

Title (en)  
RELAXATION-RESISTANT STEEL SPRING

Title (de)  
RELAXATIONSFESTE STAHLFEDER

Title (fr)  
RESSORT D'ACIER RESISTANT AU RELACHEMENT

Publication  
**EP 0906453 B1 20010822 (DE)**

Application  
**EP 96919601 A 19960529**

Priority  
DE 9600935 W 19960529

Abstract (en)  
[origin: WO9745565A1] The invention concerns a very strong steel spring having a bright surface which is free from residual dirt, the spring also being resistant to relaxation at high operating temperatures. A spring of this type is produced from a steel wire of the following composition: between 0.45 and 0.85 wt % carbon; between 0.2 and 1.60 wt % silicon; between 0.3 and 1.50 wt % manganese; between 0.4 and 1.2- wt % chromium; the remainder being iron and unavoidable impurities. The wire is austenitized and then treated isothermally at temperatures ranging from 450 to 650 DEG C. The wire is then drawn to a tensile strength of between 1600 and 2300 N/mm<2> at a contraction in area when breaking of at least 40 %. The wire is cold formed to produce a spring and is then stress-free annealed at temperatures ranging from 200 to 350 DEG C.

IPC 1-7  
**C22C 38/18**; **C21D 9/02**

IPC 8 full level  
**C21D 9/02** (2006.01); **C22C 38/18** (2006.01); **C21D 8/06** (2006.01)

CPC (source: EP)  
**C21D 9/02** (2013.01); **C22C 38/18** (2013.01); **C21D 8/06** (2013.01)

Designated contracting state (EPC)  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 9745565 A1 19971204**; AT E204612 T1 20010915; AU 5810896 A 19980105; CA 2256384 A1 19971204; DE 59607551 D1 20010927; EP 0906453 A1 19990407; EP 0906453 B1 20010822

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**DE 9600935 W 19960529**; AT 96919601 T 19960529; AU 5810896 A 19960529; CA 2256384 A 19960529; DE 59607551 T 19960529; EP 96919601 A 19960529