### 502699886 02/27/2014

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2746491

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
Li HE	02/18/2014
Amir RAHIM	02/24/2014
Bidur KHANAL	02/20/2014
Eduardo ROMERO	02/17/2014

### **RECEIVING PARTY DATA**

Name:	ROLLS-ROYCE PLC
Street Address:	65 Buckingham Gate
City:	London
State/Country:	Great Britain
Postal Code:	SW1E 6AT

### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14192363

### **CORRESPONDENCE DATA**

 Fax Number:
 (703)836-2787

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Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: JAMES A. OLIFF
Address Line 1: OLIFF, PLC
Address Line 2: P.O. BOX 320850

Address Line 4: ALEXANDRIA, VIRGINIA 22320-4850

ATTORNEY DOCKET NUMBER:	160722
NAME OF SUBMITTER:	CYNTHIA KLINE

PATENT 502699886 REEL: 032316 FRAME: 0629

Signature:	/Cynthia Kline/
Date:	02/27/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 8 source=2.27.14 160722 AssignDec#page1. source=2.27.14 160722 AssignDec#page2. source=2.27.14 160722 AssignDec#page3. source=2.27.14 160722 AssignDec#page4. source=2.27.14 160722 AssignDec#page5. source=2.27.14 160722 AssignDec#page6. source=2.27.14 160722 AssignDec#page7. source=2.27.14 160722 AssignDec#page8.	tif tif tif tif tif

### ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

### ASSIGNMENT

ROMERO
able consideration paid to each of adged, each undersigned agrees to
assigns and legal representatives, ed in 35 U.S.C. §100, in the nal, non-provisional, divisional, n(s), and all Letters Patent, the invention known as
)
1

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or patents for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with
- 3) Each undersigned agrees 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.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or
- reexamination a grant of a valid United States patent to the Assignee.

  5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office and other issuing authorities to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that 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.

#### (13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	18/2/2014	Inventor Signature	LI HE	(SEAL)
Date	,	Inventor Signature	AMIR RAHIM	(SEAL)
Date	,	Inventor Signature	BIDUR KHANAL	(SEAL)
Date		Inventor Signature	EDUARDO ROMERO	(SEAL)
neither	This assignment should preferably be signed, then it should be signed before at least two w		blic if within the U.S.A. (b) a U.S. Consul if outside ere:	the U.S.A. If
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Date		Witness for Amir Rabim		
Date		Witness for Amir Rahim		
Date		Witness for Bidur Khanal		
Date		Witness for Bidur Khanal		
Date		Witness for Eduardo Romero	· · · · · ·	
Date		Witness for Eduardo Romero		

# ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

### ASSIGNMENT

Invert	333			AMIR KARIM
Legal Name(s)	(3)	BUNIR KHANAL	(4)	EDUAREN ROMERO
of Inventor(s)	(8)		(6)	
	(?)		(#)	
	fixe we	densigned, the receipt and suffici	oney of which are t	
Insert Name of Assignee	(9)	BOLLS-ROYCE PLC		
Insert Address of Assigner	(19)	65 Buckingham Gate London	, SWIE 6AT,Gres	X Baltain
	the en unves contin	title right, title and interest for the look, and in all applications for pa matters, international, confirmatio	United States of A dent including any in, substitute and re	merics as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, insure application(s), and all Letters Faters,
Insert Identification	(11)	STATOR VANE BOW		
Number, or Foreign		5228 ACH		
Application Number	(Axto	mey Docket No. <u>160722</u>		
Allerantive Manufaction for	(32)	U.S. Application Number	14/192,363	
filed applications	filed	February 27, 2014		
	Legal Name(s) of Saventorie) of Saventorie) insert Name of Assigner insert Address of Assigner Assegner Assegner Assegner Assegner Assegner	Legal Name(s) (7) of Seventurity (5) (7) in confector for the same of (9) Assigner Insert Address of (9) Assigner Confector Co	Legal Name(s) (3) BINUR KRANAL  of Suventurity) (5)  In consideration of the sum of one doll the undersigned, the receipt and sufficionsign and hereby does assign, ransfer assign, and hereby does assign, transfer the suggest of the sum of one doll the undersigned, the receipt and sufficionsign, and hereby does assign, transfer the suggest of the sum of one doll the undersigned as the Assignment of the undersigned as the Assignment of the undersigned as the Assignment of the undersigned and interest for the unvestion, and in all applications for percentagement, international, confirmation extensions, reliables and reexamination (11) STATOR VANE ROW  Supplication Number (22) 11.5 Application Number (32) 11.5 Application Number (32) 11.5 Application Number (33) 11.5 Application Number (34) 11.5 Application Number (35) 11.5 Application Number (37) 2014	Legal Namers) (3) BSDUR KHANAL (4)  of Boventoria) (5) (5) (6)  In consideration of the sum of one dollar (\$1.90) and other the materialgued, the receipt and sufficiency of which are assign, and hereby does assign, transfer and set over to assigned the surgeon of the sum of

