

Title (en)  
HIGHLY CLEANED STEEL

Title (de)  
HOCHGEREINIGTER STAHL

Title (fr)  
ACIER FORTEMENT NETTOYE

Publication  
**EP 1127951 A1 20010829 (EN)**

Application  
**EP 00939092 A 20000616**

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Abstract (en)  
The present invention provides a super-clean steel excellent in cold workability and fatigue properties even with a reduced use of Ca and Mg ferroalloys, characterized in that, among the non-metallic inclusions with their length (l) and width (d) satisfying the relation  $l/d \leq 5$  at an L section of a rolled steel material, the number of inclusions having the composition A1 specified below accounts for 20% or more, and the total number of inclusions having the composition A1 or B1 specified below accounts for 80% or more, and that, regarding the non-metallic inclusions satisfying the relation  $l/d \leq 5$  and having the composition A1 specified below, d is 40  $\mu\text{m}$  or less. Composition A1: containing over 60% of SiO<sub>2</sub>. Composition B1: containing one or both of 50% or less of CaO and 15% or less of MgO, in addition to 20 to 60% of SiO<sub>2</sub> and 10 to 80% of MnO.

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