# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT2715208

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | SECURITY AGREEMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---|---|
| PNC BANK FORMERLY RBC BANK | 01/31/2014 |

RECEIVING PARTY DATA

| | |
|---|---|
| Name: | QCEPT TECHNOLOGIES INC. |
| Street Address: | 75 5TH STREET |
| Internal Address: | SUITE 740 |
| City: | ATLANTA |
| State/Country: | GEORGIA |
| Postal Code: | 30361 |

PROPERTY NUMBERS Total: 13

| Property Type | Number |
|---|---|
| Patent Number: | 6957154 |
| Patent Number: | 7092826 |
| Patent Number: | 7103482 |
| Patent Number: | 7107158 |
| Patent Number: | 7152476 |
| Patent Number: | 7308367 |
| Patent Number: | 7337076 |
| Patent Number: | 7379826 |
| Patent Number: | 7634365 |
| Patent Number: | 7659734 |
| Patent Number: | 7752000 |
| Patent Number: | 7900526 |
| Application Number: | 12694116 |

CORRESPONDENCE DATA

Fax Number:
Email: jferguson@trusted-counsel.com

*Correspondence will be sent via US Mail when the email attempt is unsuccessful.*

Correspondent Name: JENNI FERGUSON
Address Line 1: 1201 PEACHTREE ST NE
Address Line 2: SUITE 500
Address Line 4: ATLANTA, GEORGIA 30361

| | |
|---|---|
| NAME OF SUBMITTER: | JOHN P. MONAHON |
| Signature: | /John P. Monahon/ |
| Date: | 02/03/2014 |
| | This document serves as an Oath/Declaration (37 CFR 1.63). |

Total Attachments: 11
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# NOTICE OF TERMINATION
# OF
# SECURITY INTEREST

Notice is hereby given that **PNC BANK (formerly known as RBC Bank (USA))**, with an office at 75 5th Street, Suite 900 Atlanta, Georgia 30308 Attention: Group Executive – KBI ("Bank"), has terminated its security interest in and to all of the patents of **QCEPT TECHNOLOGIES INC.**, a Delaware corporation, with its principal place of business located at 75 5th Street, Suite 740 Atlanta, Georgia 30308 ("Company"), including without limitation those listed on Schedule A and the applications, registrations (both domestic and foreign) and goodwill associated therewith, such security interest being granted pursuant to an agreement between Company and Bank dated March 1, 2014.

Dated: January 31, 2014

PNC Bank

By:
Name: Curtis Montclair
Title: Assistant Vice-President

STATE OF GEORGIA )
COUNTY OF FULTON ) SS.:

On the 31 day of January, 2014, before me, the undersigned, a notary public in and for said state, personally appeared Curtis Montclair, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument

Notary Public

# SCHEDULE A

## PATENTS

### ISSUED U.S. PATENTS

### 1. SEMICONDUCTOR WAFER INSPECTION SYSTEM

Patent: 6,957,154 – Non-Provisional Utility Patent
Assignee: Qcept Technologies Inc.
Inventors: Steele et al.
Filed: July 29, 2003
Issued: October 18, 2005
Description: Directed to methods and systems for the inspection of semiconductor wafers and other materials such as integrated circuits and any surface benefiting from inspection.
Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 2. INSPECTION SYSTEM AND APPARATUS

Patent: 7,092,826 – Non-Provisional U.S. Utility Patent
Assignee Qcept Technologies Inc.
Inventors: Steele et al.
Filed: June 17, 2005
Issued: August 15, 2006
Description: This continuation patent contains 28 claims that are similar to the claims in Qcept's issued patent no. 6,957,154 as it is a "placeholder" for the priority date of the original patent.
Comments: Continuation of U.S. Utility Patent 6,957,154 issued October 18, 2005.
Assignment: None Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 3. INSPECTION SYSTEM AND APPARATUS

Patent: 7,103,482 – Non-Provisional U.S. Utility Patent
Assignee: Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne et al.
Filed: August 5, 2004
Issued: September 5, 2006
Description: Describes claims that deal with a variety of improvements that have been implemented for scanning systems. Also, claims that deal with the ability to apply bias voltages to the probe and with inspecting the surface of a sample without specifying the type of sample or the type of inspection.
Comments: Continuation-In-Part of Imaging and Analysis of Chemical Contamination on Semiconductor Wafers using a Non-Vibrating CPD Sensor, U.S. Pat 7,308,367.
Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 4. INSPECTION SYSTEM AND APPARATUS

