TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM538532

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
PIVOTAL SYSTEMS CORPORATION		08/27/2019	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	WESTERN ALLIANCE BANK
Street Address:	55 ALMADEN BOULEVARD
Internal Address:	SUITE 100
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95113
Entity Type:	Corporation: ARIZONA

PROPERTY NUMBERS Total: 6

Property Type	Number	Word Mark
Registration Number:	5810272	PIVOTAL SYSTEMS
Registration Number:	5810270	PIVOTAL SYSTEMS
Serial Number:	87908462	SQUARE WAVE FLOW CONTROL
Serial Number:	87908395	END POINT INDEX GENERATOR
Serial Number:	87908452	SENSOR X
Serial Number:	87908371	ACD

CH $165.00 5810272

CORRESPONDENCE DATA

Fax Number: 4048853900

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: 4048853868
Email: rusty.close@troutman.com
Correspondent Name: CHRISTOPHER CLOSE
Address Line 1: TROUTMAN SANDERS LLP
Address Line 2: 600 PEACHTREE STREET NE, SUITE 3000
Address Line 4: ATLANTA, GEORGIA 30308-2216

ATTORNEY DOCKET NUMBER:	039299.000032
NAME OF SUBMITTER:	Christopher C Close, Jr.

SIGNATURE:	/Christopher C. Close Jr./
DATE SIGNED:	08/28/2019

Total Attachments: 10

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

THIS INTELLECTUAL PROPERTY SECURITY AGREEMENT, dated as of August 27, 2019, (the "Agreement") between WESTERN ALLIANCE BANK, an Arizona corporation ("Lender") and PIVOTAL SYSTEMS CORPORATION, a Delaware corporation, ("Grantor") is made with reference to the Business Financing Agreement, dated as of August 27, 2019 (as amended from time to time, the "Financing Agreement'), between Lender and Grantor. Terms defined in the Financing Agreement have the same meaning when used in this Agreement.

For good and valuable consideration, receipt of which is hereby acknowledged, Grantor hereby covenants and agrees as follows:

To secure the Obligations under the Financing Agreement, Grantor grants to Lender a security interest in all right, title, and interest of Grantor in any of the following, whether now existing or hereafter acquired or created in any and all of the following property (collectively, the "Intellectual Property Collateral"):

(a) copyright rights, copyright applications, copyright registrations and like protections in each work or authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held (collectively, the "Copyrights"), including the Copyrights described in Exhibit A;

(b) patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same (collectively, the "Patents"), including the Patents described in Exhibit B;

(c) trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks (collectively, the "Trademarks"), including the Trademarks described in Exhibit C;

(d) mask work or similar rights available for the protection of semiconductor chips or other products (collectively, the "Mask Works");

(e) trade secrets, and any and all intellectual property rights in computer software and computer software products;

(f) design rights;

(g) claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works, and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) amendments, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

The rights and remedies of Lender with respect to the security interests granted hereunder are in addition to those set forth in the Financing Agreement, and those which are now or hereafter available to Lender as a matter of law or equity. Each right, power and remedy of Lender provided for herein or in the

Financing Agreement, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein, and the exercise by Lender of any one or more of such rights, powers or remedies does not preclude the simultaneous or later exercise by Lender of any other rights, powers or remedies.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

GRANTOR:

PIVOTAL SYSTEMS CORPORATION, a Delaware corporation

By _____

Name: Timothy O. Welch

Title: CFO

Address for Notices:
Attn: Tim Welch
48389 Fremont Blvd. #100
Fremont, California 94538
Fax:
twelch@pivotalsys.com

LENDER:

WESTERN ALLIANCE BANK, an Arizona corporation

By _____

Name: Elisa Sun

Title: VP

Address for Notices:
Attn: Elisa Sun
55 Almaden Blvd. Ste. 100
San Jose, California 95113
Tel: (408) 423-8500
Fax: (408) 423-8520

