## 505619938 08/13/2019

## PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name            | Execution Date |
|-----------------|----------------|
| SVEN SCHRAPE    | 09/07/2018     |
| BERNHARD MÜCK   | 09/07/2018     |
| JENS NIPKAU     | 09/07/2018     |
| THOMAS GIERSCH  | 08/20/2018     |
| FRANK HEINICHEN | 08/20/2018     |
| JOHN DODDS      | 08/29/2018     |

#### **RECEIVING PARTY DATA**

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| State/Country:                     | UNITED KINGDOM                      |  |
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#### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 16539688 |

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| SIGNATURE:                | /TIMOTHY J. KLIMA/ |  |
| DATE SIGNED:              | 08/13/2019         |  |
| Total Attachments: 3      |                    |  |
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| source=01162167#page2.tif |                    |  |
| source=01162167#page3.tif |                    |  |

## NONPROVISIONAL PATENT ASSIGNMENT

| Assignee Reference No. | EM 80409 |
|------------------------|----------|

#### Please return notice of recordation to:

[Customer Number: 23486] **Shuttleworth & Ingersoll, PLC** 115 3<sup>rd</sup> Street SE, Suite 500 Cedar Rapids, IA 52401

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For good and valuable consideration paid to each of the undersigned, the receipt and sufficiency of which are hereby acknowledged by the undersigned, to wit:

| and the same of th |                                |   |
|--|--------------------------------|---|
| INSERT 1 Dr. Sven Schrape  | 4 Thomas Giersch               | - |
| INVENTOR 2 Dr. Bernhard Mück   | 5 Dr. Frank Heinichen          |   |
| NAME(S) 3 Dr. Jens Nipkau  | X X box if continued on page 2 |   |

the undersigned hereby sell(s), assign(s) and transfer(s) unto and at the request of:

| INSERT      | Rolls-Royce Deutschland Ltd & Co KG | Rolls-Royce pic    |
|-------------|-------------------------------------|--------------------|
| ASSIGNEE(S) | Eschenweg 11                        | 65 Buckingham Gate |
| NAME &      | 15827 Blankenfelde-Mahlow           | SW1E 6AT London    |
| ADDRESS     | GERMANY                             | United Kingdom     |

(hereinafter "ASSIGNEE"), the entire right, title and interest in the invention in the United States ("US"), its territorial possessions and all foreign countries, including all applications therefor, including any and all previously filed applications, and any and all future divisions, continuations, substitutes, reissues, renewals, foreign and PCT applications thereof (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from said applications), and any and all resulting patents, the invention known as:

| INVENTION | Wheel of a fluid flow machine |  |
|-----------|-------------------------------|--|
| TITLE     |                               |  |
|           |                               |  |

The undersigned hereby authorize(s) and request(s) patent office officials in the US, its territorial possessions and all foreign countries, to issue any and all said patents to ASSIGNEE (including its successors and assigns) for its sole use and benefit; the undersigned agree(s) that the attorney of record in said applications shall hereinafter act on behalf of ASSIGNEE (including its successors and assigns).

The undersigned hereby agree(s) to testify, make oaths, execute papers and assist in any manner ASSIGNEE (including its successors and assigns) and its representatives, as deemed necessary by ASSIGNEE (including its successors and assigns) for ASSIGNEE'S (including its successors and assigns) full protection and title in and to the invention in the US, its territorial possessions and all foreign countries.

The undersigned hereby authorize(s) Shuttleworth & Ingersoll, PLC of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

| INVENTOR                | DATE SIGNED | <u>WITNESS</u>   |
|-------------------------|-------------|--|
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| 13. Mil                 | 07.03.6018  | The state of the s |
| Name: Dr. Bernhard Mück |             | Volker Namann  |
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| Name: Dr. Jens Nipkau   |             | Voike <b>\V</b> iogmann  |
|                         |             |  |

# NONPROVISIONAL PATENT ASSIGNMENT continued

| WITNESS       |
|---------------|
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| I SALPRA LALL |
|               |
| SAUDRA TAUG   |
|               |

### NONPROVISIONAL PATENT ASSIGNMENT continued

|                    |                  | Assignee Reference No.                 |                |  |  |
|--------------------|------------------|--|----------------|--|--|
| INVENTION<br>TITLE |                  | annananananananananananananananananana |                |  |  |
| INSERT (           | 6 Dr. John Dodds | 9                                      |                |  |  |
| INVENTOR (         | 3                | 10                                     |                |  |  |
| <u>INVER</u>       | <u>NTOR</u>      | DATE SIGNED                            | WITNESS        |  |  |
| Name: Thor         | nas Giersch      |  | ·              |  |  |
|                    | Frank Heinichen  |  | §              |  |  |
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PATENT REEL: 050041 FRAME: 0530

**RECORDED: 08/13/2019**