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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TOMOHIRO TEJIMA	09/18/2018
TSUGUHISA TASHIMA	09/18/2018
NORIKAZU TAKAGI	09/18/2018
SHOGO IWAI	09/18/2018

RECEIVING PARTY DATA

Name:	KABUSHIKI KAISHA TOSHIBA
Street Address:	1-1, SHIBAURA 1-CHOME
City:	MINATO-KU, TOKYO
State/Country:	JAPAN
Postal Code:	105-8001
Name:	TOSHIBA ENERGY SYSTEMS & SOLUTIONS CORPORATION
Street Address:	72-34, HORIKAWA-CHO, SAIWAI-KU
City:	KAWASAKI-SHI, KANAGAWA
State/Country:	JAPAN
Postal Code:	212-0013

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15956825

CORRESPONDENCE DATA

(703)413-2220 Fax Number:

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: (703) 413-3000

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Correspondent Name: OBLON, ET AL. 1940 DUKE STREET Address Line 1:

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER: 511592US NAME OF SUBMITTER: **DEJEN GEBREMICHAEL**

SIGNATURE:	/Dejen Gebremichael/
DATE SIGNED:	09/21/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 4	
source=511592usAssign#page1.tif	
source=511592usAssign#page2.tif	
source=511592usAssign#page3.tif	
source=511592usAssign#page4.tif	

Title of Invention	AXIAL FLOW TURBINE	
As the below named	d inventor, I hereby declare that:	
This declaration [The attached application, or	
is directed to:	United States application or PCT international ap filed onApril 19, 2018	plication number15/956,825
The above-identified	d application was made or authorized to be made b	y me.
I believe that I am th	he original inventor or an original joint inventor of	a claimed invention in the application.
(hereinafter referred Tokyo 105-8001 Jarespectively are desired)	ABUSHIKI KAISHA TOSHIBA; and 2) Toshiba Id to as "ASSIGNEES") having places of busines apan; and 2) 72-34, Horikawa-cho, Saiwai-ku, irous of jointly acquiring interests in the entire rights Patent that may be granted therefore in the Unit countries;	ss at: 1) 1-1, Shibaura 1-chome, Minato-ku Kawasaki-shi, Kanagawa 212-0013 Japan, t, title and interest in and to said invention and
acknowledged, and said ASSIGNEES, t and in all foreign co other relevant Interninterest in and to an	ORE, in consideration of the sum of FIVE DOL for other good and valuable consideration, I, by the full and exclusive right to the said invention in countries (including the right to claim priority under national Treaties and Arrangements from the aforemy and all Letters Patent which may be granted the any and all foreign countries and in and to an newals thereof.	these presents do sell, assign and transfer unto the United States and its territorial possessions the terms of the International Convention and said application) and the entire right, title and therefor in the United States and its territorial
any and all foreign assignees of my entheir successors and	te and request the Patent Office Officials in the Uncountries to issue any and all of said Letters Pater tire right, title and interest in and to the same, for assigns, to the full end of the term for which said would have been held by me had this Assignment	nt, when granted, to said ASSIGNEES as the the sole use and behoof of said ASSIGNEES, d Letters Patent may be granted, as fully and
respecting said invocentinuation, substituall of said Letters P possible to aid said	that I will communicate to said ASSIGNEES or ention, and testify in any legal proceeding, sigute, renewal and reissue applications, execute all relation to be issued to said ASSIGNEES, make all ASSIGNEES, their successors and assigns, to othe States and its territorial possessions and in any states.	n all lawful papers, execute all divisional, necessary assignment papers to cause any and l rightful oaths, and, generally do everything obtain and enforce proper protection for said
by fine or imprisonn	edge that any willful false statement made in this d nent of not more than five (5) years, or both.	eclaration is punishable under 18 U.S.C. 1001
LEGAL NAME OF	INVENTOR	
Inventor: Tomohir	о ТЕЈІМА	Date: 18. Sep. 2018
Signature:	onohiro Desina	