EXHIBIT A

Copyrights

No.	Description	Registration Number	Application Number
1.	None Identified		

EXHIBIT B

Patents

No.	Description	Application Number	Registration Number
1.	Method for Wide Range Gas Flow with Real Time Flow Measurement and Correction		6,119,710 (09/19/2000)
2.	Wide Range Gas Flow System with Real Time Flow Measurement and Correction		6,216,726 (04/17/2001)
3.	System and Method for Vacuum Chamber Leak Detection		7,590,498 (09/15/2009)
4.	Use of Modeled Parameters for Real-Time Semiconductor Process Metrology Applied to Semiconductor Processes		7,695,984 (04/13/2010)
5.	Techniques for Calibration of Gas Flows		7,757,541 (07/20/2010)
6.	Method and Apparatus for In Situ Testing of Gas Flow Controllers		7,823,436 (11/02/2010)
7.	End Point Detection Method for Plasma Etching of Semiconductor Wafers with Low Exposed Area		7,871,830 (01/18/2011)

No.	Description	Application Number	Registration Number
8.	System and Method for Controlling Process End-Point Utilizing Legacy End-Point System		7,873,052 (01/18/2011)
9.	Data Timestamp Management		7,937,232 (05/03/2011)
10.	Method and Apparatus for Identifying the Chemical Composition of a Gas		7,940,395 (05/10/2011)
11.	High-Speed SECS Message Services (HSMS) Pass-Through Including Bypass		8,102,844 (01/24/2012)
12.	Method and Apparatus for Identifying the Chemical Composition of a Gas		8,237,928 (08/07/2012)
13.	Method and Apparatus for In Situ Testing of Gas Flow Controllers		8,240,324 (08/14/2012)
14.	Method and Apparatus for Enhancing In-Situ Gas Flow Measurement Performance		8,265,888 (09/11/2012)
15.	Method and Apparatus for Enhancing In-Situ Gas Flow Measurement Performance		8,271,210 (09/18/2012)

No.	Description	Application Number	Registration Number
16.	Method and Apparatus for Enhancing In-Situ Gas Flow Measurement Performance		8,271,211 (09/18/2012)
17.	Method and Apparatus for the Measurement of Atmospheric Leaks in the Presence of Chamber Outgassing		8,393,197 (03/12/2013)
18.	Method and Apparatus for Enhancing In-Situ Gas Flow Measurement Performance		8,667,830 (03/11/2014)
19.	Method and Apparatus for Enhancing In-Situ Gas Flow Measurement Performance		8,857,456 (10/14/2014)
20.	Transient Measurements of Mass Flow Controllers		9,400,004 (07/26/2016)
21.	Method and Apparatus for Gas Flow Control		9,523,435 (12/20/2016)
22.	Method and Apparatus for Gas Flow Control		9,904,297 (02/27/2018)
23.	Method and Apparatus for Gas Flow Control		9,983,595 (05/29/2018)

No.	Description	Application Number	Registration Number
24.	Method and Apparatus for Gas Flow Control	12/906,058 (10/15/2010)	
25.	Mass Flow Controller with Multiple Communication Protocols	14/558,946 (12/03/2014)	
26.	Method and Apparatus for Gas Flow Control	15/206,180 (07/08/2016)	
27.	Method and Apparatus for Gas Flow Control	PCT US2016041581 (07/08/2016)	
28.	Method and Apparatus for Gas Flow Control	PCT US2010052974 (10/15/2010)	
29.	Method and Apparatus for Gas Flow Control	PCT US2009031170 (01/15/2009)	
30.	Method and Apparatus for Gas Flow Control	PCT US2008072008 (08/01/2008)	
31.	System and Method for Controlling Process End-Point Utilizing Legacy End-Point System	PCT US2007066777 (04/17/2007)	

No.	Description	Application Number	Registration Number
32.	End Point Detection Method for Plasma Etching of Semiconductor Wafers with Low Exposed Area	PCT US2006001952 (01/19/2006)	
33.	Preloaded Piezo Actuator and Gas Valve Employing the Actuator	16/510,671 (07/12/2019)	

EXHIBIT C

Trademarks

No.	Description	Serial Number	Registration Number
1.	PIVOTAL SYSTEMS (& designs)		5,810,272 (07/23/2019)
2.	PIVOTAL SYSTEMS		5,810,270 (07/23/2019)
3.	SQUARE WAVE FLOW CONTROL	87/908,462 (05/04/2018)	
4.	END POINT INDEX GENERATOR	87/908,395 (05/04/2018)	
5.	SENSOR X	87/908,452 (05/04/2018)	
6.	ACD	87/908,371 (05/04/2018)	

EXHIBIT D

Mask Works

No.	Description	Application	Registration
1.	None Identified		