

Title (en)

METHOD FOR INCREASING INTERNAL PRESSURE OF HOLLOW BALL AND DEVICE THEREFOR

Title (de)

VERFAHREN ZUR ERHÖHUNG DES INNENDRUCKS EINER HOHLKUGEL UND VORRICHTUNG DAFÜR

Title (fr)

PROCÉDÉ ET DISPOSITIF D'ACCROISSEMENT DE LA PRESSION INTERNE D'UNE BALLE CREUSE

Publication

EP 3000508 A4 20170118 (EN)

Application

EP 14803727 A 20140520

Priority

- JP 2013114997 A 20130531
- JP 2014061044 A 20140325
- JP 2014063302 W 20140520

Abstract (en)

[origin: EP3000508A1] [Object] To provide a method for easily increasing the internal pressure of a hollow ball in a practical time. [Solution] A method for increasing the internal pressure of a hollow ball according to the present invention includes the steps of (1) putting a hollow ball 18 including an outer shell and a space surrounded by the outer shell, into a housing portion 4; (2) filling the housing portion 4 with a gas which is more excellent in permeability relative to the outer shell than oxygen gas and nitrogen gas; and (3) causing the gas to pass through the outer shell. When the outer shell contains natural rubber, preferably, in the step (2), the housing portion is filled with a gas having a permeability coefficient of $20 \times 10^{-17} \text{ m}^4/(\text{N}\cdot\text{s})$ at 25°C for the natural rubber. Preferably, in the step (2), the housing portion is filled with carbon dioxide gas.

IPC 8 full level

A63B 39/02 (2006.01); **A63B 47/00** (2006.01); **A63B 102/02** (2015.01)

CPC (source: EP)

A63B 39/025 (2013.01); **A63B 39/027** (2013.01); **A63B 2039/022** (2013.01); **A63B 2102/02** (2015.10)

Citation (search report)

- [XI] WO 2011087628 A2 20110721 - DIRST WILLIAM F [US]
- [X] US 7658211 B1 20100209 - DIRST WILLIAM F [US]
- See references of WO 2014192585A1

Cited by

CN112642115A

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

DOCDB simple family (publication)

EP 3000508 A1 20160330; **EP 3000508 A4 20170118**; CN 105246563 A 20160113; CN 105246563 B 20181207; JP 2015006315 A 20150115; JP 6423164 B2 20181114; WO 2014192585 A1 20141204

DOCDB simple family (application)

EP 14803727 A 20140520; CN 201480031177 A 20140520; JP 2014061044 A 20140325; JP 2014063302 W 20140520