Patent: 7,107,158 – Non-Provisional U.S. Utility Patent
Assignee: Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Filed: March 11, 2005
Issued: September 12, 2006
Description: Claims related to combined vibrating and non-vibrating contact potential difference imaging and measurement system
Comments: Continuation-In-Part of Inspection System and Apparatus, U.S. Pat. 7,103,482. Applications pending for PCT, EPO, Taiwan, Japan, S. Korea and China.
Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 5. MEASUREMENTS OF MOTIONS OF ROTATING SHAFTS USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR

Patent: 7,152,476 – Non-Provisional U.S. Utility Patent
Assignee: Qcept Technologies Inc.
Inventors: Jeffrey A. Hawthorne; M. Brandon Steele
Filed: July 23, 2004
Issued: December 26, 2006
Description: Relates to measurement methods and systems using non-vibrating contact potential difference sensors
Comments: No foreign applications will be filed on this patent.
Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 6. WAFER INSPECTION SYSTEM

Patent: 7,308,367 – Non-Provisional U.S. Utility Patent
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne et al.
Filed: February 3, 2004
Issued: December 11, 2007
Description: This continuation patent expands upon the issued patent below in that it includes a method for calculating the scan height and method for determining the height of the sensor.
Comments: Continuation of U.S. Utility Patent 6,957,154 issued October 18, 2005.
Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 7. INSPECTION SYSTEM AND APPARATUS

Patent: 7,337,076 – Non-Provisional U.S. Utility Patent
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne et al.
Filed: September 12, 2006
Issued: February 26, 2008
Description: This continuation patent expands upon the issued patent and makes claim to a method and system for the characterization of microscopic and macroscopic defects through imaging and visualization of the CPD topology on the wafer surface through the use of a non-vibrating CPD sensor in combination with a vibrating CPD sensor.
Comments: Continuation of U.S. Utility Patent 7,107,158 issued September 12, 2006.
Assignment: None Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 8. SEMICONDUCTOR WAFER INSPECTION SYSTEM

Patent: 7,379,826 B2 – Non-Provisional U.S. Utility Patent
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne et al.
Filed: August 15, 2006
Issued: May 27, 2008
Description: This continuation patent expands upon the issued patent below in that it provides improved methods of processing CPD data to identify defects on the surface of a wafer.
Comments: Continuation of U.S. Utility Patent 7,092,826 issued August 15, 2006.
Assignment: None Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 9. INSPECTION SYSTEM AND APPARATUS UTILIZING VIBRATING & NON-VIBRATING CPD SENSOR

Patent: 7,634,365 B2 – Non-Provisional U.S. Utility Patent
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne, et al.
Filed: February 25, 2008
Issued: December 15, 2009
Description: This continuation patent expands upon the issued patent and is directed to methods and systems for the inspection of semiconductor wafers and other materials such as integrated circuits and any surface benefitting from inspection.
Comments: Continuation of U.S. Utility Patent 7,337,076 issued February 26, 2008.
Assignment: None Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 10. SEMICONDUCTOR INSPECTION SYSTEM AND APPARATUS UTILIZING A NON-VIBRATING CPD SENSOR AND CONTROLLED ILLUMINATION

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|---|---|
| Patent: | 7,659,734 – Non-Provisional U.S. Utility Patent |
| Assignee | Qcept Technologies Inc. |
| Inventors: | M. Brandon Steele, Jeffrey A. Hawthorne |
| Filed: | March 7, 2007 |
| Issued: | February 9, 2010 |
| Description: | Method and system for identifying a defect or contamination, using controlled illumination, on the surface of a semiconductor or in a semiconductor. |
| Comments: | N/A |

Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 11. CALIBRATION OF NON-VIBRATING CPD MEASUREMENTS TO DETECT SURFACE VARIATIONS THAT ARE PERPENDICULAR TO THE DIRECTION OF THE SENSOR MOTION

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| Patent: | 7,752,000 B2– Non-Provisional U.S. Utility Patent |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Mark Schulze, William Usry |
| Filed: | May 2, 2008 |
| Issued: | July 6, 2010 |
| Description: | Method using a non-vibrating CPD probe and a vibrating CPD probe to determine the contact potential difference of a wafer surface. |
| Comments: | N/A |

Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

### 12. DEFECT CLASSIFICATION UTILIZING DATA FROM A NON-VIBRATING CPD SENSOR

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| Patent: | 7,900,526 – Non-Provisional U.S. Utility Patent |
| Assignee | Qcept Technologies Inc. |
| Inventors: | M. Brandon Steele, Jeffrey Alan Hawthorne, Yeyuan Yang, Mark Schulze |
| Issued: | March 8, 2011 |
| Description: | A method and system for identifying and classifying non-uniformities on the surface of a semiconductor or in a semiconductor. |
| Comments: | N/A |

Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

## PENDING U.S. PATENT APPLICATIONS

### 1. PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR

Patent Application: 12/694116 – Non-Provisional U.S. Utility Patent
Assignee Qcept Technologies Inc.
Inventors: Jun Liu, Jeffrey Alan Hawthorne, Mark Schulze
Filed: January 26, 2010
Description: A method and system for identifying and classifying non-uniformities that are not part of a repeating pattern on the surface of a semiconductor or in a semiconductor.
Comments: N/A
Assignment: Recorded with U.S. Patent and Trademark Office.
Liens: None recorded with U.S. Patent and Trademark Office.

## ISSUED FOREIGN PATENTS:

### 1. SEMICONDUCTOR INSPECTION SYSTEM UTILIZING NON-VIBRATING CPD SENSOR AND CONTROLLED ILLUMINATION

Patent: KR 0929768
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Issued: February 28, 2008
Comments: Based on U.S. Patent No. 7,659,734

### 2. WAFER INSPECTION SYSTEM

Patent: FR 1711801
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Issued: June 17, 2009
Comments: Based on U.S. Patent No. 7,308,367

### 3. INSPECTION SYSTEM AND APPARATUS

Patent: European Grant No. 1 869 436 B1
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Issued: October 7, 2009
Comments: Based on U.S. Patent No. 7,107,158

### 4. WAFER INSPECTION SYSTEM

Patent: DE 602004021637.2
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Issued: October 7, 2009
Comments: Based on U.S. Patent No. 7,308,367

**5. INSPECTION SYSTEM AND APPARATUS**
Patent: FR 1869436
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Issued: October 7, 2009
Comments: Based on U.S. Patent No. 7,107,158

**6. INSPECTION SYSTEM AND APPARATUS**
Patent: DE 602006009637.2-08
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey A. Hawthorne
Issued: October 7, 2009
Comments: Based on U.S. Patent No. 7,107,158

**7. SYSTEM FOR INLINE PROCESSING OF A MATERIAL**
Patent: R.O.C. (TAIWAN) I317809
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey Alan Hawthorne
Issued: December 1, 2009
Comments: Based on U.S. Patent No. 7,107,158

**8. INSPECTION SYSTEM AND APPARATUS**
Patent: JP 4 459 289
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey Alan Hawthorne
Issued: February 19, 2010
Comments: Based on U.S. Patent No. 7,107,158

**9. SYSTEM FOR INLINE PROCESSING OF A MATERIAL**
Patent: KR 0950641
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey Alan Hawthorne
Issued: March 24, 2010
Comments: Based on U.S. Patent No. 7,107,158

**10. INSPECTION SYSTEM AND APPARATUS**
Patent: R.O.C. (TAIWAN) I350914
Assignee Qcept Technologies Inc.
Inventors: M. Brandon Steele, Jeffrey Alan Hawthorne
Issued: March 24, 2010
Comments: Based on U.S. Patent No. 7,107,158

### 11. INSPECTION SYSTEM AND APPARATUS

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| Patent: | CHINA - ZL200680001263.8 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | M. Brandon Steele, Jeffrey Alan Hawthorne |
| Issued: | October 21, 2011 |
| Comments: | Based on U.S. Patent No. 7,107,158 |

### 12. METHOD AND SYSTEM FOR DETECTING NON-UNIFORMITIES OF A SEMICONDUCTOR WAFER

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| Patent: | R.O.C. (TAIWAN) I346776 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | M. Brandon Steele, Jeffrey Alan Hawthorne,Yeyuan Yang, Mark Schulze |
| Issued: | April 24, 2011 |
| Comments: | Based on U.S. Patent No. 7,659,734 |

### 13. SEMICONDUCTOR INSPECTION SYSTEM AND APPARATUS UTILIZING A NON-VIBRATING CPD SENSOR AND CONTROLLED ILLUMINATION

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| Patent: | JAPAN 4 783 801 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | M. Brandon Steele, Jeffrey Alan Hawthorne,Yeyuan Yang, Mark Schulze |
| Issued: | July 15, 2011 |
| Comments: | Based on U.S. Patent No. 7,659,734 |

## FOREIGN PATENT APPLICATIONS

### 1. CALIBRATION OF NON-VIBRATING CONTACT POTENTIAL DIFFERENCE MEASUREMENTS TO DETECT SURFACE VARIATIONS THAT ARE PERPENDICULAR TO THE DIRECTION OF SENSOR MOTION

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|---|---|
| Patent | TAIWAN – 9 811 437 5 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Schulze Mark A.; Usry William R. |
| Filed: | April 30, 2009 |
| Comments: | Based on U.S. Application No. 12/151,054 |

