### 504729663 01/15/2018

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4776387

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name                  | Execution Date |
|-----------------------|----------------|
| CYNTHIA KUTCHKO       | 08/25/2017     |
| ZOUBEIDA OUNAIES      | 08/09/2017     |
| HASSENE BEN ATITALLAH | 08/14/2017     |
| NICHOLAS WYCKOFF      | 08/08/2017     |
| ANIL KUMAR            | 11/27/2017     |
| ROMAIN STALDER        | 11/27/2017     |
| DAVID WALTERS         | 08/25/2017     |

### **RECEIVING PARTY DATA**

| Name:           | PRC-DeSoto International, Inc. |  |
|-----------------|--------------------------------|--|
| Street Address: | 12780 San Fernando Road        |  |
| City:           | Sylmar                         |  |
| State/Country:  | CALIFORNIA                     |  |
| Postal Code:    | 91342                          |  |

### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |  |
|---------------------|----------|--|
| Application Number: | 15686436 |  |

### **CORRESPONDENCE DATA**

**Fax Number:** (412)434-4292

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:** 412-434-2918

Email: IPDOCKET@ppg.com
Correspondent Name: PPG INDUSTRIES, INC.

Address Line 1: ONE PPG PLACE
Address Line 2: 39TH FLOOR

Address Line 4: PITTSBURGH, PENNSYLVANIA 15272

| ATTORNEY DOCKET NUMBER: | 15010896A1                        |  |
|-------------------------|-----------------------------------|--|
| NAME OF SUBMITTER:      | DIANE R. MEYERS                   |  |
| SIGNATURE:              | /Diane R. Meyers, Reg. No. 38968/ |  |
| DATE SIGNED:            | 01/15/2018                        |  |

504729663 PATENT REEL: 044622 FRAME: 0101

# **Total Attachments: 9**

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PATENT REEL: 044622 FRAME: 0102

| U. S. Serial No | Docket No. PSU 2017-SRA007 |
|-----------------|----------------------------|
|                 | SSIGNMENT                  |

FOR VALUE RECEIVED, and pursuant to my obligations under my employment agreements/appointments with THE PENNSYLVANIA STATE UNIVERSITY ("University"), I, <u>NICHOLAS WYCKOFF, HASSENE BEN ATITALLAH, and ZHOUBEIDA OUNAIES</u>, hereby sell, assign and transfer unto the University's designee, THE PENN STATE RESEARCH FOUNDATION, as assignee, and its successors, assigns and legal representatives, the entire right, title and interest in and to all subject matter invented by me and disclosed or claimed in an application for Letters Patent of the United States of America, entitled:

### "DIELECTRIC DEVICES AND METHODS OF FABRICATION"

signed by us on the date set forth below; and in and to any and all continuations, continuations-in-part, divisions, reissues, renewals, extensions, substitutions, additions or reexaminations of such application and any U.S. patents issuing thereon; and in and to any and all corresponding international and foreign applications for Letters Patent and any foreign patents issuing thereon; and all Convention and Treaty Rights of any kind, in all countries throughout the world, for all such subject matter; together with all claims for damages by reason of future, present and past infringement, with the right to sue for and collect the same for assignee's use and on behalf of assignee's successors, assigns and legal representative.

We request that any and all patents for said inventions be issued to said assignee, its successors, assigns and legal representatives, or to such nominees as it may designate.

We agree that, when requested, we will, without charge to said assignee but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing, maintaining and enforcing patents for said inventions in any and all countries and for vesting title thereto in said assignee, its successors, assigns and legal representatives or nominees.

We authorize and empower the said assignee, its successors, assigns and legal representatives or nominees, to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from us.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of said assignee or nominee to claim the aforesaid benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

We covenant with said assignee, its successors, assigns and legal representatives, that the rights and property herein conveyed are free and clear of any encumbrance, and that we have full right to convey the same as herein expressed.

| Signed at University Park, Pennsylvania, this $8'$   | day of <u>AUGUST</u> , 2017.   |
|--|--|
| Witness:   | Signed: NiCHOLAS WYCKOFF   |
| STATE OF PENNSYLVANIA :  MICHIGAA : ss:  |  |
| COUNTY OF <del>CENTRE</del> :  | •  |
| On this <u>8</u> day of <u>AVGUST</u> State aforesaid, appeared <u>NICHOLAS WYCKOFI</u> the foregoing instrument, and acknowledged that he | , 2017, before me, a Notary Public in and for the county and to me personally known to be the person whose name is subscribed to executed said instrument as his free and voluntary act for the uses and |
| purposes therein expressed.  |  |

Witness my hand and seal the day and year last above given.

