PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5957943

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------|----------------|
| SANDIP DUTTA | 06/03/2016 |
| JAMES ZHANG | 06/03/2016 |
| GARY MICHAEL ITZEL | 06/03/2016 |
| JOHN MCCONNELL DELVAUX | 06/03/2016 |
| MATTHEW TROY HAFNER | 06/03/2016 |

RECEIVING PARTY DATA

| Name: GENERAL ELECTRIC COMPANY | | |
|--------------------------------|-----------------------------|--|
| Street Address: | eet Address: ONE RIVER ROAD | |
| City: | SCHENECTADY | |
| State/Country: | NEW YORK | |
| Postal Code: | 12345 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number | | |
|---------------------|----------|--|--|
| Application Number: | 16787819 | | |

CORRESPONDENCE DATA

Fax Number: (717)237-5300

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 717-237-5395

Email: hlawrence@mcneeslaw.com

HOLLY J. LAWRENCE **Correspondent Name:** Address Line 1: 100 PINE STREET Address Line 2: P.O. BOX 1177

Address Line 4: HARRISBURG, PENNSYLVANIA 17108-1166

| ATTORNEY DOCKET NUMBER: | 22113-0299-C1 | |
|-------------------------|---------------------|--|
| NAME OF SUBMITTER: | HOLLY J. LAWRENCE | |
| SIGNATURE: | /Holly J. Lawrence/ | |
| DATE SIGNED: | 02/11/2020 | |
| | • | |

Total Attachments: 10

PATENT REEL: 051787 FRAME: 0883

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PATENT REEL: 051787 FRAME: 0884

Customer No.: 13152

COMBINED DECLARATION AND GLOBAL ASSIGNMENT

FOR UTILITY OR DESIGN PATENT APPLICATION

As the below named inventor(s), I/we hereby declare that:

This declaration and assignment are directed to:

TURBINE COMPONENT AND METHODS OF MAKING AND COOLING A TURBINE COMPONENT

| \boxtimes | the specification of which is attached hereto OR | |
|-------------|--|-----------|
| | United States application or PCT international application number | |
| | filed on | _, as |
| | amended on [date] (if applicable). | |
| | (We hereby authorize and request the Company or its delegated attorneys or | agents to |
| | insert above the application number and filing date of the application when know | n.) |

The above-identified application was made or authorized to be made by us.

We believe that we are original joint inventors of a claimed invention in the application.

We hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC § 1001 by fine or imprisonment of not more than five (5) years, or both.

We have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR § 1.56, including, for continuation-in-part applications, material information which became available between the filing date of the prior application and the filing date of the continuation-in-part application.

In accordance with our obligation(s) under an Employee Innovation and Proprietary Information Agreement or (as applicable) arising out of other agreements (such as, but not limited to, the Services Agreement between General Electric Company, a New York corporation, and our employers), and/or for other good and valuable consideration of which we acknowledge receipt, I/we,

| Inventor First Name | Inventor Middle Name | Inventor Last Name | | Residence Town | Residence State | Residence Country |
|------------------------|----------------------------|-----------------------|----|----------------|--------------------|----------------------|
| Sandip | | DUTTA | of | Greenville | SC | US |
| James | | ZHANG | of | Greenville | SC | US |
| Gary | Michael | ITZEL | of | Simpsonville | SC | US |
| John | McConnell | DELVAUX | of | Fountain Inn | SC | US |

PATENT REEL: 051787 FRAME: 0885

Customer No.: 13152

| Matthew | Troy | HAFNER | of | Honea Path | SC | US | l |
|---------|------|--------|----|------------|----|----|---|
|---------|------|--------|----|------------|----|----|---|

hereby sell and assign to:

| Name of Company: GENERAL ELECTRIC COMPANY | |
|---|--|
| | Entity Type (optional): New York corporation |
| | Address: One River Road, Schenectady, New York 12345 USA |

herein referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements made or conceived by us described in the application(s) listed above and in the following table:

| Country of Filing | Type of Filing | Application Number | Filing Date | Title |
|-------------------|----------------|--------------------|-------------|-------|
| | | | | |
| | | | | |
| | | | | |

(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application(s) when known.)

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, continuations-in-part, reexaminations, renewals, and reissues thereof, and all rights of priority resulting from the filing of the application(s), and authorize and request any official whose duty it is to issue patents, to issue any patent on the inventions and improvements resulting therefrom to the Company, or its successors or assigns, and agree that on request and without further consideration, we will communicate to the Company or its representatives or nominees any facts known to us respecting the inventions and improvements and testify in any legal proceeding, make all rightful oaths, sign all lawful papers and execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights in all countries including, but not limited to, any provisional, non-provisional, continuation, continuation-in-part, divisional. renewal or substitute thereof, for any derivation proceedings relating thereto, and, as to any patents that issue from such applications, for any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof, and generally do everything possible to aid the Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for the invention and its improvements in all countries.

