

Title (en)  
METHOD OF PRODUCING A STEEL FOR HIGH STRENGTH COMPONENTS

Publication  
**EP 0130362 B1 19880511 (DE)**

Application  
**EP 84106058 A 19840528**

Priority  
DE 3321965 A 19830618

Abstract (en)  
[origin: EP0130362A1] 1. A process for making a steel for constructional parts which have to withstand temperatures of up to 560 degrés C in operation and must show, at room temperature, a tensile strength of at least 800 N/mm<sup>2</sup> at 0.2 % elongation ; an ultimate tensile strength of at least 900 N/mm<sup>2</sup> ; a notch impact energy of at least 40 joules on ISO-V test samples ; the following stresses in the creep resistance test : Rp 1.0 %/14<sup>\*\*4</sup> h/550 degrees C:200 N/mm<sup>\*\*2</sup> Rm /14<sup>\*\*4</sup> h/550 degrees C:200 N/mm<sup>\*\*2</sup> and a residual stress after 5000 hours of stressing at 550 degrees C of 108 N/mm<sup>\*\*2</sup>, the initial stress (at 0.2 % elongation) being 341 N/mm<sup>\*\*2</sup> ; the steel consisting of : 0.17 to 0.25 % carbon 0.15 to 0.35 % silicon 0.35 to 0.85 % manganese at most 0.30 % phosphorous at most 0.35 % sulphur 1.25 to 1.5 % chromium 0.65 to 0.85 % molybdenum 0.90 to 1.10 % vanadium the remainder iron and melt impurities the steel being austenitised to 1010 degrees C until 65 % of the vanadium has been dissolved ; quenched to form a bainite hardening grain structure ; and annealed at 700 degrees C.

IPC 1-7  
**C22C 38/22**; **C22C 38/24**; **F16B 33/00**

IPC 8 full level  
**C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **F16B 33/00** (2006.01)

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