

Title (en)  
STRENGTH MEMBER AND MANUFACTURING METHOD THEREFOR

Title (de)  
STÄRKEELEMENT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
ÉLÉMENT DE RENFORT ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 2966186 A4 20161123 (EN)**

Application  
**EP 14760929 A 20140307**

Priority  
• JP 2013047106 A 20130308  
• JP 2014056057 W 20140307

Abstract (en)  
[origin: EP2966186A1] A strength member and a manufacturing method thereof in which settling resistance and yield strength can be substantially improved without reducing cost advantages or adding substantial process changes, is provided. A strength member comprises, by mass %, 0.5 to 0.7 % of C, 1.0 to 2.0 % of Si, 0.1 to 1.0 % of Mn, 0.1 to 1.0 % of Cr, 0.035 % or less of P, 0.035 % or less of S, and the balance of Fe and inevitable impurities, wherein an area ratio of bainite is 65 % or more, and an average dislocation density of a freely selected cross section is  $2.0 \times 10^{16} \text{ m}^{-2}$  or less.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 7/06** (2006.01); **C21D 7/10** (2006.01); **C21D 9/02** (2006.01); **C22C 38/34** (2006.01); **F16F 1/02** (2006.01)

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**C21D 1/20** (2013.01); **C21D 7/06** (2013.01); **C21D 7/10** (2013.01); **C21D 9/02** (2013.01); **C22C 38/00** (2013.01); **C22C 38/02** (2013.01); **C22C 38/04** (2013.01); **C22C 38/18** (2013.01); **C22C 38/34** (2013.01); **C21D 2211/002** (2013.01); **C21D 2211/004** (2013.01)

Citation (search report)  
• [X] EP 2412840 A1 20120201 - NHK SPRING CO LTD [JP]  
• [A] US 4174981 A 19791120 - CASSELL RALPH M [US]  
• [J] PESICKA J ET AL: "THE EVOLUTION OF DISLOCATION DENSITY DURING HEAT TREATMENT AND CREEP OF TEMPERED MARTENSITE FERRITIC STEELS", ACTA MATERIALIA, ELSEVIER, OXFORD, GB, vol. 51, 1 January 2003 (2003-01-01), pages 4847 - 4862, XP003035794, ISSN: 1359-6454, DOI: 10.1016/S1359-6454(03)00324-0  
• See references of WO 2014136966A1

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Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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