

**General:**

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- EPO Application number <B210>: **15753148.4**
- Application filing date <B220>: **2015.08.14**
- Date of refusal of application <B235>:
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- Date of application deemed withdrawn <B237>:
- Date of receipt of request for re-establishment of rights <B238EP>:
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- 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>: **2017.06.21**
- 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>: **2022.11.02**
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- Date of rejection of the opposition procedure <B787>:
- Date of termination of the opposition procedure <B788>:
- Due date for translation: **2023.02.02**
- Text when the inventor has agreed to waive his entitlement to designation. <B009EP><text[jj]>:
- Date of reception of document: **2023.10.13**
- Date of publication <B140>: **2023.10.11**

**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>: |
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|                                                       | 2014.08.15                                           | GB                                                                                                                                                                            |
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**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 33/12 20060101AFI20210929BHEP                                                   | 8                                                 |
| E21B 33/124 20060101ALI20210929BHEP                                                  | 8                                                 |
| E21B 36/00 20060101ALI20210929BHEP                                                   | 8                                                 |

**Title <B540>:**  
**No title.**

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

| <b>Application number of the parent application &lt;B620&gt;&lt;anum&gt; or &lt;B620EP&gt;&lt;anum&gt;:</b> | <b>Publication number of the parent application &lt;B620&gt;&lt;pnum&gt; or &lt;B620EP&gt;&lt;pnum&gt;:</b> | <b>Date of receipt &lt;B620&gt;&lt;date&gt; or &lt;B620EP&gt;&lt;date&gt;:</b> | <b>Parent &lt;B620&gt; or &lt;B620EP&gt;:</b> |
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**EPO Customer <B710>&<B720>&<B730>&<B740>:**

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| <b>Customer type:</b>                                      | Grantees                                                             | <b>Status:</b>                                 | 0         |

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| <b>Customer type:</b>                                          | Inventor                                                            | <b>Status:</b>                                         | 0 |

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

**Designated countries <B840>:**

|                                           |                                              |                                                   |
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| B1                                        | 2023.10.11                                   | NO                                                |

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

|                                                                 |              |                                                     |            |
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| <b>Kind of document<br/>&lt;B130&gt;:</b>                       | B1           |                                                     |            |
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|                                                                  |              |                                                       |            |
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| <b>PCT Publication number<br/>&lt;B871&gt;&lt;pnum&gt;:</b>      | WO2016024122 | <b>Publication date<br/>&lt;B871&gt;&lt;date&gt;:</b> | 2016.02.18 |
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**Citations <B560>:**

| <b>Kind of document<br/>&lt;B130&gt;:</b> | <b>Type &lt;B561&gt; or &lt;B562&gt;:</b> | <b>Text &lt;B561&gt;&lt;text&gt; or<br/>&lt;B562&gt;&lt;text&gt;:</b> |
|-------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------|
| B1                                        | PT citation                               | WO-A1-02/099247                                                       |
| B1                                        | PT citation                               | WO-A1-03/083255                                                       |
| B1                                        | PT citation                               | WO-A1-2013/184237                                                     |
| B1                                        | PT citation                               | GB-A- 2 442 636                                                       |
| B1                                        | PT citation                               | GB-A- 2 480 869                                                       |
| B1                                        | PT citation                               | US-A- 2 780 294                                                       |
| B1                                        | PT citation                               | US-A1- 2007 199 693                                                   |
| B1                                        | PT citation                               | US-A1- 2008 047 708                                                   |
| B1                                        | PT citation                               | US-A1- 2011 155 377                                                   |