

Title (en)  
High corrosion-resistant, high-strength and non-magnetic stainless steel

Title (de)  
Hoch korrosionsbeständiger, hochfester und nichtmagnetischer Edelstahl

Title (fr)  
Acier inoxydable non magnétique à haute résistance à la corrosion

Publication  
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Application  
**EP 10004443 A 20100427**

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Abstract (en)  
The present invention provides a high corrosion-resistant, high-strength and non-magnetic stainless steel containing: C: 0.01% to 0.05% by mass, Si: 0.05% to 0.50% by mass, Mn: more than 16.0% by mass but 19.0% by mass or less, P: 0.040% by mass or less, S: 0.010% by mass or less, Cu: 0.50% to 0.80% by mass, Ni: 3.5% to 5.0% by mass, Cr: 17.0% to 21.0% by mass, Mo: 1.80% to 3.50% by mass, B: 0.0010% to 0.0050% by mass, O: 0.010% by mass or less, and N: 0.45% to 0.65% by mass, with the balance substantially composed of Fe and unavoidable impurities, the steel satisfying the following equations (1) to (4):  $Cr + 3.3 \times Mo + 16 \times N \neq 30$  Cr / C  $\neq 330$  Cr / Mn > 1.0 Ni + 3  $\times$  Cu / Cr + Mo > 0.25 wherein [Cr], [Mo], [N], [C], [Mn], [Ni] and [Cu] represent the content of Cr, the content of Mo, the content of N, the content of C, the content of Mn, the content of Ni, and the content of Cu in the steel in terms of mass %, respectively.

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Citation (applicant)  
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