

Title (en)
RELAXATION-RESISTANT STEEL SPRING

Title (de)
RELAXATIONSFESTE STAHLFEDER

Title (fr)
RESSORT D'ACIER RESISTANT AU RELACHEMENT

Publication
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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.

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