

Title (en)  
HIGH-CARBON STEEL WIRE HAVING SUPERIOR WIRE DRAWING PROPERTIES AND METHOD FOR PRODUCING SAME

Title (de)  
DRAHT AUS KOHLENSTOFFREICHEM STAHL MIT HERVORRAGENDEN DRAHTZIEHEIGENSCHAFTEN UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
FIL D'ACIER À TENEUR ÉLEVÉE EN CARBONE PRÉSENTANT D'EXCELLENTE PROPRIÉTÉS D'ÉTIRAGE DE FIL ET SON PROCÉDÉ DE PRODUCTION

Publication  
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Application  
**EP 15759266 A 20150306**

Priority  
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Abstract (en)  
[origin: EP3115478A1] The present invention provides a wire rod having good wire drawing characteristics stably in actual production and a method for production of such wire rod. The wire rod has a chemical composition including, by mass%, C: 0.7 to 1.2%, Si: 0.1 to 1.5%, Mn: 1.0% or less, N: 0.005ppm or less, and a balance of Fe and unavoidable impurities, wherein 80% or more of a microstructure is a bainite structure and a remaining microstructure is a nonbainite structure in a cross-section of the wire rod, wherein a full width at half maximum of a (211) crystal face of a ferrite phase in the structure of the wire rod cross-section is 0.6° or less, wherein a tensile strength TS (MPa) and reduction of area RA (%) respectively satisfy the following formula (1) and the following formula (2), and wherein a standard deviation of hardness distribution of Vickers hardness (Hv) in the cross-section is less than 6.  $TS \geq 580 + 700 \times C$   $RA \leq 100 - 46 \times C - 18 \times Mn - 10 \times Cr$

IPC 8 full level  
**C21D 8/06** (2006.01); **C21D 9/52** (2006.01); **C21D 9/64** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/08** (2006.01); **C22C 38/12** (2006.01); **C22C 38/14** (2006.01); **C22C 38/16** (2006.01); **C22C 38/18** (2006.01); **C22C 38/20** (2006.01); **C22C 38/24** (2006.01); **C22C 38/54** (2006.01)

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