02** (2013.01); **B21B 2201/04** (2013.01); **B21B 2201/16** (2013.01)

Citation (search report)

- [XAY] EP 0761326 A1 19970312 - SCHLOEMANN SIEMAG AG [DE]
- [YA] WO 9746332 A1 19971211 - HOOGOVENS STAAL BV [NL], et al
- [YA] WO 9800248 A1 19980108 - HOOGOVENS STAAL BV [NL], et al
- [A] US 5647236 A 19970715 - TIPPINS GEORGE W [US]
- [DA] US 5689991 A 19971125 - KIRCHER WERNER [DE]
- [DA] EP 0449004 A2 19911002 - SCHLOEMANN SIEMAG AG [DE]
- [A] EP 0461743 A2 19911218 - ISHIKAWAJIMA HARIMA HEAVY IND [JP]
- [A] DJUMLIJA G: "ECONOMIC ROLLING CONCEPTS TO MEET THE STEEL MARKET FOR FLATS", STEEL TIMES - INCORPORATING IRON & STEEL, vol. 223, no. 11, 1 November 1995 (1995-11-01), pages 414/415, 426, XP000552095
- [A] GINZBURG V B ET AL: "HEAT CONSERVATION BETWEEN ROUGHING AND FINISHING TRAINS OF HOT STRIP MILLS", IRON AND STEEL ENGINEER, vol. 63, no. 4, 1 April 1986 (1986-04-01), pages 29 - 39, XP002063816

Cited by  
CN113500098A; CN113714288A; CN1292847C; CN112296118A; CN113617836A; CN114618883A; EP2128277A1; CN114535325A; ITUD20110013A1; CN103608131A; ITUD20100115A1; CN103180061A; CN117960782A; ITUD20100116A1; CN103180062A; CN115647055A; ITUD20110008A1; CN103619500A; CN114700364A; US11225697B2; US7854884B2; US7363792B2; US9186711B2; WO2009076890A1; WO2006063839A1; WO2012104710A1; WO2011158090A3; WO03064069A1; WO2012101492A1; WO2011158091A3; DE102015210863A1; WO2016165933A1; US9433983B2; DE202011105865U1; US9821369B2; WO2011158091A2; US9126246B2; EP2670539B1

Designated contracting state (EPC)  
AT DE FR GB IT

DOCDB simple family (publication)  
**EP 0937512 A1 19990825**; GB 2334464 A 19990825; GB 2334464 B 20000112; GB 9803409 D0 19980415; GB 9903168 D0 19990407; JP H11315325 A 19991116

DOCDB simple family (application)  
**EP 99300895 A 19990208**; GB 9803409 A 19980219; GB 9903168 A 19990216; JP 4057299 A 19990218