

Title (en)

RAIL MANUFACTURING METHOD AND RAIL MANUFACTURING APPARATUS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SCHIENEN UND VORRICHTUNG ZUR SCHIENENHERSTELLUNG

Title (fr)

PROCÉDÉ DE FABRICATION DE RAIL ET APPAREIL DE FABRICATION DE RAIL

Publication

**EP 3199255 A4 20171101 (EN)**

Application

**EP 15845139 A 20150910**

Priority

- JP 2014192919 A 20140922
- JP 2015004617 W 20150910

Abstract (en)

[origin: EP3199255A1] To provide a method and an apparatus for manufacturing a rail having high ductility in both a head portion and a foot portion. A heated steel rail material is hot-rolled, the temperature is adjusted by cooling the hot-rolled steel rail material, the steel rail material subjected to the temperature adjustment is processed into a rail shape by means of temperature-adjusted rolling at an area reduction ratio of 20% or more, and, in adjusting the temperature of the steel rail material, the surface portions of the steel rail material corresponding to a head portion and a foot portion of the rail shape so that the temperatures of the surface portions reach 500 °C or more and 1,000C or less.

IPC 8 full level

**B21B 1/085** (2006.01); **C21D 8/00** (2006.01); **C21D 9/04** (2006.01); **C22C 38/00** (2006.01); **C22C 38/60** (2006.01)

CPC (source: EP US)

**B21B 1/085** (2013.01 - EP US); **C21D 8/00** (2013.01 - EP US); **C21D 8/005** (2013.01 - EP US); **C21D 9/04** (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/60** (2013.01 - EP US); **C22C 38/00** (2013.01 - EP US)

Citation (search report)

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- [XA] WO 2005085481 A1 20050915 - NIPPON STEEL CORP [JP], et al
- [X] JP 2002226915 A 20020814 - NIPPON STEEL CORP
- [YA] JP 5472418 B2 20140416
- [YA] US 4575397 A 19860311 - HELLER WILHELM [DE]
- See references of WO 2016047076A1

Designated contracting state (EPC)

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Designated extension state (EPC)

BA ME

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