

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2017/013279

## A. CLASSIFICATION OF SUBJECT MATTER

*B60C 9/00(2006.01)i, D02G 3/48(2006.01)i, B60C 9/02(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B60C 9/00; D02G 3/48; B60C 17/00; D02G 3/04; B60C 9/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models: IPC as above

Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) &amp; Keywords: radial pneumatic tire, hybrid, nylon, aramid, raw cord

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                                | Relevant to claim No. |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Y         | JP 2007-030868 A (THE GOODYEAR TIRE & RUBBER COMPANY) 08 February 2007<br>See paragraphs [0007]-[0021]; claim 1; and figures 1-3. | 1-32                  |
| Y         | KR 10-2012-0131449 A (HYOSUNG CORPORATION) 05 December 2012<br>See paragraphs [0014]-[0024]; and figures 1-2.                     | 1-32                  |
| Y         | KR 10-1602605 B1 (KOLON INDUSTRIES, INC.) 21 March 2016<br>See paragraphs [0005]-[0023], [0064]-[0109]; and table 2.              | 1-32                  |
| Y         | KR 10-2016-0047076 A (HANKOOK TIRE CO., LTD.) 02 May 2016<br>See paragraph [0047]; and figures 1-3.                               | 11,16-17,24-25        |
| A         | KR 10-1411209 B1 (HANKOOK TIRE CO., LTD.) 23 June 2014<br>See paragraphs [0018]-[0041]; table 1; and figure 1.                    | 1-32                  |



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

“A” document defining the general state of the art which is not considered to be of particular relevance

“E” earlier application or patent but published on or after the international filing date

“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

“&amp;” document member of the same patent family

Date of the actual completion of the international search

05 MARCH 2018 (05.03.2018)

Date of mailing of the international search report

06 MARCH 2018 (06.03.2018)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701,  
Republic of Korea

Facsimile No. +82-42-481-8578

Authorized officer

Telephone No.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.

**PCT/KR2017/013279**

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member                                                                                                                                | Publication<br>date                                                                                          |
|-------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| JP 2007-030868 A                          | 08/02/2007          | BR P10602659 A<br>CN 1900399 A<br>EP 1745945 A2<br>EP 1745945 A3<br>KR 10-1286911 B1<br>US 2007-0017620 A1<br>US 7721780 B2                            | 13/03/2007<br>24/01/2007<br>24/01/2007<br>05/11/2008<br>16/07/2013<br>25/01/2007<br>25/05/2010               |
| KR 10-2012-0131449 A                      | 05/12/2012          | KR 10-1272692 B1                                                                                                                                       | 10/06/2013                                                                                                   |
| KR 10-1602605 B1                          | 21/03/2016          | CN 106283307 A<br>EP 3112185 A1<br>JP 2017-014678 A<br>JP 6099798 B2<br>US 2016-0376733 A1<br>US 2017-0106698 A1<br>US 9617663 B2<br>WO 2017-003169 A1 | 04/01/2017<br>04/01/2017<br>19/01/2017<br>22/03/2017<br>29/12/2016<br>20/04/2017<br>11/04/2017<br>05/01/2017 |
| KR 10-2016-0047076 A                      | 02/05/2016          | CN 105525410 A<br>EP 3012117 A1<br>EP 3012117 B1<br>JP 2016-079548 A<br>JP 6219900 B2<br>KR 10-1740769 B1<br>US 2016-0107485 A1                        | 27/04/2016<br>27/04/2016<br>24/05/2017<br>16/05/2016<br>25/10/2017<br>29/05/2017<br>21/04/2016               |
| KR 10-1411209 B1                          | 23/06/2014          | NONE                                                                                                                                                   |                                                                                                              |