

Title (en)  
STEEL AND STEEL WIRE, WHICH ARE FOR SPRING, AND MANUFACTURING METHODS THEREFOR

Title (de)  
STAHL UND STAHLDRAHT FÜR FEDERN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
ACIER ET FIL D'ACIER DESTINÉS À UN RESSORT, ET LEURS PROCÉDÉS DE FABRICATION

Publication  
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Application  
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Abstract (en)  
Disclosed in the present specification are steel and a steel wire, which are for a spring, and manufacturing methods therefor, the steel and the steel wire having excellent resistance to permanent deformation by having increased in-material dislocation density or reduced average grain diameter. The steel wire for a spring, having excellent resistance to permanent deformation, according to an embodiment of the present invention, comprises, by wt%, 0.4-0.7% of C, 1.2-2.3% of Si, 0.2-0.8% of Mn, 0.2-0.8% of Cr, and the balance of Fe (iron) and other inevitable impurities, wherein the dislocation density thereof can be  $1.16 \times 10^{15} \text{ m}^{-2}$  or more, and the average grain diameter thereof can be 8.4  $\mu\text{m}$  or less.

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