

Title (en)  
CALIBER-CONTAINING CENTRIFUGALLY CAST ROLL FOR HOT ROLLING

Title (de)  
KALIBERHALTIGE ZENTRIFUGAL GEGOSSENE WALZE ZUM WARMWALZEN

Title (fr)  
CYLINDRE COULÉ PAR CENTRIFUGATION, CONTENANT UN CALIBRE, POUR LAMINAGE À CHAUD

Publication  
**EP 3135392 A4 20170524 (EN)**

Application  
**EP 15810994 A 20150626**

Priority  
• JP 2014132083 A 20140627  
• JP 2015003239 W 20150626

Abstract (en)  
[origin: EP3135392A1] Provided is a centrifugal cast caliber roll for a hot rolling mill having excellent wear resistance, excellent fatigue resistance, and excellent slip resistance. The roll has a chemical composition containing, by mass%, C: 1.8% or more and 3.0% or less, Si: 0.2% or more and 1.0% or less, Mn: 0.2% or more and 1.5% or less, Cr: 5% or more and 9% or less, Mo: 4.0% or more and 7.0% or less, V: 4.0% or more and 7.0% or less, Nb: 0.5% or more and 2.0% or less, and the balance being Fe and inevitable impurities, in which the relationship  $0.6 \leq (C - 0.24V - 0.13Nb) \leq 1.4$  (where, C, V, and Nb each denote the content (mass%) of the corresponding chemical element) is satisfied, and has a surface hardness of Hs 67 or higher and Hs 76 or lower in terms of shore hardness. With this, it is possible to obtain a caliber roll with which it is possible not only to inhibit wear and fatigue but also to prevent slip even in a harsh hot rolling environment in which a high rolling load is applied. In addition, there is an effect of improving the productivity of steel materials (such as a steel pipe), significantly improving the quality of products, and improving roll life.

IPC 8 full level  
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CPC (source: EP US)  
**B21B 27/02** (2013.01 - US); **B21B 27/024** (2013.01 - EP US); **B22D 13/02** (2013.01 - EP US); **B22D 25/02** (2013.01 - EP US); **C21D 5/00** (2013.01 - EP US); **C22C 37/00** (2013.01 - EP US); **C22C 37/04** (2013.01 - EP US); **C22C 37/06** (2013.01 - EP US); **C22C 37/10** (2013.01 - EP US); **C22C 38/001** (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 38/22** (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/32** (2013.01 - EP US); **C22C 38/36** (2013.01 - EP US); **B21B 2267/26** (2013.01 - EP US)

Citation (search report)  
• [A] JP 2011063822 A 20110331 - JFE STEEL CORP  
• [AD] JP H07179945 A 19950718 - HITACHI METALS LTD  
• [A] JP 2009221573 A 20091001 - JFE STEEL CORP  
• [A] JP 2010275595 A 20101209 - JFE STEEL CORP  
• See also references of WO 2015198612A1

Cited by  
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Designated extension state (EPC)  
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MX 2016016893 A 20170327; US 2017209906 A1 20170727; WO 2015198612 A1 20151230

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