

Title (en)  
ROLL OUTER LAYER MATERIAL FOR HOT ROLLING AND COMPOSITE ROLL FOR HOT ROLLING

Title (de)  
AUSSENSCHICHTMATERIAL FÜR EINE WALZE ZUM WARMWALZEN UND ZUSAMMENGESETZTE WALZE ZUM WARMWALZEN

Title (fr)  
MATÉRIAU DE COUCHE EXTERNE DE ROULEAU POUR LAMINAGE À CHAUD ET ROULEAU COMPOSITE POUR LAMINAGE À CHAUD

Publication  
**EP 3479915 B1 20210721 (EN)**

Application  
**EP 17848389 A 20170628**

Priority  
• JP 2016174329 A 20160907  
• JP 2017023663 W 20170628

Abstract (en)  
[origin: EP3479915A1] An object is to provide an outer layer material of a hot rolling mill roll and a composite roll for hot rolling that have decreased pit defects on a roll surface and excellent resistance to surface roughening while ensuring wear resistance. An outer layer material of a hot rolling mill roll, has a composition containing, in mass%, C: 2.0 to 3.0%, Si: 0.2 to 1.0%, Mn: 0.2 to 1.0%, Cr: 4.0 to 7.0%, Mo: 3.0 to 6.5%, V: 5.0 to 7.5%, Nb: 0.5 to 3.0%, Ni: 0.05 to 3.0%, Co: 0.2 to 5.0%, and W: 0.5 to 5.0%, with the balance being Fe and incidental impurities, and the contents of C, Cr, Mo, V, Nb, Ni, and W satisfying the following expression (1); has 85% or more of a matrix microstructure being a tempered martensite and/or a bainite microstructure; and has a minor axis of tempered martensite or bainite of 0.5 to 3.0 μm;  $0.05 \times \frac{\%C}{\%V} \times 0.177 \times \frac{\%Nb}{\%Cr} \times 0.129 \times \frac{\%Cr}{\%Mo} \times 0.099 \times \frac{\%Mo}{\%W} \times 0.063 \times \frac{\%W}{\%Ni} + \%Ni \leq 4.0$  where %C, %V, %Nb, %Cr, %Mo, %W, and %Ni each represent the respective content of each respective element (mass%).

IPC 8 full level  
**B21B 27/00** (2006.01); **B22D 13/02** (2006.01); **C21D 5/00** (2006.01); **C21D 9/38** (2006.01); **C22C 37/00** (2006.01)

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