

(12) 특허협력조약에 의하여 공개된 국제출원

(19) 세계지식재산권기구
국제사무국

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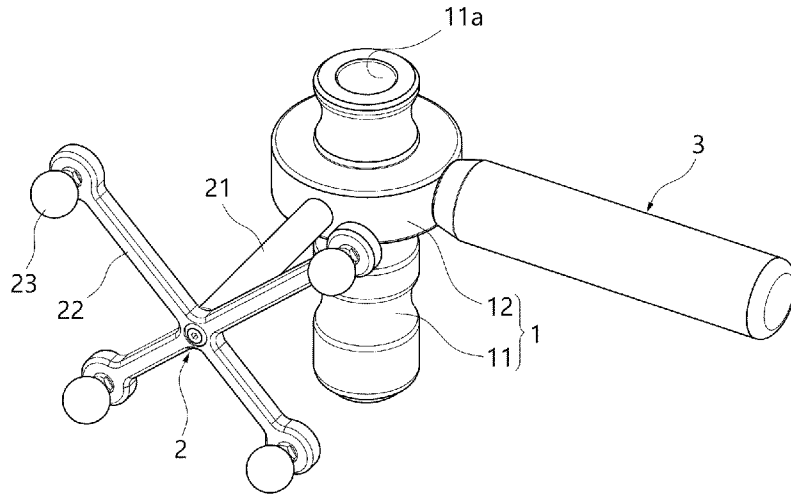


(10) 국제공개번호
WO 2020/185032 A3

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A61B 17/70 (2006.01) *A61B 34/30* (2016.01)
A61B 90/00 (2016.01) *A61B 17/00* (2006.01)
- (21) 국제출원번호: PCT/KR2020/003529
- (22) 국제출원일: 2020년 3월 13일 (13.03.2020)
- (25) 출원언어: 한국어
- (26) 공개언어: 한국어
- (30) 우선권정보: 10-2019-0028625 2019년 3월 13일 (13.03.2019) KR
- (71) 출원인: 큐렉소 주식회사 (CUREXO, INC.) [KR/KR]; 06530 서울시 서초구 강남대로 577, 4층(잠원동), Seoul (KR).
- (72) 발명자: 차용엽 (CHA, Yong Yeob); 05503 서울시 송파구 송파대로 567, 529-1010, Seoul (KR).
- (74) 대리인: 특허법인 남촌 (NAMCHON INTERNATIONAL PATENT AND LAW FIRM); 03173 서울시 종로구 새문안로5길 37 도림빌딩 406 (도림동), Seoul (KR).
- (81) 지정국 (별도의 표시가 없는 한, 가능한 모든 종류의 국내 권리의 보호를 위하여): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.
- (84) 지정국 (별도의 표시가 없는 한, 가능한 모든 종류의 역내 권리의 보호를 위하여): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 유라시아 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 유럽 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK,

(54) Title: SURGICAL TOOL HANDLE DEVICE

(54) 발명의 명칭: 수술도구용 핸들장치



(57) Abstract: The present invention relates to a surgical tool handle device and, more specifically, to a surgical tool handle device, which holds a surgical tool while maintaining a fixed position of a marker so as to enable movement or a surgery to be freely performed. The surgical tool handle device according to the present invention comprises: a handle main body having a tool insertion hole in which the surgical tool is to be inserted; a handle member attachably/detachably provided on the handle main body; and a marker member provided on the handle main body.

(57) 요약서: 본 발명은 수술도구용 핸들장치에 관한 것으로서, 더욱 상세하게는, 마커의 위치를 일정하게 유지하면서 수술도구를 거치하여 자유롭게 조작, 수술할 수 있는 수술도구용 핸들장치에 관한 것이다. 본 발명에 따른 수술도구용 핸들장치는 수술도구용 핸들장치에 있어서, 수술도구의 삽입을 위한 도구삽입홀이 형성된 핸들본체; 상기 핸들본체에 착탈 가능하게 설치되는 손잡이부재; 및 상기 핸들본체에 설치되는 마커부재;를 포함하는 것을 특징으로 한다.



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MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML,
MR, NE, SN, TD, TG).

