

## PATENT ASSIGNMENT COVER SHEET

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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>
MITSUAKI HAYASHI	10/10/2017
WATARU SUGIMURA	10/02/2017
IPPEI SHIMOZAKI	10/10/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SUMCO CORPORATION
<b>Street Address:</b>	2-1, SHIBAURA 1-CHOME, MINATO-KU
<b>City:</b>	TOKYO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	105-8634
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15677368
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)716-1180
<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>	703-716-1191
<b>Email:</b>	gbpatent@gbpatent.com
<b>Correspondent Name:</b>	GREENBLUM & BERNSTEIN, P.L.C.
<b>Address Line 1:</b>	1950 ROLAND CLARKE PLACE
<b>Address Line 4:</b>	RESTON, VIRGINIA 20191
<b>ATTORNEY DOCKET NUMBER:</b>	P53239
<b>NAME OF SUBMITTER:</b>	WILLIAM S. BOSHNIK
<b>SIGNATURE:</b>	/William S. Boshnick/
<b>DATE SIGNED:</b>	10/23/2017
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 5</b>	
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**COMBINED INVENTOR'S DECLARATION AND ASSIGNMENT****DECLARATION**

The herein-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

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.

**Authorization to Permit Access to Application by Participating Office**

☒ If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the herein-identified patent application is filed access to the herein-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the herein-identified patent application is filed to have access to the herein-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the herein-identified patent application with respect to: 1) the herein-identified patent application-as-filed; 2) any foreign application to which the herein-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the herein-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the herein-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

The undersigned hereby authorizes the U.S. attorney or agent appointed herein to accept and follow instructions from either his foreign patent agent or corporate representative, if any, as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U.S. attorney or agent and the undersigned.

Direct Correspondence to: **CUSTOMER NUMBER 07055**

At: Greenblum & Bernstein, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191

Direct Telephone Calls to: Greenblum & Bernstein, P.L.C. (703) 716-1191

ASSIGNMENT

WHEREAS, **Mitsuaki HAYASHI**, a resident of Tokyo, JAPAN, whose mailing address is c/o SUMCO CORPORATION, 2-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8634, JAPAN, **Wataru SUGIMURA**, a resident of Tokyo, JAPAN, whose mailing address is c/o SUMCO CORPORATION, 2-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8634, JAPAN and **Ippeï SHIMOZAKI**, a resident of Tokyo, JAPAN, whose mailing address is c/o SUMCO CORPORATION, 2-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8634, JAPAN, hereinafter referred to as the ASSIGNORS, have invented a certain improvement relating to

**APPARATUS FOR MANUFACTURING SILICON SINGLE CRYSTAL AND  
MELT INLET PIPE OF THE SAME**

for which they have jointly executed an application for Letters Patent for the United States which was filed in the United States Patent and Trademark Office on August 15, 2017 and was awarded Application No. 15/677,368.

AND WHEREAS, **SUMCO CORPORATION**, a corporation organized and existing under the laws of JAPAN, whose mailing address is 2-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8634, JAPAN, hereinafter known as the ASSIGNEE, is desirous of acquiring the entire right, title and interest for the United States in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations, and prolongations thereof.

NOW, THIS WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, said ASSIGNORS hereby assign, sell and transfer to said ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application, for the United States including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor and all rights to sue for past and future infringement thereunder, said ASSIGNEE and its assigns and legal representatives to have, hold, exercise and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations, and prolongations thereof, with all the rights, powers, privileges, and advantages in any ways arising from or pertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations, and prolongations thereof, for the use and benefit of said ASSIGNEE and its assigns and legal representatives in as ample and beneficial a manner to all intents and purposes as the said ASSIGNORS might or could have held and enjoyed the same, if this assignment had not been made.

AND said ASSIGNORS hereby agree to execute all papers necessary to file applications in the United States for said invention and to assign the same to said ASSIGNEE, or any assignee acquiring title to said invention, and to execute any other papers that may be needed in connection with filing said application and securing Letters Patent thereon.

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AND said ASSIGNORS authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said ASSIGNEE, its assigns and legal representatives, in accordance herewith.

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the respective date(s) indicated below.

First Witness (Optional):

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Date)

Mitsuaki Hayashi

Mitsuaki HAYASHI

\_\_\_\_\_  
Date October, 10, 2017

Second Witness (Optional):

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Date)

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the respective date(s) indicated below.

First Witness (Optional):

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Date)

Wataru Sugimura

Wataru SUGIMURA

October, 2, 2017  
Date

Second Witness (Optional):

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Date)

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IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNOR(S), on the respective date(s) indicated below.

First Witness (Optional):

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Date)

Ipppei Shimozaeki

Ipppei SHIMOZAKI

Date October, 10, 2017

Second Witness (Optional):

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Date)

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