

Title (en)

TIRE REINFORCED BY A CARBON STEEL STRIP

Title (de)

MIT EINEM KOHLENSTOFFSTAHLBAND VERSTÄRKTER REIFEN

Title (fr)

PNEU RENFORCÉ PAR UN RUBAN EN ACIER AU CARBONE

Publication

**EP 3390675 A1 20181024 (FR)**

Application

**EP 16825529 A 20161216**

Priority

- FR 1562495 A 20151216
- FR 2016053484 W 20161216

Abstract (en)

[origin: WO2017103515A1] Disclosed is a motor vehicle tire reinforced by at least one carbon steel strip that has a very low carbon content and high resistance in the cold-worked state, characterized by the following: - the carbon steel comprises (in percent by weight) 0.05% to 0.4% carbon, 0.5% to 4% manganese, 0.1% to 2.5% silicon, optionally (i) less than 1.5% aluminum, (ii) less than 0.5% of each of the metals boron, chromium, cobalt, copper, molybdenum, nickel, niobium, titanium, tungsten, vanadium, zirconium, et (iii) less than 0.05% of each of the elements phosphorus, sulfur, nitrogen or rare earth metal, the remainder consisting of iron and inevitable impurities resulting from the process; - the microstructure of the cold-worked carbon steel is primarily martensitic or ferritic-martensitic; - the resistance R<sub>m</sub> of the strip is greater than 1200 MPa, and its elongation at break A<sub>t</sub> ranges from 1% to 5%.

IPC 8 full level

**C21D 7/10** (2006.01); **B21B 1/28** (2006.01); **B32B 15/06** (2006.01); **B60C 9/00** (2006.01); **C21D 9/34** (2006.01); **C21D 9/46** (2006.01); **C21D 9/52** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/18** (2006.01); **D07B 1/06** (2006.01)

CPC (source: EP US)

**B32B 3/04** (2013.01 - EP); **B32B 3/10** (2013.01 - EP); **B32B 7/12** (2013.01 - EP); **B32B 15/06** (2013.01 - EP); **B32B 15/18** (2013.01 - EP); **B32B 15/20** (2013.01 - EP); **B32B 25/02** (2013.01 - EP); **B32B 25/12** (2013.01 - EP); **B32B 25/16** (2013.01 - EP); **B60C 9/0007** (2013.01 - EP US); **B60C 9/18** (2013.01 - EP); **C21D 7/10** (2013.01 - EP); **C21D 9/34** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C21D 9/52** (2013.01 - EP); **C22C 1/02** (2013.01 - EP); **C22C 38/004** (2013.01 - US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - US); **C22C 38/18** (2013.01 - EP US); **D07B 1/066** (2013.01 - EP); **B32B 2250/03** (2013.01 - EP); **B32B 2250/40** (2013.01 - EP); **B32B 2255/06** (2013.01 - EP); **B32B 2255/205** (2013.01 - EP); **B32B 2264/101** (2013.01 - EP); **B32B 2264/108** (2013.01 - EP); **B32B 2307/50** (2013.01 - EP); **B32B 2307/54** (2013.01 - EP); **B32B 2307/552** (2013.01 - EP); **B32B 2307/714** (2013.01 - EP); **B32B 2307/732** (2013.01 - EP); **B32B 2605/00** (2013.01 - EP); **B32B 2605/18** (2013.01 - EP); **C21D 2211/005** (2013.01 - EP); **C21D 2211/008** (2013.01 - EP); **D07B 2201/2003** (2013.01 - EP); **D07B 2201/2011** (2013.01 - EP); **D07B 2205/3039** (2013.01 - EP); **D07B 2205/3042** (2013.01 - EP); **D07B 2205/305** (2013.01 - EP)

Citation (search report)

See references of WO 2017103515A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2017103515 A1 20170622**; EP 3390675 A1 20181024; FR 3045671 A1 20170623; FR 3045671 B1 20171208; US 2020290401 A1 20200917

DOCDB simple family (application)

**FR 2016053484 W 20161216**; EP 16825529 A 20161216; FR 1562495 A 20151216; US 201616062765 A 20161216