공개:

- 국제조사보고서와 함께 (조약 제21조(3))
- 청구범위 보정 기한 만료 전의 공개이며, 보정서를 접수하는 경우 그에 관하여 별도 공개함 (규칙 48.2(h))

(88) 국제조사보고서 공개일:

2020 년 12 월 17 일 (17.12.2020)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2020/003529

A. CLASSIFICATION OF SUBJECT MATTER		
A61B 50/20(2016.01)i; A61B 17/70(2006.01)i; A61B 90/00(2016.01)i; A61B 34/20(2016.01)i; A61B 34/30(2016.01)i; A61B 17/00(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) A61B 50/20; A61B 017/58; A61B 17/32; A61B 17/88; A61B 19/00; A61B 34/20; A61B 34/30; A61B 17/70; A61B 90/00; A61B 17/00		
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) & keywords: 수술도구(surgical instrument), 핸들(handle), 마커(marker), 삽입(insertion), 홈(hole), 착탈(detachable)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6021343 A (FOLEY, K. T. et al.) 01 February 2000. See columns 3-4; and figures 1-5.	1-3,6
Y		7-8
A		4-5
Y	US 2005-0154296 A1 (LECHNER, C. et al.) 14 July 2005. See paragraphs [0030]-[0032]; and figures 2-3.	7-8
A	KR 10-2015-0103583 A (U&I CORPORATION) 11 September 2015. See entire document.	1-8
A	US 5441059 A (DANNAN, P. A.) 15 August 1995. See entire document.	1-8
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 "D" document cited by the applicant in the international application "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 02 November 2020		Date of mailing of the international search report 02 November 2020
Name and mailing address of the ISA/KR Korean Intellectual Property Office Government Complex Daejeon Building 4, 189, Cheongsaro, Seo-gu, Daejeon, Republic of Korea 35208		Authorized officer
Facsimile No. +82-42-481-8578		Telephone No.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2016-0220320 A1 (GLOBUS MEDICAL, INC.) 04 August 2016. See entire document.	1-8
<hr/>		

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2020/003529

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
US	6021343	A	01 February 2000	AU	1528499	A	15 June 1999
				US	RE43328	E	24 April 2012
				US	RE45484	E	21 April 2015
				US	RE46409	E	23 May 2017
				US	RE46422	E	06 June 2017
				WO	99-26549	A1	03 June 1999
US	2005-0154296	A1	14 July 2005	EP	1543789	A1	22 June 2005
				EP	1543789	B1	04 October 2006
				US	10335247	B2	02 July 2019
				US	2017-0000583	A1	05 January 2017
				US	9393039	B2	19 July 2016
KR	10-2015-0103583	A	11 September 2015	KR	10-1631908	B1	20 June 2016
US	5441059	A	15 August 1995	AU	1869295	A	04 September 1995
				WO	95-22298	A1	24 August 1995
US	2016-0220320	A1	04 August 2016	CA	2642481	A1	23 August 2007
				CA	2642481	C	05 April 2016
				CN	108524003	A	14 September 2018
				CN	108652743	A	16 October 2018
				CN	108969100	A	11 December 2018
				CN	108981722	A	11 December 2018
				CN	109259863	A	25 January 2019
				CN	109758232	A	17 May 2019
				CN	110013313	A	16 July 2019
				CN	110090077	A	06 August 2019
				CN	110464457	A	19 November 2019
				CN	110575255	A	17 December 2019
				CN	110638526	A	03 January 2020
				CN	110652359	A	07 January 2020
				CN	110652360	A	07 January 2020
				DE	102018113007	A1	06 December 2018
				EP	1991121	A1	19 November 2008
				EP	1991121	B1	06 August 2014
				EP	2863827	A1	29 April 2015
				EP	3060138	A1	31 August 2016
				EP	3060138	B1	22 April 2020
				EP	3241518	A2	08 November 2017
				EP	3241518	A3	24 January 2018
				EP	3247305	A1	29 November 2017
EP	3249427	A1	29 November 2017				
EP	3249427	B1	12 June 2019				
EP	3257463	A1	20 December 2017				
EP	3257463	B1	20 March 2019				
EP	3278758	A2	07 February 2018				
EP	3278758	A3	25 April 2018				
EP	3278758	B1	14 August 2019				
EP	3295887	A1	21 March 2018				
EP	3295887	B1	25 December 2019				
EP	3306567	A1	11 April 2018				
EP	3306567	B1	11 March 2020				
EP	3318213	A1	09 May 2018				

