PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHINGO MURAKAMI	03/08/2022

RECEIVING PARTY DATA

Name:	HITACHI ASTEMO, LTD.
Street Address:	2520, TAKABA
City:	HITACHINAKA-SHI, IBARAKI
State/Country:	JAPAN
Postal Code:	312-8503

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17641070

CORRESPONDENCE DATA

Fax Number: (202)672-5399

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.

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Address Line 2: SUITE 600

Address Line 4: WASHINGTON, D.C. 20007-5109

ATTORNEY DOCKET NUMBER:	023484-0696
NAME OF SUBMITTER:	MELISSA GUILD
SIGNATURE:	/MELISSA GUILD/
DATE SIGNED:	04/06/2022

Total Attachments: 1

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PATENT REEL: 059514 FRAME: 0496

507218049

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

title of invention check one () executed concurrently herewith () executed on (X) Serial No. PCT/JP2020/033452 Filed September 3, 2020 in and to said United States Patent Application including any and all divisions continuations and Convention applications based in whole or in part on said invention, upon said application, including the right to make applications for Letters Pate throughout the world in respect to the invention and to claim priority under the Internation Convention for the Protection of Industrial Property, and in and to any and all Letters Pate of any country which may issue on any such application of or said invention, including a and all reissues, reexaminations, or extensions, to be held and enjoyed by said ASSIGNI its successors, legal representatives and assigns to the full end of the term or terms for wh any and all such Letters Patent may be granted as fully and entirely as would have been he and enjoyed by the undersigned hereby authorizes and requests the Commissioner Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, successors or assigns in accordance herewith, Each of the undersigned warrants and covenants that he/she has the full a unencumbered right to sell and assign the interests herein sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith; Each of the undersigned warrants and agrees that at any time up request of said ASSIGNEE, its successors, legal representatives or assigns information known to him/her relating to said invention or patent application and that he/she will execute and deliver any appers, make all rightful caths, testify in any legal proceedin and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives or assigns in obtaining, reissuing or enforcing Letters Pate which may be granted therefor or thereon, including reissues, reexaminations, or extension in said ASSIGNEE, its successors, or assigns to	add	ne and Iress of ignee	Hitachi Astemo, Ltd. 2520, Takaba, Hitachinaka-shi, Ibaraki 312-8503 Japan
check one () executed concurrently herewith () executed on (X) Serial No. PCT/JP2020/033452 Filed September 3, 2020 in and to said United States Patent Application including any and all divisions continuations and Convention applications based in whole or in part on said invention upon said application, including the right to make applications for Letters Pate throughout the world in respect to the invention and to claim priority under the Internatio Convention for the Protection of Industrial Property, and in and to any and all Letters Pate of any country which may issue on any such application or for said invention, including a and all reissues, reexaminations, or extensions, to be held and enjoyed by said ASSIGNIS its successors, legal representatives and assigns to the full end of the term or terms for wh any and all such Letters Patent may be granted as fully and entirely as would have been had enjoyed by the undersigned hard bits Assignment not be made; Each of the undersigned hereby authorizes and requests the Commissioner Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNIE, successors or assigns in accordance herewith; Each of the undersigned warrants and covenants that he/she has the full a unencumbered right to sell and assign the interests herein sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith; Each of the undersigned further covenants and agrees that at any time up request of said ASSIGNIEE, its successors, legal representatives or assigns information known to him/her relating to said invention or patent application and that he/she will execute and deliver any papers, make all rightful oaths, testify in any legal proceeding and perform all other lawful acts deemed necessary or desirable by said ASSIGNIEE, successors, legal representatives or assigns in formation known to him/her relating to said invention or patent application and that he/she will execute and deliver any papers, make all rig			(hereinafter ASSIGNEE) all right, title and interest for the United States, its territories and possessions in and to his invention relating to
in and to said United States Patent Application including any and all divisions continuations and Convention applications based in whole or in part on said invention upon said application, including the right to make applications for Letters Pate throughout the world in respect to the invention and to claim priority under the Internation Convention for the Protection of Industrial Property, and in and to any and all Letters Pate throughout the world in respect to the invention and to claim priority under the Internation Convention for the Protection of Industrial Property, and in and to any and all Letters Pate of any country which may issue on any such application or for said invention, including a and all reissues, reexaminations, or extensions, to be held and enjoyed by said ASSIGNI its successors, legal representatives and assigns to the full end of the term or terms for wh any and all such Letters Patent may be granted as fully and entirely as would have been he and enjoyed by the undersigned had this Assignment not be made; Each of the undersigned had this Assignment not be made; Each of the undersigned hereby authorizes and requests the Commissioner Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, successors or assigns in accordance herewith; Each of the undersigned warrants and covenants that he/she has not executed and will not execute any document or instrument in conflict herewith; Each of the undersigned further covenants and agrees that at any time up request of said ASSIGNEE, its successors, legal representatives or assigns information known to him/her relating to said invention or patent application and that he/s will execute and deliver any papers, make all rightful oaths, testify in any legal proceedir and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, or assigns to perfect title to said invention, to such assigns in obtaining, reissuing or enforcing Letters Patent of tunied States for said invention; Each of t			CONTROL VALVE
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of			Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, its successors or assigns in accordance herewith; Each of the undersigned warrants and covenants that he/she has the full and unencumbered right to sell and assign the interests herein sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith; Each of the undersigned further covenants and agrees that at any time upon request of said ASSIGNEE, its successors, legal representatives or assigns he/she will communicate to said ASSIGNEE, its successors, legal representatives or assigns all information known to him/her relating to said invention or patent application and that he/she 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, reexaminations, 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; Each of the undersigned hereby grants the firm of Foley & Lardner LLP the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation
inventors	signa of	atures	Shingo Murakami date 03/08/2022date

date

Name:

PATENT REEL: 059514 FRAME: 0497

_date__

RECORDED: 04/06/2022

Name: