507608266 11/21/2022

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7655158

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
HIROTAKA NAKAI	10/17/2022
OSAMU MUKAIHARA	10/27/2022
TOSHIHIRO AONO	10/19/2022

#### **RECEIVING PARTY DATA**

Name:	HITACHI ASTEMO, LTD.
Street Address:	2520, TAKABA
City:	HITACHINAKA-SHI, IBARAKI
State/Country:	JAPAN
Postal Code:	3128503

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	17925627

#### **CORRESPONDENCE DATA**

**Fax Number:** (202)624-8844

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:** 2026242800

**Email:** ehorne@crowell.com, edocket@crowell.com

Correspondent Name: CROWELL & MORING LLP

Address Line 1: P.O. BOX 14300

Address Line 4: WASHINGTON, D.C. 20011-4300

ATTORNEY DOCKET NUMBER:	116298.PG037US
NAME OF SUBMITTER:	MICHAEL H. JACOBS
SIGNATURE:	/Michael H. Jacobs/
DATE SIGNED:	11/21/2022

#### **Total Attachments: 3**

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PATENT 507608266 REEL: 061835 FRAME: 0504

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

Title of Invention: Soil	enoid Valve Control Device	
the application identif	ion are directed to (check one): ied above by the attorney docket ication Number PCT/JP2021/0 tion No, filed	04256, filed 05 February 2021
	<b>ASSIGNME</b>	<u>NT</u>
For good and valuable consid below named inventor I have	eration, the receipt and sufficien sold and assigned, and by these	cy of which are hereby acknowledged, as a presents hereby sell and assign, unto:
Name of Assignee: HITACH	II ASTEMO, LTD.	
Address of Assignee: 2520	, Takaba, Hitachinaka-shi, Ibara	ki 3128503 Japan
and to the above-identified in continuations thereof, and in such application or for said ir enjoyed by said ASSIGNEE,	vention and United States patent and to any and all Letters Patent evention, including any and all re its successors or assigns to the fi	United States, its territories and possessions in application, including any and all divisions or of the United States which may issue on any issues or extensions thereof, to be held and all end of the term or terms for which any and all uld have been held and enjoyed by me had this
	t the Director of the U.S. Patent NEE, its successors or assigns in	and Trademark Office to issue any and all such accordance herewith.
I warrant and covenant that I and assigned and that I have I herewith.	nave the full and unencumbered not executed and will not execute	right to sell and assign the interests herein sold any document or instrument in conflict
or assigns all information kno and deliver any papers, make acts deemed necessary or desi perfect title to said invention, all Letters Patent which may land ASSIGNEE, its successors or	wn to me relating to said inventiall rightful oaths, testify in any I rable by said ASSIGNEE, its su to said application including divoe granted therefor or thereon, in assigns, or to assist said ASSIG	SSIGNEE, its successors, legal representatives on or patent application and that I will execute egal proceedings and perform all other lawful excessors, legal representatives or assigns to isions and continuations thereof and to any and cluding reissues or extensions, in said NEE, its successors, legal representatives or ne United States for said invention.
	<b>DECLARAT</b>	<u>(ON</u>
As a below named inventor, I	hereby declare that:	
The above-identified applicat	ion was made or authorized to be	made by me.
I believe that I am the origina	inventor or an original joint inv	entor of a claimed invention in the application.
	y willful false statement made in of not more than five (5) years,	this declaration is punishable under 18 U.S.C. or both.
Signature: Hirotaka Inventor: Hirotaka	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	October 17, 2022 DATE

PATENT REEL: 061835 FRAME: 0505

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

(For Use with Signed Application Data Sheet)

Title of Invention: Solenoid Valve Control Device		
This assignment and declaration are directed to (check one):  the application identified above by the attorney docket no. and title of the application and polication Number PCT/JP2021/004256, file  United States Application No, filed	ed 05 February 2021	
<b>ASSIGNMENT</b>		
For good and valuable consideration, the receipt and sufficiency of which a below named inventor I have sold and assigned, and by these presents herely		
Name of Assignee: HITACHI ASTEMO, LTD.		
Address of Assignee: 2520, Takaba, Hitachinaka-shi, Ibaraki 3128503 Ja	apan	
(hereinafter ASSIGNEE) all my right, title and interest for the United States and to the above-identified invention and United States patent application, it continuations thereof, and in and to any and all Letters Patent of the United such application or for said invention, including any and all reissues or extendioned by said ASSIGNEE, its successors or assigns to the full end of the such Letters Patent may be granted as fully and entirely as would have been Assignment not been made.	States which may issue on any ensions thereof, to be held and term or terms for which any and all	
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 as and assigned and that I have not executed and will not execute any documen herewith.		
I further covenant and agree that I will communicate to said ASSIGNEE, its or assigns all information known to me relating to said invention or patent a and deliver any papers, make all rightful oaths, testify in any legal proceedi acts deemed necessary or desirable by said ASSIGNEE, its successors, legal perfect title to said invention, to said application including divisions and coall Letters Patent which may be granted therefor or thereon, including reissa ASSIGNEE, its successors or assigns, or to assist said ASSIGNEE, its successigns in obtaining, reissuing or enforcing Letters Patent of the United States.	application and that I will execute ngs and perform all other lawful all representatives or assigns to ntinuations thereof and to any and ues or extensions, in said essors, legal representatives or	
<b>DECLARATION</b>		
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 cla	imed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration 1001 by fine or imprisonment of not more than five (5) years, or both.	ion is punishable under 18 U.S.C.	
Signature: /Osamu.mukaihara/ Inventor: Osamu MUKAIHARA	October 27, 2022  DATE	

PATENT REEL: 061835 FRAME: 0506

**RECORDED: 11/21/2022** 

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

(For Use with Signed Application Data Sheet)

Title of Inventi	on: Solenoid Valve Control Device	
the application that the depth that	and declaration are directed to (check one): ation identified above by the attorney docket no. and title ornational Application Number PCT/JP2021/004256, file attes Application No, filed	d 05 February 2021
	<b>ASSIGNMENT</b>	
-	uable consideration, the receipt and sufficiency of which are entor I have sold and assigned, and by these presents hereb	•
Name of Assigne	ee: HITACHI ASTEMO, LTD.	
Address of Assig	mee: 2520, Takaba, Hitachinaka-shi, Ibaraki 3128503 Ja	pan
and to the above- continuations the such application of enjoyed by said A	GNEE) all my right, title and interest for the United States identified invention and United States patent application, it reof, and in and to any and all Letters Patent of the United or for said invention, including any and all reissues or extensional acceptance of the full end of the total may be granted as fully and entirely as would have been seen made.	ncluding any and all divisions or States which may issue on any nsions thereof, to be held and term or terms for which any and all
	e and request the Director of the U.S. Patent and Trademar said ASSIGNEE, its successors or assigns in accordance he	
	enant that I have the full and unencumbered right to sell at that I have not executed and will not execute any documen	
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 which 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.		
<b>DECLARATION</b>		
As a below name	d inventor, I hereby declare that:	
The above-identi	fied 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.		
	edge that any willful false statement made in this declaration apprisonment of not more than five (5) years, or both.	on is punishable under 18 U.S.C.
Signature:	Toshihiro Aono/	October 19,2022
Inventor:	Toshihiro AONO	DATE

PATENT REEL: 061835 FRAME: 0507