### 2. PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR

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| Patent | PCT/US2010/022139 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Schulze Mark A.; Liu Jun; Hawthorne Jeffrey Alan. |
| Filed: | January 26, 2010 |
| Comments: | Based on Provisional Appl. No. 61/149605 |

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| 3. | **PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR** |
| Patent | TAIWAN – 9 910 240 8 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Schulze Mark A.; Liu Jun; Hawthorne Jeffrey Alan. |
| Filed: | January 28, 2010 |
| Comments: | Based U.S. Application No. 61/149605 |

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| 4. | **DEFECT CLASSIFICATION UTILIZING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR** |
| Patent | EPO - 0 885 7056.9 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Hawthorne Jeffrey Alan; Steele M. Brandon; Yang Yeyuan; Schulze Mark A. |
| Filed: | November 25, 2008 |
| Comments: | Based on U.S. Application No. 7900526 |

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|---|---|
| 5. | **CALIBRATION OF NON-VIBRATING CONTACT POTENTIAL DIFFERENCE MEASUREMENTS TO DETECT SURFACE VARIATIONS THAT ARE PERPENDICULAR TO THE DIRECTION OF SENSOR MOTION** |
| Patent | CHINA – 2009/80115697.4 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Schulze Mark A.; Usry William R. |
| Filed: | April 28, 2009 |
| Comments: | Based on U.S. Application No. 7752000 |

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|---|---|
| 6. | **CALIBRATION OF NON-VIBRATING CONTACT POTENTIAL DIFFERENCE MEASUREMENTS TO DETECT SURFACE VARIATIONS THAT ARE PERPENDICULAR TO THE DIRECTION OF SENSOR MOTION** |
| Patent | EPO - 09739580.0 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Schulze Mark A.; Usry William R.. |
| Filed: | April 28, 2009 |
| Comments: | Based on U.S. Application No. 7752000 |

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|---|---|
| 7. | **CALIBRATION OF NON-VIBRATING CONTACT POTENTIAL DIFFERENCE MEASUREMENTS TO DETECT SURFACE VARIATIONS THAT ARE PERPENDICULAR TO THE DIRECTION OF SENSOR MOTION** |
| Patent | SOUTH KOREA – 10-2010-7023566 |
| Assignee | Qcept Technologies Inc. |
| Inventors: | Schulze Mark A.; Usry William R. |
| Filed: | April 28, 2009 |
| Comments: | Based on U.S. Application No. 7752000 |

**8. CALIBRATION OF NON-VIBRATING CONTACT POTENTIAL DIFFERENCE MEASUREMENTS TO DETECT SURFACE VARIATIONS THAT ARE PERPENDICULAR TO THE DIRECTION OF SENSOR MOTION**

Patent JAPAN – 2011-507577
Assignee Qcept Technologies Inc.
Inventors: Schulze Mark A.; Usry William R.
Filed: April 28, 2009
Comments: Based on U.S. Application No. 7752000

**9. PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR**

Patent EPO - 10738973.6
Assignee Qcept Technologies Inc.
Inventors: Schulze Mark A.; Liu Jun; Hawthorne Jeffrey Alan
Filed: January 26, 2010
Comments: Based on Provisional Application No. 61/149605

**10. PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR**

Patent JAPAN - 2011-548235
Assignee Qcept Technologies Inc.
Inventors: Schulze Mark A.; Liu Jun; Hawthorne Jeffrey Alan
Filed: January 26, 2010
Comments: Based on Provisional Application No. 61/149605

**11. PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR**

Patent SOUTH KOREA - 10-2011-7017506
Assignee Qcept Technologies Inc.
Inventors: Schulze Mark A.; Liu Jun; Hawthorne Jeffrey Alan
Filed: January 26, 2010
Comments: Based on Provisional Application No. 61/149605

**12. PATTERNED WAFER INSPECTION SYSTEM USING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR**

Patent CHINA - 201080005600.7
Assignee Qcept Technologies Inc.
Inventors: Schulze Mark A.; Liu Jun; Hawthorne Jeffrey Alan
Filed: January 26, 2010
Comments: Based on Provisional Application No. 61/149605

### 13. DEFECT CLASSIFICATION UTILIZING A NON-VIBRATING CONTACT POTENTIAL DIFFERENCE SENSOR

Patent TAIWAN – 9 714 590 8
Assignee Qcept Technologies Inc.
Inventors: Hawthorne Jeffrey Alan; Steele M. Brandon; Yang Yeyuan; Schulze Mark A.
Filed: November 27, 2008
Comments: Based on U.S. Utility Application No. 11/948518