



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).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

28 March 2013

Published:

— *with international search report (Art. 21(3))*

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2011/001085

A. CLASSIFICATION OF SUBJECT MATTER
 INV. E21B47/09
 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)
 E21B

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.
X	US 2010/122813 A1 (TRUMMER SASCHA [US] ET AL) 20 May 2010 (2010-05-20) paragraph [0022] - paragraph [0026]; figure 1	1-3, 7-18, 22-35
X	WO 03/042498 A1 (BAKER HUGHES INC [US]) 22 May 2003 (2003-05-22) page 6, line 22 - page 9, line 7	1,4-6, 18-21
X	US 6 585 042 B2 (SUMMERS JERRY L [US]) 1 July 2003 (2003-07-01) figure 4	1,7,18, 22
A	US 2010/139386 A1 (TAYLOR MICHAEL R [CA]) 10 June 2010 (2010-06-10) paragraph [0020] ----- -/-	1-35



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

16 January 2013

Date of mailing of the international search report

30/01/2013

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

Ott, Stéphane

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2011/001085

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2004/094961 A1 (SENSOR HIGHWAY LTD [GB]; RAMOS ROGERIO T [GB]) 4 November 2004 (2004-11-04) the whole document -----	1-35

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2011/001085

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010122813 A1	20-05-2010	CA 2684273 A1 US 2010122813 A1	18-05-2010 20-05-2010
WO 03042498 A1	22-05-2003	AU 2002352612 B2 BR 0214105 A CA 2466761 A1 GB 2399114 A US 2003127232 A1 WO 03042498 A1	28-02-2008 28-09-2004 22-05-2003 08-09-2004 10-07-2003 22-05-2003
US 6585042 B2	01-07-2003	NONE	
US 2010139386 A1	10-06-2010	US 2010139386 A1 WO 2010065826 A2	10-06-2010 10-06-2010
WO 2004094961 A1	04-11-2004	CA 2521543 A1 GB 2401430 A US 2006214098 A1 WO 2004094961 A1	04-11-2004 10-11-2004 28-09-2006 04-11-2004