

Title (en)  
THREE-LAYER STEEL CORD THAT IS RUBBERIZED IN SITU AND HAS A 2+M+N STRUCTURE

Title (de)  
IN-SITU GUMMIERTES DREILAGIGES STAHLSEIL MIT 2+M+N-STRUKTUR

Title (fr)  
CABLE METALLIQUE A TROIS COUCHES GOMME IN SITU DE CONSTRUCTION 2+M+N

Publication  
**EP 2449168 A2 20120509 (FR)**

Application  
**EP 10727000 A 20100702**

Priority  
• EP 2010059486 W 20100702  
• FR 0954598 A 20090703

Abstract (en)  
[origin: WO2011000950A2] The invention relates to a steel cord (C-1) with three layers (C1, C2, C3) and a 2+M+N structure, that is rubberized in situ and comprises: a first layer or central layer (C1) formed by two wires (10) of diameter d1 assembled in a helix at a pitch p1; a second layer (C2) formed by M wires (11) of diameter d2, which are wound around the central layer (C1) in a helix at a pitch p2; and a third layer (C3) formed by N wires (12) of diameter d3, which are wound around the second layer in a helix at a pitch p3. The cord is characterised in that it has the following characteristics: (d1, d2, d3, p1, p2 and p3 being expressed in mm): - 0.08 = d1 = 0.5; - 0.08 = d2 = 0.5; - 0.08 = d3 = 0.5; - 3 1 2 3 < 50; for any 3 cm-length of cord, a rubber composition known as "filling rubber" is present in each of the capillaries defined by the 2 wires of the first layer (C1) and the M wires of the second layer and by the M wires of the second layer (C2) and the N wires of the third layer (C3); and the level of filling rubber in the cord is between 10 and 50 mg per gram of cord. The invention also relates to the method of producing one such cord and to a multi-strand cord, in which at least one of the strands is a three-layer steel cord (C-1) rubberized in situ in accordance with the invention.

IPC 8 full level  
**D07B 1/06** (2006.01); **D07B 1/16** (2006.01); **D07B 7/14** (2006.01)

CPC (source: EP KR US)  
**D07B 1/06** (2013.01 - KR); **D07B 1/0633** (2013.01 - EP US); **D07B 1/16** (2013.01 - KR); **D07B 7/14** (2013.01 - KR); **D07B 7/145** (2013.01 - EP US); **D07B 1/0613** (2013.01 - EP US); **D07B 1/0646** (2013.01 - EP US); **D07B 1/0653** (2013.01 - EP US); **D07B 2201/2011** (2013.01 - EP US); **D07B 2201/2023** (2013.01 - EP US); **D07B 2201/2025** (2013.01 - EP US); **D07B 2201/2028** (2013.01 - EP US); **D07B 2201/2032** (2013.01 - EP US); **D07B 2201/204** (2013.01 - EP US); **D07B 2201/2046** (2013.01 - EP US); **D07B 2201/2061** (2013.01 - EP US); **D07B 2201/2062** (2013.01 - EP US); **D07B 2201/2097** (2013.01 - EP US); **D07B 2205/2042** (2013.01 - EP US); **D07B 2205/3021** (2013.01 - EP US); **D07B 2205/305** (2013.01 - EP US); **D07B 2205/3053** (2013.01 - EP US); **D07B 2205/306** (2013.01 - EP US); **D07B 2205/3067** (2013.01 - EP US); **D07B 2205/3085** (2013.01 - EP US); **D07B 2205/3089** (2013.01 - EP US); **D07B 2207/4072** (2013.01 - EP US); **D07B 2401/2025** (2013.01 - EP US); **D07B 2501/2046** (2013.01 - EP US)

Citation (search report)  
See references of WO 2011000950A2

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 SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2011000950 A2 20110106**; **WO 2011000950 A3 20110224**; BR 112012000118 A2 20160315; CN 102471999 A 20120523; EP 2449168 A2 20120509; FR 2947576 A1 20110107; FR 2947576 B1 20110819; JP 2012531538 A 20121210; KR 20120051666 A 20120522; US 2012175035 A1 20120712

DOCDB simple family (application)  
**EP 2010059486 W 20100702**; BR 112012000118 A 20100702; CN 201080029415 A 20100702; EP 10727000 A 20100702; FR 0954598 A 20090703; JP 2012518923 A 20100702; KR 20127002903 A 20100702; US 201013382147 A 20100702