



(51) International Patent Classification:

B60K 15/03 (2006.01) B29C 49/22 (2006.01)
B29C 49/04 (2006.01) B29C 49/00 (2006.01)
B29C 49/20 (2006.01)

(21) International Application Number:

PCT/EP20 11/0033 19

(22) International Filing Date:

5 July 2011 (05.07.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10 2010 027 096.2 13 July 2010 (13.07.2010) DE

(71) Applicant (for all designated States except US): **KAU-
TEX TEXTRON GMBH & CO. KG** [DE/DE]; Kautex-
str. 52, 53229 Bonn (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KARSCH, Ulrich**
[DE/DE]; Aggerstrasse 24, 53859 Niederkassel (DE).

(74) Agents: **KIERDORF, Theodor** et al; Fleischer, Gode-
meyer, Kierdorf & Partner, Polypatent, Postfach 10 04 11,
51404 Bergisch Gladbach (DE).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG,
SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (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, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: FUEL TANK OF PLASTIC AND METHOD FOR THE PRODUCTION THEREOF

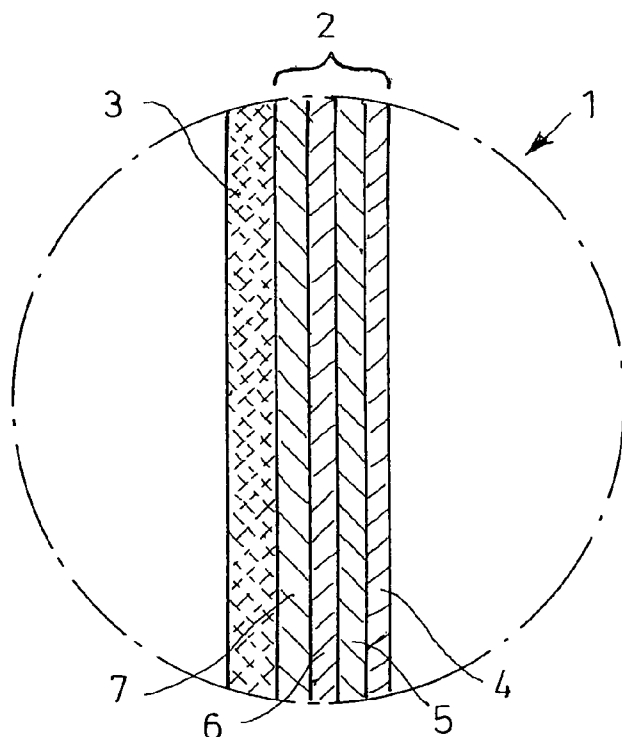


Fig. 6

(57) Abstract: The invention concerns
a fuel tank of plastic with a mul-
tilayered tank wall comprising at least
one inner layer of thermoplastic materi-
al and at least one outer layer of a fibre
composite material. The inner layer and
the outer layer are connected to each
other by a material bond.



31 May 2012

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2011/003319

A. CLASSIFICATION OF SUBJECT MATTER INV. B60K15/03 B29C49/04 B29C49/20 B29C49/22 B29C49/00 ADD.		
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) B60K B29C		
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 practical, 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.
X	wo 2007/093006 AI (RODGERS WILLIAM [AU]) 23 August 2007 (2007-08-23) page 1, lines 13-14 page 14, lines 2-4 claims 1-7, 22-24, 36 figure 2 -----	1, 2, 5-7 , 10
X	wo 99/03792 AI (NU CHEM INC [US] ; THORPE ALLEN W [US] ; TAYLOR EDWARD W JR [US] ; FELDMA) 28 January 1999 (1999-01-28) page 11, line 6 - page 13, line 5 figures 1-5 -----	1, 2, 5-7 , 10, 13, 14
X	DE 10 2004 009365 AI (TI AUTOMOTIVE TECHNOLOGY CT GM [DE]) 9 September 2004 (2004-09-09) paragraphs [0019] - [0021] , [0127] figures 1-3 ----- -/- .	1, 3, 4, 8, 9
☒ 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 document 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 1 March 2012		Date of mailing of the international search report 12/03/2012
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 Adacker, Jurgen

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2011/003319

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	wo 2007/045466 AI (MAT GLOBAL SOLUTIONS S L [ES] ; MATEU CODINA XAVI ER [ES] ; CADENS BALLAR) 26 April 2007 (2007-04-26) page 5, line 14 - page 6, line 12 page 6, line 34 - page 7, line 26 page 8, lines 20-26 page 12, lines 20-25 figures 1,4-6 -----	1-15
X	US 5 194 212 A (BONNETT ROY E [US]) 16 March 1993 (1993-03-16) column 2, line 57 - column 4, line 32 figures 1-4 -----	1-3 ,5-9
A	EP 1 894 702 A2 (KAUTEX TEXTRON GMBH & CO KG [DE]) 5 March 2008 (2008-03-05) abstract paragraphs [0025] - [0030] figures -----	1, 10-15
A	wo 94/12334 AI (SALFLEX POLYMERS LTD [CA]) 9 June 1994 (1994-06-09) page 6, line 1 - page 7, line 9 page 10, line 9 - page 11, line 9 figures 1,7 -----	1, 10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2011/003319

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007093006 A1	23-08-2007	AU 2007215389 A1	23-08-2007
		BR PI0708078 A2	17-05-2011
		CA 2640568 A1	23-08-2007
		CN 101460299 A	17-06-2009
		EA 200801857 A1	28-04-2009
		EP 1991413 A1	19-11-2008
		JP 2009533238 A	17-09-2009
		KR 20080108243 A	12-12-2008
		NZ 571295 A	28-10-2011
		US 2009304962 A1	10-12-2009
		WO 2007093006 A1	23-08-2007
		ZA 200807931 A	25-11-2009

WO 9903792 A1	28-01-1999	AU 8492898 A	10-02-1999
		BR 9811103 A	18-07-2000
		CA 2294738 A1	28-01-1999
		EP 0998433 A1	10-05-2000
		JP 2001510138 A	31-07-2001
		US 6001437 A	14-12-1999
		WO 9903792 A1	28-01-1999

DE 102004009365 A1	09-09-2004	DE 102004009365 A1	09-09-2004
		JP 2004256096 A	16-09-2004

WO 2007045466 A1	26-04-2007	EP 1948462 A1	30-07-2008
		ES 2253127 A1	16-05-2006
		WO 2007045466 A1	26-04-2007

US 5194212 A	16-03-1993	NONE	

EP 1894702 A2	05-03-2008	DE 102006041837 A1	20-03-2008
		EP 1894702 A2	05-03-2008
		US 2008078761 A1	03-04-2008

WO 9412334 A1	09-06-1994	CA 2083523 A1	21-05-1994
		WO 9412334 A1	09-06-1994
