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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
SATOSHI INOUE	06/19/2018
TOMOHIKO SAKAMAKI	06/22/2018
TOMOYA YAMAGUCHI	06/22/2018
KEN SATOU	06/22/2018
KOUJU YAMADA	06/22/2018
MASANORI JINDOU	06/22/2018
YOSHIO ORITANI	06/25/2018

RECEIVING PARTY DATA

Name:	DAIKIN INDUSTRIES, LTD.
Street Address:	UMEDA CENTER BUILDING
Internal Address:	4-12, NAKAZAKI-NISHI 2-CHOME, KITA-KU, OSAKA-SHI
City:	OSAKA
State/Country:	JAPAN
Postal Code:	530-8323

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16337912

CORRESPONDENCE DATA

Fax Number: (713)228-8778

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: 7132288600

Email: futakata@oshaliang.com **Correspondent Name:** YUICHI WATANABE Address Line 1: 909 FANNIN STREET

Address Line 2: **SUITE 3500**

Address Line 4: HOUSTON, TEXAS 77010

ATTORNEY DOCKET NUMBER: 18461/027001 NAME OF SUBMITTER: KUNIKO FUTAKATA /YUICHI WATANABE/ SIGNATURE:

PAIENI

REEL: 048763 FRAME: 0586 505405675

DATE SIGNED:	03/30/2019
Total Attachments: 5	
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DECLARATION REGARDING VERIFICATION OF TRANSLATION

- I, Yuichi Watanabe, at Osha Liang LLP, located at 909 Fannin St., Suite 3500, Houston, TX 77010, hereby declare as follows:
 - (1) I am fluent in both Japanese and English languages; and
 - (2) To the best of my knowledge and belief, the attached English language translation of the Japanese language assignment contained within the Assignment form, a copy of which attached hereto, is a true and correct translation.

By:

Date: <u>December 17, 2018</u>



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宣誓書及び譲渡証 - 米国のみ

DECLARATION AND ASSIGNMENT – U.S. RIGHTS ONLY

本証末尾に署名した者(以下、「発明者」という)は次の出願にかかる発明を行った。 Whereas, the undersigned individual(s) (referred to herein as the "INVENTOR(S)") has/have invented:

	米国出願として出願されるか、若しくはPC	T国際出願である添付の出願、	又は、
	The attached application to be filed as a United State	tes application or PCT international	application, or
	米国出願、若しくは(日付)	に出願された PCT 国際出願番	i号 と
して出願され	れているものであって、次の名称を有するもの		
\boxtimes	United States application or PCT international app	plication number PCT/JP2017/0355	583 filed on September
	I, entitled: (発明の名称)HEAT EXCHANGER		_

その出願に関し、各発明者は次のことを宣言する。

Regarding that application, each of the INVENTOR(S) declares the following:

- 上記の出願は私自身、又は私が権限を授与したものによって行われた。
- The above-identified application was made or authorized to be made by me.
- 私は本出願書に記載された本来の発明者、又は本来の共同発明者である。
- I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
- 本宣誓書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認める。
- 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.

「発明者」は、適正・相当な対価を受領しており、それが十分な対価であることを認めた上で、 For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the INVENTOR(S) hereby assign, transfer, and set over to:

(氏名または組織名)

DAIKIN INDUSTRIES, LTD.

having the following address:

(住所)

Umeda Center Building, 4-12, Nakazaki-Nishi 2-Chome, Kita-ku, Osaka-shi, Osaka 530-8323, Japan

上記の者(以下、「会社」という)、その承継人、及び譲受人に、上記の特許出願に記載された発明(以下、「発明」という)について、同特許出願、その分割、継続、一部継続、再発行、及びそれらの延長、並びに、それらに対して与えられる米国で発行される全ての特許証とともに米国(その領土及び所有地を制限なく含む)における全ての権利、権原、利権を譲渡する。

かかる利権とは、「会社」、その承継人、又はそれらの法的代理人の上記出願に対する、及び、特許証が与えられたときにはそれに対する、本譲渡が行われなかった場合に「発明者」に対して特許証が与えられ、又延長されることにより享受し得るものと同一の期間に亘る全ての所有権を意味する。

(referred to herein as "COMPANY"), its successors, and assigns, the entire right, title, and interest for the United States of America (including without limitation its territories and possessions) in and to the invention described in the patent application identified above (referred to herein as INVENTION), together with said

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patent application, all divisions, continuations, continuations-in-part, reissues, and extensions thereof, and all United States Letters Patent which may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by COMPANY, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the INVENTOR(S) if this assignment had not been made.

さらに、「発明者」は以下のことに同意する。 In addition, the undersigned INVENTOR(S) each hereby agrees:

- 1. 米国においてなされた「発明」に対する特許に関する全ての出願との関連において、 必要とされ、望ましく、合法で、且つ、適切な書面であって、上記出願、分割、継続、一部継続、これらの補正、これらに関する抵触手続き、又は、「会社」の権利 を保護する為に必要な又は望ましいものを含む、全ての書面に、制限なく署名する こと。
- 2. To sign and execute any further documents that may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to COMPANY;
- 2. 全ての書面に署名し、優先権の主張に関連する、又は工業所有権の保護に関する 国際条約若しくはこれに類似の条約或いは協定の下、合法で且つ適切な行為をす ること
- To execute all papers and documents and to perform all lawful acts that may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
- 3. 「会社」に対し有効で且つ行使可能な特許が付与される為に必要であると認められる合法 的行為を積極的に行うこと。
- To perform all lawful affirmative acts that may be necessary to obtain the grant of valid and enforceable patents to COMPANY.

