

**General:**

- Id of document version: **20402578**
- Status of the document <ep-bulletin>: **Replacement of data for an application already published**
- Changed tag from previous publication of document <B002EP><ep-chgt-info>: **B475=N,20200221**
- Publication number of the document (EPO or WIPO) <B110>: **3039240**
- Kind of document <B130>: **B1**
- EPO Application number <B210>: **14839167.5**
- Application filing date <B220>: **2014.08.28**
- Date of refusal of application <B235>:
- Date of withdrawal of application <B235>:
- Date of application deemed withdrawn <B237>:
- Date of receipt of request for re-establishment of rights <B238EP>:
- Date of decision for re-establishment of rights <B238>:
- Date of making available to the public by printing or similar process of an unexamined patent document, on which no grant has taken place on or before the said date <B430>: **2016.07.06**
- Date of making available to the public by printing or similar process of a patent document on which grant has taken place on or before the said date <B450><date>: **2019.03.27**
- Number of the EPO Bulletin in which the mention of the grant is published. <B450><bnum>: **201913**
- Date of rejection of the opposition procedure <B787>:
- Date of termination of the opposition procedure <B788>:
- Due date for translation: **2019.06.27**
- Text when the inventor has agreed to waive his entitlement to designation. <B009EP><text[j]>:
- Date of reception of document: **2020.03.26**
- Date of publication <B140>: **2020.03.25**

**Priority <B300>:**

Number(s) assigned to priority application(s) <B310>:	Date(s) of filing of priority application(s) <B320>:	National property office allotting the priority application number or the organization allotting the regional priority application Number (WO for PCT) – country code <B330>:
	2013.08.28	US

**Lapse <B472>:**

**No lapse.**

**Classification <B500>:**

<b>IPC (8) as one fixed length field of 50 positions &lt;B510EP&gt;&lt;text&gt;:</b>	<b>Edition of IPC (IPC version) &lt;B516&gt;:</b>
E21B 17/00 20060101ALI20170420BHEP	8
E21B 47/12 20120101AFI20170420BHEP	8

**Title <B540>:**

No title.

**Division <B620> or <B620EP>:**

No division.

**EPO Customer <B710>&<B720>&<B730>&<B740>:**

<b>Name &lt;snm&gt;:</b>	Baker Hughes Incorporated	<b>EPO number of the customer &lt;iid&gt;:</b>	101697678
<b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b>	17021 Aldine Westfield Houston, TX 77073-5101 US		
<b>Customer type:</b>	Grantees	<b>Status:</b>	0

<b>Name &lt;snm&gt;:</b>	BRP Renaud & Partner mbB Rechtsanwälte Patentanwälte Steuerberater	<b>EPO number of the customer &lt;iid&gt;:</b>	100060892
<b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b>	Königstraße 28 70173 Stuttgart DE		
<b>Customer type:</b>	Attorney / Agent	<b>Status:</b>	0

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<b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b>	Im Brande 6 30926 Seelze DE		
<b>Customer type:</b>	Inventor	<b>Status:</b>	0

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<b>Address &lt;street&gt;, &lt;city&gt;, &lt;ctry&gt;:</b>	Im Dreieck 9 29331 Lachendorf DE		
<b>Customer type:</b>	Inventor	<b>Status:</b>	0

**Opposition <B780>:**  
No opposition.

**Designated countries <B840>:**

<b>Kind of document &lt;B130&gt;:</b>	<b>Date of publication &lt;B140&gt;:</b>	<b>Country code &lt;B840&gt;&lt;ctry&gt;:</b>
B1	2020.03.25	NO

**PCT <B860>&<B870>:**

<b>Kind of document</b>	B1
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<b>&lt;B130&gt;:</b>			
<b>PCT Application number &lt;B861&gt;&lt;anum&gt;:</b>	US2014053045	<b>Date of filing &lt;B861&gt;&lt;date&gt;:</b>	2014.08.28
<b>PCT Publication number &lt;B871&gt;&lt;pnum&gt;:</b>	WO2015031554	<b>Publication date &lt;B871&gt;&lt;date&gt;:</b>	2015.03.05
<b>Issue number of the Gazette &lt;B871&gt;&lt;bnum&gt;:</b>	201509	<b>Country code &lt;B862&gt;:</b>	en

**Citations <B560>:**

<b>Kind of document &lt;B130&gt;:</b>	<b>Type &lt;B561&gt; or &lt;B562&gt;:</b>	<b>Text &lt;B561&gt;&lt;text&gt; or &lt;B562&gt;&lt;text&gt;:</b>
B1	PT citation	EP-A2- 2 273 058
B1	PT citation	GB-A- 2 407 334
B1	PT citation	US-A- 4 788 544
B1	PT citation	US-A- 5 052 941
B1	PT citation	US-A1- 2007 030 167
B1	PT citation	US-A1- 2007 257 812
B1	PT citation	US-A1- 2010 264 650
B1	PT citation	US-A1- 2010 328 095
B1	PT citation	US-A1- 2013 080 060
B1	PT citation	US-B2- 6 641 434