504182091 01/18/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4229720

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ROBERT J. SHINAVSKI	04/18/2016
SUNGBO SHIM	04/05/2016
STEPHEN I. HARRIS	04/12/2016
SEAN E. LANDWEHR	01/18/2017

RECEIVING PARTY DATA

Name:	ROLLS-ROYCE HIGH TEMPERATURE COMPOSITES, INC.
Street Address:	18411 GOTHARD STREET, UNIT B
City:	HUNTINGTON BEACH
State/Country:	CALIFORNIA
Postal Code:	92648
Name:	ROLLS-ROYCE CORPORATION
Street Address:	450 S. MERIDIAN STREET
City:	INDIANAPOLIS
State/Country:	INDIANA
Postal Code:	46225

PROPERTY NUMBERS Total: 1

Property Type	Number			
Application Number:	15049712			

CORRESPONDENCE DATA

Fax Number: (317)231-7433

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.

Email: aholt@btlaw.com

Correspondent Name: BARNES & THORNBURG LLP Address Line 1: 11 S. MERIDIAN STREET

Address Line 4: INDIANAPOLIS, INDIANA 46204

ATTORNEY DOCKET NUMBER:	27163-245643/HTC11357
NAME OF SUBMITTER:	SAMUEL C. GIESTING
SIGNATURE:	/SCG/

 DATE SIGNED:
 01/18/2017

 Total Attachments: 8

 source=HTC11357_US_20160418_27163-245643_Executed_Assignment_Shinavski#page1.tif

 source=HTC11357_US_20160405_27163-245643_Executed_Assignment_Shim#page1.tif

 source=HTC11357_US_20160405_27163-245643_Executed_Assignment_Shim#page2.tif

 source=HTC11357_US_20160412_27163-245643_Executed_Assignment_Harris#page1.tif

 source=HTC11357_US_20160412_27163-245643_Executed_Assignment_Harris#page2.tif

 source=HTC11357_US_20170118_27163-245643_Executed_Assignment_Landwehr#page1.tif

source=HTC11357_US_20170118_27163-245643_Executed_Assignment_Landwehr#page2.tif

ASSIGNMENT TO BUSINESS CONCERN

Attorr	iey Doc	ket No.: _	27163-245643
Client	Refere		HTC11357

ASSIGNMENT

	For good and valuable consideration, the receipt of	of which	is hereby acknowledg	ed.
Name(s)	Robert J. Shinavski			
of Inventor(s)				
	maker(s) of an invention which is the subject of an ("Application") entitled	n applica	tion for Letters Patent	of the United Stat
Title of	METHOD FOR INCORPORATING REFRACTO	ORY ME	TAL ELEMENT INT	O CERAMIC
Application	MATRIX COMPOSITE			
Serial No.:	15/049,712			
Filing Date:	02/22/2016			
	the undersigned (hereinafter "Assignors") hereby	sell(s), a	ssign(s), and set(s) ov	er to
Name of	Rolls-Royce High Temperature Composi	ites, Inc.		
Assignee				
Address of	SOASS COUNTY CALLERY TO SE			
Assignee	18411 Gothard Street Unit B	<u> </u>	<u> </u>	
Business	Huntington Beach, CA 92648			
Insert State of				
Incorporation	a corporation of <u>California</u>			
(if applicable) or	Constant wa			
"Not Applicable"				

(hereinafter designated as the Assignce) 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 Assignce 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.

Pate Zo/L

Inventor (Signature)

Robert J. Shinavski Inventor (Printed Name)

ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket	No.:	27163-245643
Client Reference	No.:	HTC11357

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged,
Sungbo Shim
maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled
METHOD FOR INCORPORATING REFRACTORY METAL FLEMENT INTO CERAMIC MATRIX COMPOSITE
MACINIA COMI OSIXE
15/049,712
02/22/2016
the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to
Rolls-Royce High Temperature Composites, Inc.
18411 Gothard Street Unit B
Huntington Beach, CA 92648
a corporation of <u>California</u>

(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 Legers 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 Assigners 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.

	4/5/1	6		<u> </u>
Date			Invent	or (Signature)
			<u>Sungb</u> Invent	o Shim ox (Printed Name)

Attorney Docket No.: 27163-245643
Client Reference No.: HTC11357

ASSIGNMENT

	For good and valuable consideration, the receipt of which is hereby acknowledged,
Name(s) of Inventor(s)	Stephen I. Harris
	maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled
Fitle of Application	METHOD FOR INCORPORATING REFRACTORY METAL ELEMENT INTO CERAMIC MATRIX COMPOSITE
Serial No.: Filing Date:	15/049.712 02/22/2016
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to
Name of Assignee	Rolls-Royce High Temperature Composites, Inc.
Address of Assignee	18411 Gothard Street Unit B
Business	Huntington Beach, CA 92648
insert State of incorporation if applicable) or "Not Applicable"	a corporation of <u>California</u>

(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.

54/12/ 2016 Date

Inventor (Signature)

Stephen I. Harris
Inventor (Printed Name)

A	ttorn	iey D	locket	No.	s 9	2716	3-24	5643
			erence			HTC		

ASSIGNMENT

	For good and valuable consideration, the receipt of which is hereby acknowledged,
Name(s) of Inventor(s)	Sean E. Landwehr
	maker(s) of an invention which is the subject of an application for Letters Patent of the United State ("Application") entitled
Title of Application	METHOD FOR INCORPORATING REFRACTORY METAL ELEMENT INTO CERAMIC MATRIX COMPOSITE
Serial No.: Filing Date:	15/049,712 02/22/2016
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to
Name of Assignee	Rolls-Royce Corporation
Address of Assignee	430 S. Meridian Street
Business	Indianapolis, Indiana 46225
Insert State of Incorporation (if applicable) or	a corporation of <u>Delawase</u>

(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.

Inventor (Sismatu

Sean E. Landwehr

Inventor (Printed Name)