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2020/003529

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
		EP 3320874 A1	16 May 2018
		EP 3332706 A1	13 June 2018
		EP 3369394 A2	05 September 2018
		EP 3369394 A3	12 September 2018
		EP 3369394 B1	10 June 2020
		EP 3391848 A2	24 October 2018
		EP 3391848 A3	27 February 2019
		EP 3409231 A1	05 December 2018
		EP 3431025 A1	23 January 2019
		EP 3479791 A1	08 May 2019
		EP 3479791 B1	26 August 2020
		EP 3482694 A1	15 May 2019
		EP 3510927 A1	17 July 2019
		EP 3517069 A1	31 July 2019
		EP 3566669 A1	13 November 2019
		EP 3578128 A1	11 December 2019
		EP 3586782 A1	01 January 2020
		EP 3586784 A2	01 January 2020
		EP 3586784 A3	04 March 2020
		EP 3586785 A1	01 January 2020
		EP 3636195 A1	15 April 2020
		JP 2015-528713 A	01 October 2015
		JP 2016-539681 A	22 December 2016
		JP 2017-205495 A	24 November 2017
		JP 2017-221660 A	21 December 2017
		JP 2017-223657 A	21 December 2017
		JP 2018-011938 A	25 January 2018
		JP 2018-051306 A	05 April 2018
		JP 2018-079304 A	24 May 2018
		JP 2018-094404 A	21 June 2018
		JP 2018-108344 A	12 July 2018
		JP 2018-110841 A	19 July 2018
		JP 2018-143766 A	20 September 2018
		JP 2018-161477 A	18 October 2018
		JP 2018-202156 A	27 December 2018
		JP 2018-509949 A	12 April 2018
		JP 2019-018018 A	07 February 2019
		JP 2019-088781 A	13 June 2019
		JP 2019-122768 A	25 July 2019
		JP 2019-141572 A	29 August 2019
		JP 2019-202130 A	28 November 2019
		JP 2020-014840 A	30 January 2020
		JP 2020-018842 A	06 February 2020
		JP 2020-022730 A	13 February 2020
		JP 2020-072773 A	14 May 2020
		JP 2020-075105 A	21 May 2020
		JP 6704034 B2	03 June 2020
		JP 6714737 B2	24 June 2020
		US 10136954 B2	27 November 2018
		US 10172678 B2	08 January 2019

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2020/003529

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
		US 10231791 B2	19 March 2019
		US 10350013 B2	16 July 2019
		US 10357184 B2	23 July 2019
		US 10427676 B2	01 October 2019
		US 10485617 B2	26 November 2019
		US 10531927 B2	14 January 2020
		US 10624710 B2	21 April 2020
		US 10639112 B2	05 May 2020
		US 10646280 B2	12 May 2020
		US 10653497 B2	19 May 2020
		US 2007-0238985 A1	11 October 2007
		US 2008-0154389 A1	26 June 2008
		US 2008-0215181 A1	04 September 2008
		US 2013-0123799 A1	16 May 2013
		US 2013-0345718 A1	26 December 2013
		US 2014-0275955 A1	18 September 2014
		US 2014-0378999 A1	25 December 2014
		US 2015-0032164 A1	29 January 2015
		US 2015-0209119 A1	30 July 2015
		US 2015-0335386 A1	26 November 2015
		US 2016-0235493 A1	18 August 2016
		US 2016-0242849 A9	25 August 2016
		US 2016-0256225 A1	08 September 2016
		US 2016-0278875 A1	29 September 2016
		US 2016-0331479 A1	17 November 2016
		US 2017-0007334 A1	12 January 2017
		US 2017-0020630 A1	26 January 2017
		US 2017-0071691 A1	16 March 2017
		US 2017-0079727 A1	23 March 2017
		US 2017-0119339 A1	04 May 2017
		US 2017-0172669 A1	22 June 2017
		US 2017-0231702 A1	17 August 2017
		US 2017-0239002 A1	24 August 2017
		US 2017-0239003 A1	24 August 2017
		US 2017-0239006 A1	24 August 2017
		US 2017-0239007 A1	24 August 2017
		US 2017-0245944 A1	31 August 2017
		US 2017-0245951 A1	31 August 2017
		US 2017-0252112 A1	07 September 2017
		US 2017-0252114 A1	07 September 2017
		US 2017-0258533 A1	14 September 2017
		US 2017-0258535 A1	14 September 2017
		US 2017-0265774 A1	21 September 2017
		US 2017-0265949 A1	21 September 2017
		US 2017-0281145 A1	05 October 2017
		US 2017-0304013 A1	26 October 2017
		US 2017-0312039 A1	02 November 2017
		US 2017-0348061 A1	07 December 2017
		US 2017-0354468 A1	14 December 2017
		US 2017-0360517 A1	21 December 2017

