

Title (en)  
MARTENSITIC STAINLESS STEEL MATERIAL

Title (de)  
MARTENSITISCHES EDELSTAHL MATERIAL

Title (fr)  
MATÉRIAU EN ACIER INOXYDABLE MARTENSITIQUE

Publication  
**EP 3604591 A4 20200902 (EN)**

Application  
**EP 18774332 A 20180327**

Priority  
• JP 2017062539 A 20170328  
• JP 2018012601 W 20180327

Abstract (en)  
[origin: EP3604591A1] A martensitic stainless steel product has a chemical composition that contains, in mass%, C: 0.030% or less, Si: 1.00% or less, Mn: 1.00% or less, P: 0.030% or less, S: 0.005% or less, Al: 0.0010 to 0.0100%, N: 0.0500% or less, Ni: 5.00 to 6.50%, Cr: 10.00 to 13.40%, Cu: 1.80 to 3.50%, Mo: 1.00 to 4.00%, V: 0.01 to 1.00%, Ti: 0.050 to 0.300%, and Co: 0.300% or less and W: 0 to 1.50%, with the balance being Fe and impurities, and that satisfies Formula (1) and Formula (2), and the yield strength of 724 to 860 MPa, and the microstructure containing martensite having a volume ratio of 80% or more. The size of each intermetallic compound and each Cr oxide in the microstructure is not more than  $5.0\text{ }\mu\text{m}$ , and the gross area fraction of intermetallic compounds and Cr oxides is 3.0% or less.  $11.5 \leq \text{Cr} + 2\text{Mo} + 2\text{Cu} - 1.5\text{Ni} \leq 14.3$ ,  $\text{Ti}/\text{C} \geq 7.5$

IPC 8 full level  
**B21B 23/00** (2006.01); **C21D 1/18** (2006.01); **C21D 1/22** (2006.01); **C21D 6/00** (2006.01); **C21D 8/00** (2006.01); **C21D 8/02** (2006.01); **C21D 8/10** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/46** (2006.01); **C22C 38/50** (2006.01); **C22C 38/52** (2006.01)

CPC (source: EP RU)  
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• [A] EP 1584699 A1 20051012 - SUMITOMO METAL IND [JP]  
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