「発明者」の各人は、分割、継続、一部継続、又は再発行を含む上記出願に基づく如何なる、そして全ての特許証が「会社」対して発行されるよう、米国特許商標庁長官に権限を認め、要請する。

The undersigned INVENTOR(S) each hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, or reissue thereof to COMPANY.

本証末尾に署名した「発明者」は、各々、本証の登記にあたり米国特許商標庁の規則に従い、必要な、又は望ましい識別情報を本譲渡証に挿入する権限をオーシャ リャン LLP (OSHA・LIANG LLP) に与える。

The undersigned INVENTOR(S) each hereby grants to the firm of OSHA • LIANG LLP 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 the recordation of this document.

Application No.: 16/337,912 Filing Date: March 28, 2019

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以上の証として、この譲渡証は本証末尾に署名した各人により、各署名の左欄に記された日に執行された。

IN WITNESS WHEREOF, this Assignment has been executed by each of the undersigned individuals on the date appearing by such individual's signature:

T 10 20 18	第一発明者の署名	< ' _
June. 19. 2018	1st Inventor Signature:	
日付 Date		Satoshi INOUE
	Print or Type Name:	Satoshi INOUE
	••	
	然一些明老 小图 5	
T	第二発明者の署名	TO I A CALCALLA
June. 22 2018		Tomohito SAKAMAKI
日付 Date		Tomohiko SAKAMAKI
	Print or Type Name:	Tomohiko SAKAMAKI
	第三発明者の署名	
June 2) 2018	3rd Inventor Signature	/omoya YAMAGUCHI
June 22 2018 目付 Date	CL. &	Tomoya YAMAGUCHI
HT Date	风伯 Duint ou Tour Nove	7 XMM (LI)
	rrmt or Type Name:	Jamaya YAMAGUCHI
7 2210	第四発明者の署名	(C. +
June 22 2018	4th Inventor Signature:	Ken Satou
日付 Date	氏.夕	Ken SATOU
	Print or Type Name:	Ken Satou
	#Ma → 174 1274 Ab	
June 22 20/8	第五発明者の署名	WASAANA
	5" Inventor Signature:	Kouju YAMADA Kouju YAMADA
日付 Date	氏名	Kouju YAMADA
	Print or Type Name:	Xoju YAMADA
		, 0
_	第六発明者の署名	
June 22 2018	6th Inventor Signature	Masanna Traitoris
日付 Date	o inventor signature.	Masanori JINDOU Masanori JINDOU
ру Date	天名 Doi:tTN	Wasanon Jindoo
	rimit or Type Name:	Masanori J2NDOU
/ 4	第七発明者の署名	Sel. Obstance
June 25, 2018	7th Inventor Signature:	Yushio ORITANI
日付 Date	氏名	Yoshio ORITANI
,,,,		Yushio ORITANI
	- zame ov z Pho z mmer	TOSTING OTHER PROPERTY.
	444 N 1015 WH 45 4:	
	第八発明者の署名	
	8 th Inventor Signature:	
目付 Date	氏名	
	Print or Type Name:	



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この譲渡書は、下記(a)米国における何れかの州の公証人、又は(b)二人の証人の面前で署名することができる。 This Assignment may be signed before either: (a) a Notary Public for one of the States of the United States, or (b) two witnesses who sign below:

<u>5</u>	州名 State of 国名 County of 私の面前で署名を行った者 Before me personally			
18	appeared:	第一発明者 1s Inventor	第二	卷明者 2 nd Inventor
NOTARY PUBLIC		第三発明者 3 rd Inventor	第四:	発明者 4 th Inversior
TAR		第五発明者 5th Inventor	第六	论明者 6 th Inventor
Š		第七発明者 7世 Inventor	第八	発明者 8 ⁶ Inventor
	各人は、上記証書が自由意思/ ことを認める。		2 1 1 4 14 2 4 1 3 192 (Schart C D 1) 4	/ Transfer Transfer
公配	each of whom acknowledged t authorized to execute this Assig	gnment, <u>公証人</u>	公証人権限の有効期限	presented that he/she is
	each of whom acknowledged t authorized to execute this Assig	gnment, <i>公証人</i> Notary Public 証人の署名	公証人権限の有効期限 My commission expires:	
	each of whom acknowledged t authorized to execute this Assig	gnment, 公証人 Notary Public	公証人権限の有効期限	
証人 WITNESSES ☆	each of whom acknowledged t authorized to execute this Assig 日付 Date	gnment, <i>公証人 Notary Public</i> 証人の署名 Signature of Witness: 氏名	公証人権限の有効期限 My commission expires:	

PATENT REEL: 048763 FRAME: 0592

RECORDED: 04/02/2019