

Title (en)  
HIGH-STRENGTH SPRING, METHOD FOR PRODUCING SAME, STEEL FOR HIGH-STRENGTH SPRING, AND METHOD FOR PRODUCING SAME

Title (de)  
HOCHFESTE FEDER, VERFAHREN ZUR HERSTELLUNG DAVON, STAHL FÜR EINE HOCHFESTE FEDER UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
RESSORT À HAUTE RÉSIDANCE, PROCÉDÉ DE FABRICATION DUDIT RESSORT, ACIER DESTINÉ À UN RESSORT À HAUTE RÉSIDANCE ET PROCÉDÉ DE PRODUCTION DUDIT ACIER

Publication  
**EP 3336214 B1 20200513 (EN)**

Application  
**EP 17835988 A 20170601**

Priority

- JP 2016205535 A 20161019
- JP 2017061981 A 20170327
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- JP 2017020501 W 20170601

Abstract (en)  
[origin: EP3336214A1] A high strength spring containing, by mass%, C: 0.40 to 0.50%, Si: 1.00 to 3.00%, Mn: 0.30 to 1.20%, Ni: 0.05 to 0.50%, Cr: 0.35 to 1.50%, Mo: 0.03 to 0.50%, Cu: 0.05 to 0.50%, Al: 0.005 to 0.100%, V: 0.05 to 0.50%, Nb: 0.005 to 0.150%, N: 0.0100 to 0.0200%, P: limited to be less than or equal to 0.015%, S: limited to be less than or equal to 0.010%, and the balance of Fe and inevitable impurities, wherein a Nb-compound including at least one of Nb-carbide, Nb-nitride and Nb-carbonitride is included, and wherein a V-compound including at least one of V-carbide and V-carbonitride that is precipitated around the Nb-compound is included.

IPC 8 full level  
**C22C 38/00** (2006.01); **C21D 1/25** (2006.01); **C21D 9/02** (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 38/48** (2006.01)

CPC (source: CN EP KR)  
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