

INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2018/051607

A. CLASSIFICATION OF SUBJECT MATTER  
INV. H01M2/02 H01M2/10  
ADD. H01M2/04

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)  
H01M

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	DE 10 2015 223368 A1 (HYUNDAI MOTOR CO LTD [KR]) 16 February 2017 (2017-02-16) paragraphs [0009], [0025] - [0029]; figures 1-11	1,2,4,6,8,10 3,5,7,9
Y	----- WO 2016/045752 A1 (VITO [BE]) 31 March 2016 (2016-03-31) page 11, line 1 - page 17, line 30; figures 1-10	1,2,4,6,8,10
Y	----- DE 10 2014 215032 A1 (BAYERISCHE MOTOREN WERKE AG [DE]) 4 February 2016 (2016-02-04) paragraphs [0005] - [0014]; figures 1-8	1
A	----- US 2014/272515 A1 (MAGUIRE PATRICK DANIEL [US] ET AL) 18 September 2014 (2014-09-18) the whole document	3

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
- "&" document member of the same patent family

Date of the actual completion of the international search

27 April 2018

Date of mailing of the international search report

11/05/2018

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

Bossa, Christina

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2018/051607

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102015223368 A1	16-02-2017	CN 106450073 A	22-02-2017
		DE 102015223368 A1	16-02-2017
		KR 20170019770 A	22-02-2017
		US 2017047623 A1	16-02-2017
-----			
WO 2016045752 A1	31-03-2016	CN 105469997 A	06-04-2016
		CN 205376309 U	06-07-2016
		WO 2016045752 A1	31-03-2016
-----			
DE 102014215032 A1	04-02-2016	DE 102014215032 A1	04-02-2016
		WO 2016015958 A1	04-02-2016
-----			
US 2014272515 A1	18-09-2014	CN 104051815 A	17-09-2014
		DE 102014204209 A1	18-09-2014
		US 2014272515 A1	18-09-2014
-----			