Notary Public

[Page 1 of 3 – Signatures Continued on Page 2]

### [Page 2 of 3 - Assignment Signatures Continued]

| Signed at University Park, Pennsylvania, th  | is <u>ly<sup>†</sup>N</u> day of | August   | , 2017.  |          |
|--|----------------------------------|--|--|----------|
| Witness: Alling Winnesot a   | Signo                            | ed: HASSENE BEN A  | TITALLAH   |          |
| On this 14 day of Augustate aforesaid, appeared HASSENE BEI subscribed to the foregoing instrument, and uses and purposes therein expressed. | , 201<br>N ATITALLAH , to m      | 7, before me, a Notary Properties of the Propert | ublic in and for the county<br>e the person whose name i<br>s his free and voluntary ac  | and<br>s |
| Witness my hand and seal the day   | and year last above give         | n.   |  |          |
|  | Notary Public                    | STATE NO   | HNESWARY RAJAGOPALA<br>ITARY PUBLIC - MINNESOTA<br>Immission Expires Jan. 31, 2020       |          |
| Signed at University Park, Pennsylvania, thi   | is day of                        |  | , 2017.  |          |
| Witness:   | Signe                            | ed: ZHOUBEIDA OUN  | AIES   |          |
| STATE OF PENNSYLVANIA COUNTY OF CENTRE   | :<br>: ss:<br>:                  |  |  |          |
| On this day of   | DUNAIES, to me persona           | ally known to be the pers  | ublic in and for the county<br>on whose name is subscrib<br>voluntary act for the uses a | ed to    |
| Witness my hand and seal the day a   | and year last above giver        | n.   |  |          |
|  | Notary Public                    |  | ·  |          |

**REEL: 044622 FRAME: 0104** 

## [Page 2 of 3 - Assignment Signatures Continued]

| Vitreess:  | Signed: HASSENE BEN ATITALLAH  |
|--|--|
|  | HADDENE DEN ATTIALLA   |
| STATE OF PENNSYLVANIA  | 3  |
| OUNTY OF CENTRE  | 3  |
| On thisday of  | , 2017, before me, a Notary Public in and for the county s<br>IE BEN ATITALLAH , to me personally known to be the person whose name is<br>nt, and acknowledged that he executed said instrument as his free and voluntary act  |
| Witness my hand and seal th  | ne day and year last above given.  |
|  |  |
|  | Notary Public  |
|  |  |
|  |  |
|  |  |
|  |  |
| Sonad at Vintuaretta Bark-Bannesdua  | mis this 9th deviat Associate 2017   |
| Signed at University Park, Pennsylva   | unis, this 9th day of August   |
|  | unis, this 9th day of August 2017.   |
|  |  |
| Vitness: <u>Uh. M. J</u>   | /// Signed: <u>Q</u>   |
| Vitness: <u>UM</u>   | /// Signed: <u>Q</u>   |
| Vitness: <u> </u>  | Signed: ZHOUBEIDA OUNAIES  ss:   |
| Witness:   | Signed: Stylend Signed: ZHOUBEIDA OUNAIES  |
| Witness:   STATE OF PENNSYLVANIA  COUNTY OF CENTRE  On this 9 <sup>th</sup> day of 1  State aforesaid, appeared 2HOUBE the foregoing instrument, and acknow surposes therein expressed.  | Signed: ZHOUBEIDA OUNAIES  : ss:  . ss:  |
| Witness:   STATE OF PENNSYLVANIA  COUNTY OF CENTRE  On this 9 <sup>th</sup> day of 1  State aforesaid, appeared 2HOUBE the foregoing instrument, and acknow surposes therein expressed.  | Signed:  ZHOUBEIDA OUNAIES  ss:  , 2017, before me, a Notary Public in and for the county of the Ounaies, to me personally known to be the person whose name is subscribe viedged that he executed said instrument as his free and voluntary act for the uses as   |
| Vitness:   ATATE OF PENNSYLVANIA  COUNTY OF CENTRE  On this 9 <sup>th</sup> day of 1  Charte aforesaid, appeared 2HOUBE the foregoing instrument, and acknown aurposes therein expressed.  | Signed: ZHOUBEIDA OUNAIES  2HOUBEIDA OUNAIES  , 2017, before me, a Notary Public in and for the county a SIDA OUNAIES, to me personally known to be the person whose name is subscribe yledged that he executed said instrument as his free and voluntary act for the uses at the day and year last above given. |
| Vitness:   TATE OF PENNSYLVANIA  COUNTY OF CENTRE  On this 9 <sup>th</sup> day of tate aforesaid, appeared ZHOUBE ne foregoing instrument, and acknow surposes therein expressed.  | Signed:  ZHOUBEIDA OUNAIES  ss:  , 2017, before me, a Notary Public in and for the county of the Ounaies, to me personally known to be the person whose name is subscribe viedged that he executed said instrument as his free and voluntary act for the uses as   |
| TATE OF PENNSYLVANIA COUNTY OF CENTRE  On this 9th day of tate aforesaid, appeared ZHOUBE to foregoing instrument, and acknown the processed of the contract o | Signed:  ZHOUBEIDA OUNAIES  ss:  , 2017, before me, a Notary Public in and for the county of the December of the person whose name is subscribe verded that he executed said instrument as his free and voluntary act for the uses as need and year last above given.  Notary Public                             |

