

Title (en)  
HOT-ROLLED STEEL SHEET AND METHOD FOR MANUFACTURING SAME

Title (de)  
HEISSGEWALZTES STAHLBLECH UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)  
TÔLE D'ACIER LAMINÉE À CHAUD ET PROCÉDÉ POUR LA FABRIQUER

Publication  
**EP 2871254 A1 20150513 (EN)**

Application  
**EP 13837646 A 20130911**

Priority  
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• JP 2013005388 W 20130911

Abstract (en)  
There is provided a high-strength hot-rolled steel sheet having high low-temperature toughness and a low yield ratio that is suitable for a steel pipe material. The hot-rolled steel sheet has a composition that contains C: 0.03% to 0.10%, Si: 0.01% to 0.50%, Mn: 1.4% to 2.2%, P: 0.025% or less, S: 0.005% or less, Al: 0.005% to 0.10%, Nb: 0.02% to 0.10%, Ti: 0.001% to 0.030%, Mo: 0.01% to 0.50%, Cr: 0.01% to 0.50%, and Ni: 0.01% to 0.50%. The composition preferably has Moeq in the range of 1.4% to 2.2%. The hot-rolled steel sheet includes an inner layer having a microstructure that contains a main phase and a second phase, the main phase being bainitic ferrite having an average grain size of 10 μm or less, the second phase having an area fraction in the range of 1.4% to 15% and containing massive martensite having an aspect ratio of less than 5.0. The hot-rolled steel sheet includes an outer layer having a microstructure that contains a tempered martensite phase or a tempered martensite phase and a tempered bainite phase.

IPC 8 full level  
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Cited by  
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