

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4455100

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RICHARD C. USKERT	06/18/2015
KANG N. LEE	03/04/2016
TED J. FREEMAN	02/24/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ROLLS-ROYCE CORPORATION
<b>Street Address:</b>	450 S. MERIDIAN STREET
<b>City:</b>	INDIANAPOLIS
<b>State/Country:</b>	INDIANA
<b>Postal Code:</b>	46225
<b>Name:</b>	ROLLS-ROYCE NORTH AMERICAN TECHNOLOGIES, INC.
<b>Street Address:</b>	2059 S. TIBBS AVENUE
<b>City:</b>	INDIANAPOLIS
<b>State/Country:</b>	INDIANA
<b>Postal Code:</b>	46241
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14957149
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(317)231-7433
<i>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.</i>	
<b>Email:</b>	aholt@btlaw.com
<b>Correspondent Name:</b>	BARNES & THORNBURG LLP
<b>Address Line 1:</b>	11 S. MERIDIAN STREET
<b>Address Line 4:</b>	INDIANAPOLIS, INDIANA 46204
<b>ATTORNEY DOCKET NUMBER:</b>	27163-244732/RCA10924
<b>NAME OF SUBMITTER:</b>	SAMUEL C. GIESTING
<b>SIGNATURE:</b>	/SCG/
<b>DATE SIGNED:</b>	06/12/2017

**Total Attachments: 6**

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ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.: 27163-230078  
Client Reference No.: RCA10924

ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned,

Name(s) of Inventor(s) Richard C. Uskert

maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled

Title of Application ABRASIVE TIPS FOR CERAMIC MATRIX COMPOSITE BLADES AND METHODS FOR MAKING THE SAME

Serial No.: 62/093,605  
Filing Date: 12-18-2014

the undersigned hereby sell(s), assign(s), and set(s) over to

Name of Assignee Rolls-Royce Corporation

Address of Assignee Business 450 S. Meridian Street  
Indianapolis, Indiana 46225

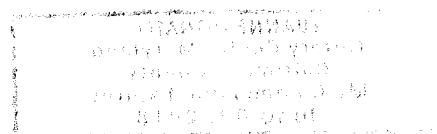
Insert State of Incorporation (if applicable) or "Not Applicable" a corporation of Delaware

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries, including Canada, which may be granted for such inventions, or any of them, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by them had this assignment and sale not been made.

The undersigned agree(s) to execute all papers necessary in connection with the application(s) in the United States and foreign countries and any continuing, divisional, or reissue applications thereof, and any reexamination of any of such applications, and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared or litigation concerning the application(s) or continuation, division, reissue, or reexamination thereof, and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or litigation.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.



ASSIGNMENT TO BUSINESS CONCERN

The undersigned agree(s) to do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States and in all other countries where Assignee may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application(s) or any division or divisions or continuing or reissue applications thereof, and any reexamination of any of such applications, to the said Assignee, as Assignee of the entire interest, and hereby covenants that the undersigned has full right to convey the interest herein assigned, and that the undersigned has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, I have executed this assignment at Hunt Valley, MD

this 18 day of JUNE, 2015.

Outside the USA: \_\_\_\_\_

Witnesses are \_\_\_\_\_

required when  
acknowledgment

before a Notary \_\_\_\_\_

Public is not \_\_\_\_\_  
feasible. Witness

Richard C Uskert

Inventor (Signature)

Richard C. Uskert

Inventor (Printed Name)

ACKNOWLEDGMENT

STATE OF \_\_\_\_\_ }

COUNTY OF \_\_\_\_\_ }

SS:

Acknowledged before me, a Notary Public, within and for said County and State. Witness my hand and Notarial Seal

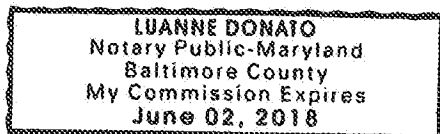
this 18 day of JUNE, 2015.