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2020/003529

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
		US 2018-0000546 A1	04 January 2018
		US 2018-0064497 A1	08 March 2018
		US 2018-0132839 A1	17 May 2018
		US 2018-0147018 A1	31 May 2018
		US 2018-0214221 A1	02 August 2018
		US 2018-0221098 A1	09 August 2018
		US 2018-0256259 A1	13 September 2018
		US 2018-0279993 A1	04 October 2018
		US 2018-0318018 A9	08 November 2018
		US 2018-0325610 A1	15 November 2018
		US 2018-0348767 A1	06 December 2018
		US 2019-0000561 A1	03 January 2019
		US 2019-0000569 A1	03 January 2019
		US 2019-0000571 A1	03 January 2019
		US 2019-0029765 A1	31 January 2019
		US 2019-0038366 A1	07 February 2019
		US 2019-0046281 A1	14 February 2019
		US 2019-0069961 A1	07 March 2019
		US 2019-0105116 A1	11 April 2019
		US 2019-0117313 A1	25 April 2019
		US 2019-0167362 A1	06 June 2019
		US 2019-0239964 A1	08 August 2019
		US 2019-0269467 A1	05 September 2019
		US 2019-0282123 A1	19 September 2019
		US 2019-0314093 A1	17 October 2019
		US 2019-0314094 A1	17 October 2019
		US 2019-0380794 A1	19 December 2019
		US 2019-0388161 A1	26 December 2019
		US 2020-0155243 A1	21 May 2020
		US 2020-0179065 A1	11 June 2020
		US 8010181 B2	30 August 2011
		US 8219177 B2	10 July 2012
		US 8219178 B2	10 July 2012
		US 9078685 B2	14 July 2015
		US 9782229 B2	10 October 2017
		WO 2007-095637 A1	23 August 2007
		WO 2013-192598 A1	27 December 2013
		WO 2015-061638 A1	30 April 2015
		WO 2016-118744 A1	28 July 2016

