

Title (en)

TYRE TYPE DEVICE FOR VEHICLE

Title (de)

REIFENARTIGE VORRICHTUNG FÜR EIN FAHRZEUG

Title (fr)

DISPOSITIF DE TYPE PNEUMATIQUE POUR VEHICULE

Publication

EP 3490813 A1 20190605 (FR)

Application

EP 17754412 A 20170727

Priority

- FR 1657338 A 20160729
- FR 2017052097 W 20170727

Abstract (en)

[origin: WO2018020163A1] The present invention relates to a tyre type device, intended to equip a vehicle, with improved flattening of the tread thereof compared with a conventional tyre. The tyre type device (1) comprises a radially outer structure of revolution (2), which is intended to come into contact with the ground, a radially inner structure of revolution (3), which is coaxial with the radially outer structure of revolution and is intended to provide the connection to a mounting means (4), an inner annular space (5) which is radially delimited by the two structures of revolution and has a mean radial height H, and a bearing structure (6) which at least partially connects the two structures of revolution and is made up of a plurality of bearing elements (7) that are independent in pairs and are made to buckle under compression in the contact patch (A) in contact with the ground. According to the invention, the smallest characteristic dimension E of the section S of any bearing element (7) is at most equal to 0.02 times the mean radial height H of the inner annular space (5), the bearing elements (7) have an initial length LP strictly greater than the mean radial height H and at most equal to 1.1 times the mean radial height H, and the surface density D of the bearing elements (7) per unit area of the radially outer structure of revolution, expressed in 1/m², is at least equal to $Z/(A \cdot \sum Fr/n)$, wherein Z is the nominal radial load, expressed in N, A is the area of contact with the ground, expressed in m², and $\sum Fr/n$ is the mean force at break under tension of the n bearing elements (7) made to buckle under compression, expressed in N, and the tyre type device comprises two sidewalls (8), which are not linked to the bearing structure (6) and close the inner annular space (5), forming a closed cavity that can be pressurized.

IPC 8 full level

B60C 7/10 (2006.01); **B60C 7/12** (2006.01); **B60C 7/14** (2006.01)

CPC (source: EP US)

B60C 5/01 (2013.01 - EP); **B60C 7/125** (2013.01 - EP US); **B60C 7/14** (2013.01 - EP); **B60C 7/146** (2021.08 - EP); **B60C 9/18** (2013.01 - EP); **B60C 17/009** (2013.01 - EP US)

Citation (search report)

See references of WO 2018020163A1

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 2018020163 A1 20180201; EP 3490813 A1 20190605; FR 3054484 A1 20180202

DOCDB simple family (application)

FR 2017052097 W 20170727; EP 17754412 A 20170727; FR 1657338 A 20160729