Luanne Donato  
Notary Public

Luanne Donato  
Printed Name

My Commission Expires: JUNE 2, 2018

Resident of Baltimore County



ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.: 27163-244732

Client Reference No.: RCA10924

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged,

Name(s)  
of Inventor(s)

Kang N. Lee

maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled

Title of  
Application

ABRASIVE TIPS FOR CERAMIC MATRIX COMPOSITE BLADES AND METHODS FOR MAKING THE SAME

Serial No.:  
Filing Date:

14/957,149

12/02/2015

the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to

Name of  
Assignee

Rolls-Royce Corporation

Address of  
Assignee  
Business

450 South Meridian Street

Indianapolis, Indiana 46225

Insert State of  
Incorporation  
(if applicable) or  
"Not Applicable"

a corporation of Delaware

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, all inventions disclosed therein, and any and all Letters Patent of the United States and of all other countries that may be granted for such inventions, all rights in such Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by Assignors had this assignment not been made.

The Assignors agree to execute any and all papers in connection with the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, and any Letters Patent issuing therefrom, and also to execute separate assignments as the Assignee may deem necessary or desirable.

The Assignors agree to execute any and all papers in connection with any litigation or any administrative proceeding concerning the Application, any and all patent applications filed in the United States and in all other countries claiming priority to the Application, or any Letters Patent issuing therefrom, and also to cooperate with the Assignee in every way possible in obtaining evidence and participating in any such litigation or proceeding.

The Assignors agree to execute any and all papers and to perform any and all acts which the Assignee may deem necessary or desirable in view of the provisions of the Patent Cooperation Treaty, the International Convention for Protection of Industrial Property, or similar agreements.

The Assignors agree to perform any and all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States and in all other countries where Assignee may desire patent protection, with specifications and claims in such form as shall be approved by Assignee, and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

The Assignors hereby covenant that they have the full right to convey the interests herein assigned, and that the Assignors have not executed, and will not execute, any agreement in conflict herewith.

The Assignors hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent & Trademark Office for recordation of this document.

3-4-16  
Date

Kang Lee  
Inventor (Signature)

Kang N. Lee  
Inventor (Printed Name)

ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.: 27163-230078

Client Reference No.: RCA10924

**ASSIGNMENT**

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned,

Name(s) Ted J. Freeman  
of Inventor(s) \_\_\_\_\_

maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled

Title of ABRASIVE TIPS FOR CERAMIC MATRIX COMPOSITE BLADES AND METHODS FOR  
Application MAKING THE SAME

Serial No.: 62/093,605  
Filing Date: 12-18-2014

the undersigned hereby sell(s), assign(s), and set(s) over to

Name of Rolls-Royce North American Technologies, Inc.  
Assignee \_\_\_\_\_

Address of 2059 S. Tibbs Ave.  
Assignee \_\_\_\_\_  
Business Indianapolis, Indiana 46241

(hereinafter designated as the Assignee) their entire right, title, and interest in, to, and under the Application, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries, including Canada, which may be granted for such inventions, or any of them, all such inventions and all rights in such Application and Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by them had this assignment and sale not been made.

The undersigned agree(s) to execute all papers necessary in connection with the application(s) in the United States and foreign countries and any continuing, divisional, or reissue applications thereof, and any reexamination of any of such applications, and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared or litigation concerning the application(s) or continuation, division, reissue, or reexamination thereof, and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or litigation.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

ASSIGNMENT TO BUSINESS CONCERN

The undersigned agree(s) to do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States and in all other countries where Assignee may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application(s) or any division or divisions or continuing or reissue applications thereof, and any reexamination of any of such applications, to the said Assignee, as Assignee of the entire interest, and hereby covenants that the undersigned has full right to convey the interest herein assigned, and that the undersigned has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, I have executed this assignment at Indianapolis, IN  
this 24 day of February, 2015.

Outside the USA:	_____	<u>Ted J. Freeman</u>
Witnesses are	Witness	Inventor (Signature)
required when		
acknowledgment		
before a Notary	_____	<u>Ted J. Freeman</u>
Public is not	Witness	Inventor (Printed Name)
feasible.		

ACKNOWLEDGMENT

STATE OF                    }  
                                  }  
COUNTY OF                }     SS:

Acknowledged before me, a Notary Public, within and for said County and State. Witness my hand and Notarial Seal  
this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Printed Name

My Commission Expires: \_\_\_\_\_

Resident of \_\_\_\_\_ County