A. 발명이 속하는 기술분류(국제특허분류(IPC)) A61B 50/20(2016.01)i, A61B 17/70(2006.01)i, A61B 90/00(2016.01)i, A61B 34/20(2016.01)i, A61B 34/30(2016.01)i, A61B 17/00(2006.01)i		
B. 조사된 분야 조사된 최소문헌(국제특허분류를 기재) A61B 50/20; A61B 017/58; A61B 17/32; A61B 17/88; A61B 19/00; A61B 34/20; A61B 34/30; A61B 17/70; A61B 90/00; A61B 17/00 조사된 기술분야에 속하는 최소문헌 이외의 문헌 한국등록실용신안공보 및 한국공개실용신안공보: 조사된 최소문헌란에 기재된 IPC 일본등록실용신안공보 및 일본공개실용신안공보: 조사된 최소문헌란에 기재된 IPC		
국제조사에 이용된 전산 데이터베이스(데이터베이스의 명칭 및 검색어(해당하는 경우)) eKOMPASS(특허청 내부 검색시스템) & 키워드: 수술도구(surgical instrument), 핸들(handle), 마커(marker), 삽입(insertion), 홀(hole), 착탈(detachable)		
C. 관련 문헌		
카테고리*	인용문헌명 및 관련 구절(해당하는 경우)의 기재	관련 청구항
X	US 6021343 A (FOLEY, K. T. 등) 2000.02.01 컬럼 3-4; 도면 1-5	1-3,6
Y		7-8
A		4-5
Y	US 2005-0154296 A1 (LECHNER, C. 등) 2005.07.14 단락 [0030]-[0032]; 도면 2-3	7-8
A	KR 10-2015-0103583 A (유엔아이 주식회사) 2015.09.11 전문	1-8
A	US 5441059 A (DANNAN, P. A.) 1995.08.15 전문	1-8
A	US 2016-0220320 A1 (GLOBUS MEDICAL, INC.) 2016.08.04 전문	1-8
<input type="checkbox"/> 추가 문헌이 C(계속)에 기재되어 있습니다. <input checked="" type="checkbox"/> 대응특허에 관한 별지를 참조하십시오.		
* 인용된 문헌의 특별 카테고리: “A” 특별히 관련이 없는 것으로 보이는 일반적인 기술수준을 정의한 문헌 “D” 본 국제출원에서 출원인이 인용한 문헌 “E” 국제출원일보다 빠른 출원일 또는 우선일을 가지나 국제출원일 이후 “X” 특별한 관련이 있는 문헌. 해당 문헌 하나만으로 청구된 발명의 신규성 또는 진보성이 없는 것으로 본다. “L” 우선권 주장에 의문을 제기하는 문헌 또는 다른 인용문헌의 공개일 또는 다른 특별한 이유(이유를 명시)를 밝히기 위하여 인용된 문헌 “Y” 특별한 관련이 있는 문헌. 해당 문헌이 하나 이상의 다른 문헌과 조합하는 경우로 그 조합이 당업자에게 자명한 경우 청구된 발명은 진보성이 없는 것으로 본다. “O” 구두 개시, 사용, 전시 또는 기타 수단을 언급하고 있는 문헌 “P” 우선일 이후에 공개되었으나 국제출원일 이전에 공개된 문헌 “T” 국제출원일 또는 우선일 후에 공개된 문헌으로, 출원과 상충하지 않으며 발명의 기초가 되는 원리나 이론을 이해하기 위해 인용된 문헌 “X” 특별한 관련이 있는 문헌. 해당 문헌 하나만으로 청구된 발명의 신규성 또는 진보성이 없는 것으로 본다. “Y” 특별한 관련이 있는 문헌. 해당 문헌이 하나 이상의 다른 문헌과 조합하는 경우로 그 조합이 당업자에게 자명한 경우 청구된 발명은 진보성이 없는 것으로 본다. “&” 동일한 대응특허문헌에 속하는 문헌		
국제조사의 실제 완료일 2020년 11월 02일 (02.11.2020)	국제조사보고서 발송일 2020년 11월 02일 (02.11.2020)	
ISA/KR의 명칭 및 우편주소  대한민국 특허청 (35208) 대전광역시 서구 청사로 189, 4동 (둔산동, 정부대전청사) 팩스 번호 +82-42-481-8578	심사관 한인호 전화번호 +82-42-481-3362	

