Title (en)

WIRE ROD AND STEEL WIRE USING SAME

Title (de)

WALZDRAHT UND STAHLDRAHT DAMIT

Title (fr)

TIGE DE FIL MÉTALLIQUE ET FIL D'ACIER L'UTILISANT

Publication

EP 2832878 B1 20190814 (EN)

Application

EP 13767810 A 20130325

Priority

- JP 2012077003 A 20120329
- JP 2013058566 W 20130325

Abstract (en)

[origin: EP2832878A1] A wire rod contains C, Si, Mn, N, Al, P, and S in predetermined contents with the remainder being iron and inevitable impurities. The Al and N contents meet a condition specified by Expression (1) as follows: [Al]#¤-2.1×10×[N]+0.255 (1), where [Al] and [N] are contents (in mass percent) of Al and N, respectively. The wire rod has a microstructure including 95 percent by area or more of a pearlite. The wire rod has an AlN content of 0.005% or more and a percentage of AlN particles having a diameter d GM of 10 to 20 µm of 50% or more (in number percent) in an extreme value distribution of maximum values of the diameters d GM of AlN particles, where the d GM refers to a geometrical mean (ab) 1/2 of a length "a" and a thickness "b" of an AlN particle. The wire rod is usable typically for a high-strength prestressing steel wire and wire rope that less suffer from reduction in delayed fracture resistance with an increasing strength and have delayed fracture resistance conforming building standards.

IPC 8 full level

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CPC (source: EP)

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Cited by

US10808305B2; EP3327161A4; CN107849659A; US2018216213A1; EP3327162A4; US10752974B2

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