504798615 02/28/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4845347

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
INGA MAHLE	02/16/2018
MARKUS BRETTSCHNEIDER	02/16/2018
FADI MAATOUK	02/16/2018

RECEIVING PARTY DATA

Name:	MTU AERO ENGINES AG
Street Address:	DACHAUER STRASSE 665
City:	MUNICH
State/Country:	GERMANY
Postal Code:	80995

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15908401

CORRESPONDENCE DATA

Fax Number: (401)273-4447

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: 401-273-4446 Email: drj@barjos.com

Correspondent Name: BARLOW, JOSEPHS & HOLMES, LTD. Address Line 1: 101 DYER STREET, 5TH FLOOR

Address Line 4: PROVIDENCE, RHODE ISLAND 02903

ATTORNEY DOCKET NUMBER:	M078 P03410-US
NAME OF SUBMITTER:	DAVID R. JOSEPHS
SIGNATURE:	/david r. josephs/
DATE SIGNED:	02/28/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

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PATENT REEL: 045068 FRAME: 0476 504798615

Attorney Docket No. M078 P03410-US (U.S. Rights)

ASSIGNMENT AND DECLARATION UNDER 37 C.F.R. § 1.63

(For Use with Signed Application Data Sheet)

Title of Invention;	CONTOURING A BLADEA	ANE CASCADE STAGE		
the attached app the application i	dentified by the attorney docke	t no. and title of invention gi	ven above;	
United States A	pplication or PCT International		, filed	
e o o o o o o o o o o o o o o o o o o o		<u>GNMENT</u>		
For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, as a below- named inventor I have sold and assigned, and by these presents hereby sell and assign, unto:				
Name of Assignee:	MTU Aero Engines AG			
Address of Assignce:	Dachauer Strasse 665, 809	95 Munich, Germany		
and to the above-identicontinuations thereof, a application or for said is said ASSIGNEE, its su	E) all my right, title, and interestied invention and United States and in and to any and all Letters invention, including any and all ecessors, or assigns to the full eas fully and entirely as would he	s patent application, including Patent of the United States to reissues or extensions therecand of the term or terms for war and of the term or terms for war.	g any and all divisions or hat may issue on any such of, to be held and enjoyed by which any and all such Letters	
hereby authorize and a Letters Patent to said A	request the Director of the U.S. SSIGNEE, its successors, or as	Patent and Trademark Office signs in accordance herewith	e to issue any and all such	
warrant and covenant assigned and that I have	that I have the full and unencur c not executed and will not exec	nbered right to sell and assig rate any document or instrun	n the interests herein sold and sent in conflict herewith,	
further covenant and agree that I will communicate to said ASSIGNEE, its successors, legal representatives, or assigns all information known to me relating to said invention or patent application and that I will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings, and perform all other lawful acts deemed accessary or desirable by said ASSIGNEE, its successors, legal representatives, or assigns to perfect title o said invention, to said application including divisions and continuations thereof and to any and all Letters Patent that may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns, or to assist said ASSIGNEE, its successors, legal representatives, or assigns in obtaining, reissuing, or enforcing Letters Patent of the United States for said invention.				
	DECL	<u>ARATION</u>		
As a below-named inve	ntor, I hereby declare that:			
	plication was made or authorize			
believe that I am the o	riginal inventor or an original jo	oint inventor of a claimed in	vention in the application.	
hereby acknowledge the 1001 by fine or impris	nat any willful false statement is somment of not more than five (nade in this declaration is pu 5) years, or both.	nishable under 18 U.S.C.	
Signature: Unc	la Mahle		16.2.2018	

PATENT REEL: 045068 FRAME: 0477 Attorney Docket No. M078 P03410-US (U.S. Rights)

ASSIGNMENT AND DECLARATION UNDER 37 C.F.R. § 1.63

(For Use with Signed Application Data Sheet)

