PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4381618

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ROBERT T. DUGE	10/12/2016
CRAWFORD F. SMITH III	10/11/2016

RECEIVING PARTY DATA

Name:	ROLLS-ROYCE NORTH AMERICAN TECHNOLOGIES, INC.
Street Address:	2059 S. TIBBS AVENUE
City:	INDIANAPOLIS
State/Country:	INDIANA
Postal Code:	46241

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15292676

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:	27163-255782/LWA11503
NAME OF SUBMITTER:	SAMUEL C. GIESTING
SIGNATURE:	/SCG/
DATE SIGNED:	04/24/2017

Total Attachments: 4

source=LWA11503_US_20161012_27163-255782_Executed_Assignment_Smith#page1.tif source=LWA11503_US_20161012_27163-255782_Executed_Assignment_Smith#page2.tif source=LWA11503_US_20161013_27163-255782_Executed_Assignment_Duge#page1.tif source=LWA11503_US_20161013_27163-255782_Executed_Assignment_Duge#page2.tif

PATENT 504334930 REEL: 042128 FRAME: 0951

ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.:	27163-255782
Client Reference No.:	LWA11503

ASSIGNMENT

Name(s) of Inventor(s)	For good and valuable consideration, the receipt of which is hereby acknowledged. Crawford F. Smith
	maker(s) of an invention which is the subject of an application for Letters Patent of the United States ("Application") entitled
Title of Application	AIR-INLET DUCT HAVING A PARTICLE SEPARATOR AND AN AGGEOMERATOR FOR A GAS TURBINE ENGINE
Serial No.: Filing Date:	15/292,676 10/13/2016
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to
Name of Assignee	Rolls-Royce North American Technologies, Inc.
Address of	2059 S. Tibbs Ave.
Assignee Business	Indianapolis, Indiana 46241
Insert State of Incorporation (if applicable) or "Not Applicable"	a corporation of <u>Delaware</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.

PATENT REEL: 042128 FRAME: 0952 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.

19/11/2016

Inventer (Signature)

Crawford F. Smith III Inventor (Printed Name)

Attorney Docket No.:	27163-255782
Client Reference No.:	LWA11503

ASSIGNMENT

	Lui. Bood sum asidanie consideramor, me receibi or amon is necesà sessio aleafad.	
Name(s) of Inventor(s)	Robert T. Duge	••••••
	maker(s) of an invention which is the subject of an application for Letters Patent of the Ut ("Application") entitled	nited State
Title of Application	AIR-INLET DUCT HAVING A PARTICLE SEPARATOR AND AN AGGLOMERATO A GAS TURBINE ENGINE	OR FOR
Serial No.: Filing Date:	15/292,676 10/13/2016	
	the undersigned (hereinafter "Assignors") hereby sell(s), assign(s), and set(s) over to	
Name of Assignee	Rolls-Royce North American Technologies, Inc.	
Address of Assignee	2059 S. Tibbs Ave.	
Business	Indianapolis, Indiana 46241	·
insert State of incorporation	a corporation of <u>Delaware</u>	
(if applicable) or "Not Applicable"		

(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.

Oct. 12, 2016

nventor (Signature)

Robert T. Duge Inventor (Printed Name)

REEL: 042128 FRAME: 0955