

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 15 77 6006

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2010/089660 A1 (PEARCE CODY A [US] ET AL) 15 April 2010 (2010-04-15) * paragraphs [0044], [0089] - [0092]; claims 1-3,7,8; figures 8-10 *	1-15	INV. E21B10/02 E21B10/48 E21B10/60
A	FR 1 197 183 A (J K SMIT & FILS ETS) 27 November 1959 (1959-11-27) * figures 1,4,5 *	1	
A	US 2013/186693 A1 (WEST GREGORY DONALD [NZ] ET AL) 25 July 2013 (2013-07-25) * paragraphs [0206], [0223]; figures 1,6 *	14,15	
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			TECHNICAL FIELDS SEARCHED (IPC)
			E21B
Place of search		Date of completion of the search	Examiner
The Hague		30 January 2018	Maukonen, Kalle
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☒ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

☐ All further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the first mentioned in the claims, namely claims:

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 15 77 6006

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-01-2018

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2010089660	A1	15-04-2010	AU 2010337217 A1	05-07-2012
			BR PI1011892 A2	12-04-2016
			CA 2784465 A1	07-07-2011
			CN 102782243 A	14-11-2012
			CN 106884617 A	23-06-2017
			EP 2513405 A1	24-10-2012
			PE 09922015 A1	29-06-2015
			PE 10572012 A1	09-08-2012
			US 2010089660 A1	15-04-2010
			US 2013313026 A1	28-11-2013
			US 2015300096 A1	22-10-2015
			WO 2011081775 A1	07-07-2011
			ZA 201205225 B	29-01-2014
			ZA 201307869 B	30-09-2015

FR 1197183	A	27-11-1959	NONE	

US 2013186693	A1	25-07-2013	NONE	
