

Title (en)

USE OF A CARBON-MANGANESE STEEL FOR STRUCTURAL MEMBERS OF HIGH STRENGTH AND TOUGHNESS BY SIMPLE HEAT TREATMENT

Publication

**EP 0085828 B1 19860730 (DE)**

Application

**EP 83100080 A 19830107**

Priority

DE 3201204 A 19820116

Abstract (en)

[origin: EP0085828A1] 1. Use of a steel having 0.3 to 0.6 % carbon 0.2 to 0.6 % silicon 0.55 to 2.5 % manganese 0.05 to 0.2 % vanadium 0 to 0.3 % zirconium 0 to 0.2 % niobium 0 to 0.5 % chromium 0 to 0.5 % nickel 0 to 0.5 % copper 0 to 0.3 % molybdenum 0.01 to 0.05 % sulphur 0 to 0.1 % aluminium 0.0005 to 0.005 % boron 0 to 0.4 % nitrogen less than 0.0003 % hydrogen the rest iron and melting-induced impurities, as a material for components with a cross section from about 40 cm\*\*2 which, after heat deformation by rolling, forging or pressing, or an annealing process at final moulding temperatures up to about 1 000 degrees C or annealing temperatures up to about 1 000 degrees C, and subsequent cooling in still or moving air, if necessary after controlled cooling, have a ferritic-pearlitic structure with approximately 5 to 20% ferrite, the rest pearlite and an interval- or 0.2 border of at least 580 N/nm\*\*2 and an impact energy measured by ISO-U tests of at least 25 J.

IPC 1-7

**C21D 9/30; C22C 38/12**

IPC 8 full level

**C22C 38/00** (2006.01); **C22C 38/04** (2006.01); **C22C 38/12** (2006.01)

CPC (source: EP)

**C22C 38/04** (2013.01); **C22C 38/12** (2013.01)

Citation (examination)

- VDI-Z, Band 122, Nr. 17, September 1980, S. ENGINEER et al. "Entwicklungen auf dem Gebiet der Stähle für Gesenkschmiedestücke" Seiten 705-711
- Daimler-Benz-Liefervorschrift 4550, Fassung 7. 1975

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CN103898408A; EP0632138A1; EP0348633A1; US5882585A; EP0247415A3; GB2246579A; FR2665461A1; GB2246579B; WO9733010A1

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