국제조사보고서에서 인용된 특허문헌	공개일	대응특허문헌	공개일
US 6021343 A	2000/02/01	AU 1528499 A USRE43328 E USRE45484 E USRE46409 E USRE46422 E WO 99-26549 A1	1999/06/15 2012/04/24 2015/04/21 2017/05/23 2017/06/06 1999/06/03
US 2005-0154296 A1	2005/07/14	EP 1543789 A1 EP 1543789 B1 US 10335247 B2 US 2017-0000583 A1 US 9393039 B2	2005/06/22 2006/10/04 2019/07/02 2017/01/05 2016/07/19
KR 10-2015-0103583 A	2015/09/11	KR 10-1631908 B1	2016/06/20
US 5441059 A	1995/08/15	AU 1869295 A WO 95-22298 A1	1995/09/04 1995/08/24
US 2016-0220320 A1	2016/08/04	CA 2642481 A1 CA 2642481 C CN 108524003 A CN 108652743 A CN 108969100 A CN 108981722 A CN 109259863 A CN 109758232 A CN 110013313 A CN 110090077 A CN 110464457 A CN 110575255 A CN 110638526 A CN 110652359 A CN 110652360 A DE 102018113007 A1 EP 1991121 A1 EP 1991121 B1 EP 2863827 A1 EP 3060138 A1 EP 3060138 B1 EP 3241518 A2 EP 3241518 A3 EP 3247305 A1 EP 3249427 A1 EP 3249427 B1 EP 3257463 A1 EP 3257463 B1 EP 3278758 A2 EP 3278758 A3 EP 3278758 B1	2007/08/23 2016/04/05 2018/09/14 2018/10/16 2018/12/11 2018/12/11 2019/01/25 2019/05/17 2019/07/16 2019/08/06 2019/11/19 2019/12/17 2020/01/03 2020/01/07 2020/01/07 2018/12/06 2008/11/19 2014/08/06 2015/04/29 2016/08/31 2020/04/22 2017/11/08 2018/01/24 2017/11/29 2017/11/29 2019/06/12 2017/12/20 2019/03/20 2018/02/07 2018/04/25 2019/08/14

국제조사보고서에서 인용된 특허문헌	공개일	대응특허문헌	공개일
		EP 3295887 A1	2018/03/21
		EP 3295887 B1	2019/12/25
		EP 3306567 A1	2018/04/11
		EP 3306567 B1	2020/03/11
		EP 3318213 A1	2018/05/09
		EP 3320874 A1	2018/05/16
		EP 3332706 A1	2018/06/13
		EP 3369394 A2	2018/09/05
		EP 3369394 A3	2018/09/12
		EP 3369394 B1	2020/06/10
		EP 3391848 A2	2018/10/24
		EP 3391848 A3	2019/02/27
		EP 3409231 A1	2018/12/05
		EP 3431025 A1	2019/01/23
		EP 3479791 A1	2019/05/08
		EP 3479791 B1	2020/08/26
		EP 3482694 A1	2019/05/15
		EP 3510927 A1	2019/07/17
		EP 3517069 A1	2019/07/31
		EP 3566669 A1	2019/11/13
		EP 3578128 A1	2019/12/11
		EP 3586782 A1	2020/01/01
		EP 3586784 A2	2020/01/01
		EP 3586784 A3	2020/03/04
		EP 3586785 A1	2020/01/01
		EP 3636195 A1	2020/04/15
		JP 2015-528713 A	2015/10/01
		JP 2016-539681 A	2016/12/22
		JP 2017-205495 A	2017/11/24
		JP 2017-221660 A	2017/12/21
		JP 2017-223657 A	2017/12/21
		JP 2018-011938 A	2018/01/25
		JP 2018-051306 A	2018/04/05
		JP 2018-079304 A	2018/05/24
		JP 2018-094404 A	2018/06/21
		JP 2018-108344 A	2018/07/12
		JP 2018-110841 A	2018/07/19
		JP 2018-143766 A	2018/09/20
		JP 2018-161477 A	2018/10/18
		JP 2018-202156 A	2018/12/27
		JP 2018-509949 A	2018/04/12
		JP 2019-018018 A	2019/02/07
		JP 2019-088781 A	2019/06/13
		JP 2019-122768 A	2019/07/25
		JP 2019-141572 A	2019/08/29
		JP 2019-202130 A	2019/11/28
		JP 2020-014840 A	2020/01/30
		JP 2020-018842 A	2020/02/06
		JP 2020-022730 A	2020/02/13
		JP 2020-072773 A	2020/05/14