Excellented agrees to execute all papers resessary in connection with any application and/or patent for the invention and also to execute sensions and patents as the Assignor may deem necessary.

2) Exit undersigned agrees to execute all papers accessors in connection with any interference which may be declared concerning any applicances or access are the intertion and to corporate with the Assigner in every tray possible in obtaining evidence and going forward with access the context of the intertion and in corporate with the Assigner in every tray possible in obtaining evidence and going forward with access the context of the intertion and in the Assigner in every tray possible in obtaining evidence and going forward with

7) Each understored agrees to execute all papers and documents and perform any act which may be necessary in connection with these or provisions of the international Convention for Protection of Industrial Property or similar agreements.

 4) Each processor agrees to perform all affirmative acts which may be recovery to obtain, mointain or confirm by receive or securing action a grant of a valid Control States potent to the Assignor.

States assessing at an entering and improve the Commissioner of the U.S. Patient and Trademark Office and other issuing authorates to several patients are the provided and special and that he has not executed, and will not execute, any agreements) in conflict herewith, and several to account a barding on Assigner and Assigner's better succession, and legal representatives.

6. Cars recording to thereby grows the firm of OLDY PLOTE power to insert on this assignment any further upon five that may be recording to design the complete with the ratios of the United States Patent and Trackment Office for reconstation of this document.

#### (13) Declaration

As an above named inventor of her by decision of

Determine the properties are an engined your incomer of a dormed promiser (or claimed design) in the above-destribed application for which the declaration is being extensive.

The application was made or authorized to be made by the

There is several and argument the descent of the above identified application, and and all and are about the distribution on the Office at Indoor above to the Artificial Indoor and the Artificial Indoor and the Artificial Indoor and the Artificial Indoor and Indoo

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In allows whereof, executed by the andersigned on the date(x) opposite the undersigned summer.

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Date	Incretor Signature	BIDUR KHANAS	(SPA)
Date	Inventor Signature	EDUARDO ROMERO	(MEAL)
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Date	Witness for Li He		
on 24th Florenz 2016	Witness for Assir Rabins	GADOR ZIMKRISTO (A)	4/2
nee 24th February 2014	Witness for Amir Rabins	Jaskvan Challen A	
Date	Witnessfor BiderKhasal		
Date	Witness for Sidor Khasai		
Date	Witness for Eduardo Romero		
Detr	Witness for Eduardo Homero		

# ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

### ASSIGNMENT

	Insert	133	FIRE	(2)	AMB RABBM	
(38)	Legal Name(s)	(3)	BIDUR KHANAL	(4)	EDUARDO ROMERO	
	of Inventor(s)	(5)		(6)		
		(7)		(8)		
		the un		iency of which are I	r good and valuable consideration paid to each c screeky acknowledged, each undersigned agrees t	
(9)	Insert Name of Assignee	(9)	ROLLS-ROYCE PLC			
(10)	Insert Address of Assignee	(10)	65 Buckingham Gate, Londo	m, SW1E 6AT, Gre	at Britain	
		the en invent contin	tire right, title and interest for th ion, and in all applications for p uation, international, confirmati	e United States of A atent including any on, substitute and re	cirs, successors, assigns and legal representatives imerica as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent, by be granted on the invention known as	
(11)	Insert Identification	(11)	STATOR VANE ROW			
	such as Title, Case Number, or Foreign Application Number	(Atto	5226 ACH ney Docket No. 160722			
(12)	Alternative Identification for	(12)	U.S. Application Number	14/192,363		
	filed applications	filed	February 27, 2014			

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or patents for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- 3) Each undersigned agrees 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.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.
- 5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office and other issuing authorities to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that 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.

### (13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me,

I have reviewed and understand the contents of the above identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56

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

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Inventor Signature	LIHE	(SEAL)
Date		Inventor Signature	AMIR RAHIM	(SEAL)
Date	20-02 -2014	Inventor Signature	BIDUR KHANAL	(SEAL)
Date		Inventor Signature	EDUARDO ROMERO	(SEAL)
neither	This assignment should preferably be signed, then it should be signed before at least two	ed before: (a) a Notary Pul witnesses who also sign h	blic if within the U.S.A. (b) a U.S. Consul if ere:	outside the U.S.A. If
Date		Witness for Li He		
Date		Witness for Li He		
Date		Witness for Amir Rahim		
Date		Witness for Amir Rahim		
Date	20th Feb 2014	Witness for Bidur Khanal	AMSentila Men. Sic	umar
Date	20-feb-2014-	Witness for Bidur Khanal	JAken. D.C	Heusm]
Date		Witness for Eduardo Romero	,	
		Witness for		

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# ASSIGNMENT (BEING-FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

#### ASSIGNMENT

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(1-8)	Legal Name(s)	(3)	BIDUR KHANAL	(4)	EDUARDO ROMERO		
	of Inventor(s)	(5)	, '	(6)			
	Insert Name of Assignee Insert Address of Assignee	(7)		(8)			
		In consideration of the sum of one dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and sufficiency of which are hereby acknowledged, each undersigned agrees to assign, and hereby does assign, transfer and set over to					
(9) (10)		(9)	(9) ROLLS-ROYCE PLC				
		(10)	65 Buckingham Gafe, London, SWIE 6AT, Great Britain				
		(hereinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all provisional, non-provisional, divisional, continuation, international, confirmation, substitute and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as					
(H)	Insert Identification such as Title, Case Number, or Foreign Application Number	(11)	(11) STATOR VANE ROW				
			5226 ACH	•••••			
		(Attor	mey Docket No. 160722			}	
(12)	Afternative Identification for	(12)	U.S. Application Number	14/192,363			
	filed applications	filed	February 27, 2014				

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### (13) Declaration

Second.

As an above named inventor, Thereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and an aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Inventor Signature	LIME	(SEAL)
Date		Inventor Signature	AMIR RAHIM	(SEAL)
Date		Inventor Signature	BIDUR KHANAL	_ (SEÁL)
Date	13 Feb 2014	Inventor Signature	EDUARDO ROMERO E. Q.	(SEAL)
neither	This assignment should preferably be signed, then it should be signed before at least two w	d before: (a) a Notary Pt ritnesses who also sign t	ublic if within the U.S.A. (b) a U.S. Consul if outside there: $. \label{eq:consultation}$	he U.S.A. If
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Date	17/02/2014	Witness for Eduardo Romero	NGUNGUNYANA MHLANGA	<u>V.NY</u> -
Date	17/02/2014	Witness for Eduardo Romero .	MARTU MOTT <b>R</b> AM <i>III JUR</i> S	£