

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TOKYO ELECTRON LIMITED	08/06/2021
MURATA MACHINERY, LTD.	08/03/2021
MA SOLUTIONS LIMITED	08/10/2021
DAIFUKU CO., LTD.	07/27/2021
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	DAIFUKU CO., LTD.
<b>Street Address:</b>	2-11, MITEJIMA 3-CHOME, NISHI YODOGAWA-KU
<b>City:</b>	OSAKA-SHI, OSAKA
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	555-0012
<b>Name:</b>	MURATA MACHINERY, LTD.
<b>Street Address:</b>	3 MINAMI OCHIAI-CHO, KISSHOIN, MINAMI-KU
<b>City:</b>	KYOTO-SHI, KYOTO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	601-8326
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Patent Number:</b>	9268328
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)783-6031
<i>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.</i>	
<b>Phone:</b>	202-783-6040
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<b>Correspondent Name:</b>	ROTHWELL, FIGG, ERNST & MANBECK, P.C.
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<b>ATTORNEY DOCKET NUMBER:</b>	4030.0332

<b>NAME OF SUBMITTER:</b>	STEVEN P. WEIHROUCH, REG. 32829
<b>SIGNATURE:</b>	/Steven P. Weihrouch/
<b>DATE SIGNED:</b>	11/10/2021
<b>Total Attachments: 4</b> source=4030-0332-Assignment#page1.tif source=4030-0332-Assignment#page2.tif source=4030-0332-Assignment#page3.tif source=4030-0332-Assignment#page4.tif	

ASSIGNMENT BY COMPANY OF UNITED STATES PATENT APPLICATION

WHEREAS,

Name: TOKYO ELECTRON LIMITED  
Address: 3-1 Akasaka 5-chome, Minato-ku, Tokyo, JAPAN 107-6325

Name: MURATA MACHINERY, LTD.  
Address: 3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi, Kyoto, JAPAN 601-8326

Name: MA SOLUTIONS LIMITED  
Address: 2-31-11, Shima, Koriyama-shi, Fukushima, JAPAN 963-8034

Name: DAIFUKU CO., LTD.  
Address: 2-11, Mitejima 3-chome, Nishi Yodogawa-ku, Osaka-shi, Osaka, JAPAN 555-0012

(hereafter ASSIGNOR), has rights, by virtue of an assignment recorded on September 25, 2013 at Reel/Frame 031279/0742, in an invention entitled

PRODUCTION EFFICIENCY IMPROVING APPARATUS, PRODUCTION EFFICIENCY IMPROVING METHOD, AND COMPUTER PROGRAM

for which application for Letters Patent of the United States was made in an application filed in the U.S. Patent and Trademark Office on September 25, 2013 as U.S. Serial Number 14/004,120, issued on February 23, 2016 as U.S. Patent No. 9,268,328 B2 (hereafter "the invention");

AND, WHEREAS,

Name: DAIFUKU CO., LTD.  
Address: 2-11, Mitejima 3-chome, Nishi Yodogawa-ku, Osaka-shi, Osaka, JAPAN 555-0012

Name: MURATA MACHINERY, LTD.  
Address: 3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi, Kyoto, JAPAN 601-8326

(hereinafter ASSIGNEE) is desirous of acquiring an interest in therein;

NOW, THEREFORE, be it known that for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the above-said ASSIGNOR by these presents does sell, assign and transfer unto the said ASSIGNEE, its successors, assigns and legal representatives, ASSIGNOR'S entire right, title and interest in and to the invention in the United States, or any continuations, divisions, reissues, reexaminations or extensions thereof and all rights connected therewith, and all applications for Letters Patent which may be filed for the invention in any country or countries foreign to the United States, and all Letters Patent which may be granted for the invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof and all rights of priority in any such country or countries based upon the filing of the invention which are created by any law, treaty or international convention, for the full term or terms for which the same may be granted, including all rights to recover damages for any and all past infringement; and

ASSIGNOR(S) agree(s) to execute all papers necessary in connection with the invention and any continuing, divisional, reissue or reexamination applications thereof and to execute separate assignments in connection with such applications as ASSIGNEE may deem necessary.

ASSIGNOR(S) agree(s) to execute all papers necessary in connection with any interference, litigation, or other legal proceeding which may be declared concerning the invention or any continuation, division, reissue or reexamination thereof or Letters Patent, reissue patent or reexamination certificate issued thereon and to cooperate with ASSIGNEE in every way possible in obtaining and producing evidence and proceeding with such interference, litigation, or other legal proceeding.

IN TESTIMONY WHEREOF, ASSIGNOR'S duly authorized representative with authority to do so, has hereunto set his/her hand and seal as set forth below.

On behalf of the assignor TOKYO ELECTRON LIMITED

By Takeshi Sakuma  
(Signature)

Takeshi SAKUMA  
Vice President, Corporate Intellectual Property  
(Typed or Printed Name and Title):

Date: August 4, 2021

On behalf of the assignor MURATA MACHINERY, LTD.

By Daisuke Murata  
(Signature)

Daisuke Murata, President & CEO  
(Typed or Printed Name and Title):

Date: August 3rd, 2021

On behalf of the assignor MA SOLUTIONS LIMITED

By Akira Machida  
(Signature)

Akira Machida, President & CEO  
(Typed or Printed Name and Title):

Date: 8.10.2021

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On behalf of the assignor DAIFUKU CO., LTD.

By H. Geshira  
(Signature)

Hiroshi Geshira, President and CEO  
(Typed or Printed Name and Title)

Date: July 27th, 2021

ACCEPTED AND ACKNOWLEDGED FOR AND ON BEHALF OF THE ASSIGNEE:

DAIFUKU CO., LTD.

By: H. Geshiro  
(Signature)

Hirashi Geshiro, President and CEO.  
(Typed or Printed Name and Title):

Date: July 27th, 2021

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ACCEPTED AND ACKNOWLEDGED FOR AND ON BEHALF OF THE ASSIGNEE:

MURATA MACHINERY, LTD.

By: Daisuke Murata  
(Signature)

Daisuke Murata, President & CEO  
(Typed or Printed Name and Title):

Date: August 3rd, 2021