

Title (en)  
SPRING STEEL

Publication  
**EP 0139649 B1 19880217 (EN)**

Application  
**EP 83902908 A 19830905**

Priority  
SE 8205037 A 19820906

Abstract (en)  
[origin: WO8400981A1] Steel and process for its manufacture which is suitable for the production of springs, especially leafsprings for vehicles. The steel which is vacuum-treated is an ordinary low-carbon steel with 0.20 - 0.40 % C. Its composition is incidentally characterised in that the oxygen content does not exceed 0.040 % and in that boron is added to an amount of 0.002 - 0.004 % and titanium to an amount of 0.015 - 0.050 %. The addition of boron causes the hardenability to increase greatly, thus making it possible to keep the carbon content low and, in consequence, reducing the danger of destructive decarbonisation. A characteristic of the process of production consists in the fact that the steel is produced in an oxygen converter in such a manner that the nitrogen content in the ladle does not exceed 20 ppm, in that it is subsequently subjected to vacuum treatment and in that Al is added so that the amount of uncombined oxygen drops to max. 40 ppm, whereafter titanium and boron are added prior to continuous casting and rolling.

IPC 1-7  
**C22C 38/14**; **F16F 1/02**

IPC 8 full level  
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CPC (source: EP)  
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**WO 8400981 A1 19840315**; AT E32528 T1 19880315; DE 3375699 D1 19880324; EP 0139649 A1 19850508; EP 0139649 B1 19880217; FI 73467 B 19870630; FI 73467 C 19871009; FI 843928 A0 19841005; FI 843928 L 19841005; SE 8205037 D0 19820906; SE 8205037 L 19840307

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