Remuneration claims of the inventor(s)/assignor(s) potentially arising from German Law on Employee Inventions, or any other respective country law, remain unaffected by this assignment.

| INVENTOR 1 | |
|---|--------------------|
| Signature: 514 Junda Sandip DUTTA | Date: June 3, 2016 |
| Witnessed by: Joseph a Walter Signature | Date: June 3,2016 |
| Printed Name of Witness Witnessed by: Signature Fund Sudw Printed Name of Witness | Date: June 3, 2014 |
| | |
| INVENTOR 2 | |
| Signature: | Date: |
| Witnessed by:Signature | Date: |
| Printed Name of Witness | |
| Witnessed by:Signature | Date: |
| Printed Name of Witness | |
| | |
| | |

Customer No.: 13152

INVENTOR 3 Signature: Date: 6/3/2016

Witnessed by: Christopher W. Kester

Date: 6/3/16

Date: 6/3/16

Date: 6/3/16 Date: _____6/3//6__ Printed Name of Witness **INVENTOR 4** Date: Signature: John McConnell DELVAUX Witnessed by: Signature Date: Printed Name of Witness Witnessed by: ______Signature Date: Printed Name of Witness

Docket No.: 283109/22113-0299

Customer No.: 13152

| Docket No.: 283109/22113-0299 Customer No.: 13152 | | |
|--|----------|--|
| INVENTOR 5 | | |
| Signature: | Date: | |
| Witnessed by:Signature | Date: | |
| Printed Name of Witness | <u> </u> | |
| Witnessed by:Signature | Date: | |
| Printed Name of Witness | | |

Customer No.: 13152

COMBINED DECLARATION AND GLOBAL ASSIGNMENT

FOR UTILITY OR DESIGN PATENT APPLICATION

As the below named inventor(s), I/we hereby declare that:

This declaration and assignment are directed to:

TURBINE COMPONENT AND METHODS OF MAKING AND COOLING A TURBINE

COMPONENT

| \boxtimes | the specification of which is attached hereto OR |
|-------------|--|
| | United States application or PCT international application number |
| | filed on, as |
| | amended on [date] (if applicable). |
| | (We hereby authorize and request the Company or its delegated attorneys or agents to |
| | insert above the application number and filing date of the application when known.) |

The above-identified application was made or authorized to be made by us.

We believe that we are original joint inventors of a claimed invention in the application.

We hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC § 1001 by fine or imprisonment of not more than five (5) years, or both.

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We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR § 1.56, including, for continuation-in-part applications, material information which became available between the filing date of the prior application and the filing date of the continuation-in-part application.

In accordance with our obligation(s) under an Employee Innovation and Proprietary Information Agreement or (as applicable) arising out of other agreements (such as, but not limited to, the Services Agreement between General Electric Company, a New York corporation, and our employers), and/or for other good and valuable consideration of which we acknowledge receipt, I/we,

| Inventor First Name | Inventor Middle Name | Inventor Last Name | | Residence Town | Residence State | Residence Country |
|------------------------|----------------------------|-----------------------|----|----------------|--------------------|----------------------|
| Sandip | | DUTTA | of | Greenville | SC | US |
| James | | ZHANG | of | Greenville | SC | US |
| Gary | Michael | ITZEL | of | Simpsonville | SC | US |
| John | McConnell | DELVAUX | of | Fountain Inn | SC | US |

PATENT REEL: 051787 FRAME: 0890

Customer No.: 13152

| DATE THE SAME | | | | |
|---------------|--|--|--|--|
| | | | | |
| | | | | |

hereby sell and assign to:

| Name of Company: GENERAL ELEC | TRIC COMPANY |
|---------------------------------------|--------------|
| Entity Type (optional): New York corp | oration |
| Address: One River Road, Schenecta | |

herein referred to as "Company", its successors and assigns our entire respective rights, titles and interests in and to the invention and improvements made or conceived by us described in the application(s) listed above and in the following table:

| Country of Filing | Type of Filing | Application Number | Filing Date | Title |
|-------------------|----------------|--------------------|-------------|-------|
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(We hereby authorize and request the Company or its delegated attorneys or agents to insert above the application number and filing date of the application(s) when known.)

and any and all applications for patent and patents therefrom in any and all countries, including all divisions, continuations, continuations-in-part, reexaminations, renewals, and reissues thereof, and all rights of priority resulting from the filing of the application(s), and authorize and request any official whose duty it is to issue patents, to issue any patent on the inventions and improvements resulting therefrom to the Company, or its successors or assigns, and agree that on request and without further consideration, we will communicate to the Company or its representatives or nominees any facts known to us respecting the inventions and improvements and testify in any legal proceeding, make all rightful oaths, sign all lawful papers and execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights in all countries including, but not limited to, any provisional, non-provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, for any derivation proceedings relating thereto, and, as to any patents that issue from such applications, for any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof, and generally do everything possible to aid the Company, its successors, assigns, and nominees to obtain and enforce proper patent protection for the invention and its improvements in all countries.

Remuneration claims of the inventor(s)/assignor(s) potentially arising from German Law on Employee Inventions, or any other respective country law, remain unaffected by this assignment.

| INVENTOR 1 | |
|---|------------------------|
| Signature: Sandip DUTTA | Date: |
| Witnessed by: Signature | Date: |
| Printed Name of Witness | |
| Witnessed by:Signature | Date: |
| Printed Name of Witness | |
| INVENTOR 2 | |
| Signature: James ZHÂNG | Date: 6/3/2016 |
| Witnessed by: Signature | Date: <u>(0/3/20)6</u> |
| Printed Name of Witness | |
| Witnessed by: Signature Stan F. Singson | Date: |
| Printed Name of Witness | |
| | |

Customer No.: 13152

Docket No.: 283109/22113-0299 Customer No.: 13152 **INVENTOR 3** Signature: Gary Michael ITZEL Date: Date: Witnessed by: _____ Signature Printed Name of Witness Date: Witnessed by: _____ Signature Printed Name of Witness **INVENTOR 4** Signature: John McConnell DELVAUX Witnessed by:

Printed Name of Witness

Signature

Printed Name of Witness

Signature