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P.
ATTORNEYS AT LAW
1940 DUKE STREET
ALEXANDRIA, VIRGINIA 22314

Title of Invention	AXIAL FLOW TURBINE
As the below name	d inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States application or PCT international application number April 19, 2018 15/956,825
The above-identifie	ed application was made or authorized to be made by me.
I believe that I am t	he original inventor or an original joint inventor of a claimed invention in the application.
(hereinafter referre Tokyo 105-8001 J respectively are des	ABUSHIKI KAISHA TOSHIBA; and 2) Toshiba Energy Systems & Solutions Corporation d to as "ASSIGNEES") having places of business at: 1) 1-1, Shibaura 1-chome, Minato-ku Japan; and 2) 72-34, Horikawa-cho, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0013 Japan, sirous of jointly acquiring interests in the entire right, title and interest in and to said invention and rs Patent that may be granted therefore in the United States and its territorial possessions and in countries;
acknowledged, and said ASSIGNEES, and in all foreign co other relevant Inter- interest in and to a	FORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby for other good and valuable consideration, I, by these presents do sell, assign and transfer unto the full and exclusive right to the said invention in the United States and its territorial possessions puntries (including the right to claim priority under the terms of the International Convention and national Treaties and Arrangements from the aforesaid application) and the entire right, title and my and all Letters Patent which may be granted therefor in the United States and its territorial any and all foreign countries and in and to any and all divisions, reissues, continuations, newals thereof.
any and all foreign assignees of my en their successors and	ze and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEES as the tire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEES, a assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.
Further, I agree that I will communicate to said ASSIGNEES or their representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEES, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEES, their successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.	
by fine or imprisonr	ledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nent of not more than five (5) years, or both.
LEGAL NAME OF	
Inventor: Tsuguhi	sa TASHIMA Dato: September 18, 2018
Signature: Jan	gulisa Tashime

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This declaration	The attached application, or
is directed to:	United States application or PCT international application number 15/956,825 filed on April 19, 2018
The above-identifie	ed application was made or authorized to be made by me.
I believe that I am t	the original inventor or an original joint inventor of a claimed invention in the application.
WHEREAS, 1) KABUSHIKI KAISHA TOSHIBA; and 2) Toshiba Energy Systems & Solutions Corporation (hereinafter referred to as "ASSIGNEES") having places of business at: 1) 1-1, Shibaura 1-chome, Minato-ku Tokyo 105-8001 Japan; and 2) 72-34, Horikawa-cho, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0013 Japan, respectively are desirous of jointly acquiring interests in the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;	
NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I, by these presents do sell, assign and transfer unto said ASSIGNEES, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.	
any and all foreign assignees of my er their successors and	ize and request the Patent Office Officials in the United States and its territorial possessions and a countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEES as the ntire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEES, d assigns, to the full end of the term for which said Letters Patent may be granted, as fully and a would have been held by me had this Assignment and sale not been made.
Further, I agree that I will communicate to said ASSIGNEES or their representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEES, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEES, their successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.	
	rledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 ment of not more than five (5) years, or both.
LEGAL NAME OF	
Inventor: Norikaz	zu TAKAGI Date: Sep. 18. 2018
Signature:	Roickay Jakagi

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Title of Invention	AXIAL FLOW TURBINE
As the below name	d inventor, I hereby declare that:
This declaration	The attached application, or
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The above-identifie	ed application was made or authorized to be made by me.
I believe that I am t	the original inventor or an original joint inventor of a claimed invention in the application.
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acknowledged, and said ASSIGNEES, and in all foreign co other relevant Inter- interest in and to a	FORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby for other good and valuable consideration, I, by these presents do sell, assign and transfer unto the full and exclusive right to the said invention in the United States and its territorial possessions countries (including the right to claim priority under the terms of the International Convention and national Treaties and Arrangements from the aforesaid application) and the entire right, title and may and all Letters Patent which may be granted therefor in the United States and its territorial any and all foreign countries and in and to any and all divisions, reissues, continuations, newals thereof.
any and all foreign assignees of my en their successors and	ze and request the Patent Office Officials in the United States and its territorial possessions and countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEES as the stire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEES, d assigns, to the full end of the term for which said Letters Patent may be granted, as fully and would have been held by me had this Assignment and sale not been made.
respecting said inv continuation, substi all of said Letters I possible to aid said	that I will communicate to said ASSIGNEES or their representatives any facts known to me vention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, tute, renewal and reissue applications, execute all necessary assignment papers to cause any and Patent to be issued to said ASSIGNEES, make all rightful oaths, and, generally do everything ASSIGNEES, their successors and assigns, to obtain and enforce proper protection for said ited States and its territorial possessions and in any and all foreign countries.
	ledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 nent of not more than five (5) years, or both.
LEGAL NAME OF	
Inventor: Shogo I	
Signature: Sho	ga dun i

OBLON, McCLELLAND, MAIER & NEUSTADT, L.L.P. ATTORNEYS AT LAW 1940 DUKE STREET

ALEXANDRIA, VIRGINIA 22314

PATENT REEL: 046940 FRAME: 0514

RECORDED: 09/21/2018