Title of Invention: CONTOURING A BLADE/VANE CASCADE STAGE	
This assignment and declaration are directed to (check one): the attached application; the application identified by the attorney docket no. and title of invention given above; United States Application or PCT International Application No, filed	
<u>ASSIGNMENT</u>	
For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, as a below-named inventor I have sold and assigned, and by these presents hereby sell and assign, unto:	
Name of Assignce: MTU Aero Engines AG	
Address of Assignee: Dachauer Strasse 665, 80995 Munich, Germany	
(hereinafter ASSIGNEE) all my right, title, and interest for the United States, its territories, and possessions in and to the above-identified invention and United States patent application, including any and all divisions or continuations thereof, and in and to any and all Letters Patent of the United States that may issue on any such application or for said invention, including any and all reissues or extensions thereof, to be held and enjoyed by said ASSIGNEE, its successors, or assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by me had this Assignment not been made.	
I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue any and all such Letters Patent to said ASSIGNEE, its successors, or assigns in accordance herewith.	
I warrant and covenant that I have the full and unencumbered right to sell and assign the interests herein sold and assigned and that I have not executed and will not execute any document or instrument in conflict herewith.	
I further covenant and agree that I will communicate to said ASSIGNEE, its successors, legal representatives, or assigns all information known to me relating to said invention or patent application and that I will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings, and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives, or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all Letters Patent that may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns, or to assist said ASSIGNEE, its successors, legal representatives, or assigns in obtaining, reissuing, or enforcing Letters Patent of the United States for said invention.	
<u>DECLARATION</u>	
As a below-named inventor, I hereby declare that:	
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
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.	
Signature: UMUS SECTION DATE DATE DATE	

Attorney Docket No. M078 P03410-US (U.S. Rights)

RECORDED: 02/28/2018

ASSIGNMENT AND DECLARATION UNDER 37 C.F.R. § 1.63 (For Use with Signed Application Data Sheet)

Title of Invention:	CONTOURING A BLADE/VANE CASCADE STAGE	
This assignment and declaration are directed to (check one): the attached application; the application identified by the attorney docket no. and title of invention given above; United States Application or PCT International Application No		
	ASSIGNMENT	
For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, as a below-named inventor I have sold and assigned, and by these presents hereby sell and assign, unto:		
Name of Assignee:	MTU Aero Engines AG	
Address of Assignce:	Dachauer Strasse 665, 80995 Munich, Germany	
and to the above-identit continuations thereof, a application or for said i said ASSIGNEE, its su	E) all my right, title, and interest for the United States, its territories, and possessions in fied invention and United States patent application, including any and all divisions or and in and to any and all Letters Patent of the United States that may issue on any such expension, including any and all reissues or extensions thereof, to be held and enjoyed by accessors, or assigns to the full end of the term or terms for which any and all such Letters as fully and entirely as would have been held and enjoyed by me had this Assignment not	
I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue any and all such Letters Patent to said ASSIGNEE, its successors, or assigns in accordance herewith.		
I warrant and covenant that I have the full and unencumbered right to sell and assign the interests herein sold and assigned and that I have not executed and will not execute any document or instrument in conflict herewith.		
I further covenant and agree that I will communicate to said ASSIGNEE, its successors, legal representatives, or assigns all information known to me relating to said invention or patent application and that I will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings, and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives, or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all Letters Patent that may be granted therefor or thereon, including reissues or extensions, in said ASSIGNEE, its successors, or assigns, or to assist said ASSIGNEE, its successors, legal representatives, or assigns in obtaining, reissuing, or enforcing Letters Patent of the United States for said invention.		
	<u>DECLARATION</u>	
As a below-named inve	ntor, I hereby declare that:	
The above-identified application was made or authorized to be made by me.		
I believe that I am the o	riginal inventor or an original joint inventor of a claimed invention in the application.	
	hat any willful false statement made in this declaration is punishable under 18 U.S.C. sonment of not more than five (5) years, or both. - a.d.	
	AATOUK DATE	

PATENT REEL: 045068 FRAME: 0479