국제조사보고서에서 인용된 특허문헌	공개일	대응특허문헌	공개일
		JP 2020-075105 A	2020/05/21
		JP 6704034 B2	2020/06/03
		JP 6714737 B2	2020/06/24
		US 10136954 B2	2018/11/27
		US 10172678 B2	2019/01/08
		US 10231791 B2	2019/03/19
		US 10350013 B2	2019/07/16
		US 10357184 B2	2019/07/23
		US 10427676 B2	2019/10/01
		US 10485617 B2	2019/11/26
		US 10531927 B2	2020/01/14
		US 10624710 B2	2020/04/21
		US 10639112 B2	2020/05/05
		US 10646280 B2	2020/05/12
		US 10653497 B2	2020/05/19
		US 2007-0238985 A1	2007/10/11
		US 2008-0154389 A1	2008/06/26
		US 2008-0215181 A1	2008/09/04
		US 2013-0123799 A1	2013/05/16
		US 2013-0345718 A1	2013/12/26
		US 2014-0275955 A1	2014/09/18
		US 2014-0378999 A1	2014/12/25
		US 2015-0032164 A1	2015/01/29
		US 2015-0209119 A1	2015/07/30
		US 2015-0335386 A1	2015/11/26
		US 2016-0235493 A1	2016/08/18
		US 2016-0242849 A9	2016/08/25
		US 2016-0256225 A1	2016/09/08
		US 2016-0278875 A1	2016/09/29
		US 2016-0331479 A1	2016/11/17
		US 2017-0007334 A1	2017/01/12
		US 2017-0020630 A1	2017/01/26
		US 2017-0071691 A1	2017/03/16
		US 2017-0079727 A1	2017/03/23
		US 2017-0119339 A1	2017/05/04
		US 2017-0172669 A1	2017/06/22
		US 2017-0231702 A1	2017/08/17
		US 2017-0239002 A1	2017/08/24
		US 2017-0239003 A1	2017/08/24
		US 2017-0239006 A1	2017/08/24
		US 2017-0239007 A1	2017/08/24
		US 2017-0245944 A1	2017/08/31
		US 2017-0245951 A1	2017/08/31
		US 2017-0252112 A1	2017/09/07
		US 2017-0252114 A1	2017/09/07
		US 2017-0258533 A1	2017/09/14
		US 2017-0258535 A1	2017/09/14
		US 2017-0265774 A1	2017/09/21
		US 2017-0265949 A1	2017/09/21
		US 2017-0281145 A1	2017/10/05

국제조사보고서에서 인용된 특허문헌	공개일	대응특허문헌	공개일
		US 2017-0304013 A1	2017/10/26
		US 2017-0312039 A1	2017/11/02
		US 2017-0348061 A1	2017/12/07
		US 2017-0354468 A1	2017/12/14
		US 2017-0360517 A1	2017/12/21
		US 2018-0000546 A1	2018/01/04
		US 2018-0064497 A1	2018/03/08
		US 2018-0132839 A1	2018/05/17
		US 2018-0147018 A1	2018/05/31
		US 2018-0214221 A1	2018/08/02
		US 2018-0221098 A1	2018/08/09
		US 2018-0256259 A1	2018/09/13
		US 2018-0279993 A1	2018/10/04
		US 2018-0318018 A9	2018/11/08
		US 2018-0325610 A1	2018/11/15
		US 2018-0348767 A1	2018/12/06
		US 2019-0000561 A1	2019/01/03
		US 2019-0000569 A1	2019/01/03
		US 2019-0000571 A1	2019/01/03
		US 2019-0029765 A1	2019/01/31
		US 2019-0038366 A1	2019/02/07
		US 2019-0046281 A1	2019/02/14
		US 2019-0069961 A1	2019/03/07
		US 2019-0105116 A1	2019/04/11
		US 2019-0117313 A1	2019/04/25
		US 2019-0167362 A1	2019/06/06
		US 2019-0239964 A1	2019/08/08
		US 2019-0269467 A1	2019/09/05
		US 2019-0282123 A1	2019/09/19
		US 2019-0314093 A1	2019/10/17
		US 2019-0314094 A1	2019/10/17
		US 2019-0380794 A1	2019/12/19
		US 2019-0388161 A1	2019/12/26
		US 2020-0155243 A1	2020/05/21
		US 2020-0179065 A1	2020/06/11
		US 8010181 B2	2011/08/30
		US 8219177 B2	2012/07/10
		US 8219178 B2	2012/07/10
		US 9078685 B2	2015/07/14
		US 9782229 B2	2017/10/10
		WO 2007-095637 A1	2007/08/23
		WO 2013-192598 A1	2013/12/27
		WO 2015-061638 A1	2015/04/30
		WO 2016-118744 A1	2016/07/28