**REEL: 044622 FRAME: 0105** 

### [Page 3 of 3 – Assignment Signatures Continued]

| The Assignee hereby acknowledges and accepts the foregoing assignment. |  |  |  |  |
|--|--|--|--|--|
| Assignee: THE PENN STATE RESEARCH FOUNDATION                           |  |  |  |  |
| Signature:   |  |  |  |  |
| Date:  |  |  |  |  |
| Name: Ronald J. Huss   |  |  |  |  |
| Title: Director, Office of Technology Management                       |  |  |  |  |

PATENT REEL: 044622 FRAME: 0106

#### ASSIGNMENT

IN CONSIDERATION of good and valuable considerations received from PRC DE-SOTO INTERNATIONAL, INC., a corporation of California, having a place of business at Glendale, California, and intending to be legally bound hereby, we, Cynthia Kutchko, Zoubeida Ounaies, Hassene Ben Atitallah, Nicholas Wyckoff, Anil Kumar, Romain Stalder, and David Walters do hereby sell, assign and set over unto PRC DE-SOTO INTERNATIONAL, INC, the entire right, title and interest in and to our invention of improvements in

### DIELECTRIC DEVICES AND METHODS OF FABRICATION

as set forth in our application for Letters Patent of the United States of America, in and for the United States and all foreign countries, the same to be held and enjoyed by PRC DE-SOTO INTERNATIONAL, INC., its successors, assigns, or legal representatives, to the full ends of the terms for which all Letters Patent therefor may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

AND WE HEREBY AUTHORIZE PRC DE-SOTO INTERNATIONAL, INC., to make application for and to receive Letters Patent for said invention in any or all foreign countries in its own name, or in any name, at its election.

AND WE HEREBY COVENANT AND AGREE that we will execute or procure any further necessary assurance of the title to said invention and Letters Patent; and that we will at any time, upon the request and at the expense of PRC DE-SOTO INTERNATIONAL, INC., execute and deliver any and all papers that may be necessary or desirable to perfect the title to said invention or any Letters Patent which may be granted therefor, in PRC DE-SOTO INTERNATIONAL, INC., its successors, assigns, or other legal representatives, and that we will, at any time, upon the request and at the expense of PRC DE-SOTO INTERNATIONAL, INC., testify in any legal proceeding, sign all lawful papers, execute any additional, divisional, continuing or reissue applications for patents for said invention, or any part or parts thereof, make all rightful oaths and generally do all lawful acts to aid PRC DE-SOTO INTERNATIONAL, INC., its successors, assigns, or other legal representatives to obtain and enforce patent protection on said invention in all countries, without further compensation, but at the expense of PRC DE-SOTO INTERNATIONAL, INC., its successors, assigns, or other legal representatives.

AND WE HEREBY AUTHORIZE AND REQUEST the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States for said invention, or resulting

PATENT REEL: 044622 FRAME: 0107 from said application, or from any division, reissue, or extension thereof, to PRC DE-SOTO INTERNATIONAL, INC., as sole assignee.

## IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals

| NAME OF FIRST INVENTOR:  |           |                     |                 |            |
|--|-----------|---------------------|-----------------|------------|
| First Name: CYNTHIA  | Middle:   | Family Name or Surn | sme: KUTCHKO    |            |
| Residence: City: Pittsburgh  | State: PA | Country: US         | Citizenship: US | ********** |
| Mailing Address: 1405 Green:   |           | A 15239 U.S.        |                 |            |
| Mailing Address: 1405 Greendale Drive, Pittisburgh, PA 15239 U.S.  Signature: 4 S/25/7 |           |                     |                 |            |
|  |           |                     |                 |            |

Church Blasson)
Witness

| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                           |           |                               |                 |  |  |
|---|-----------|-------------------------------|-----------------|--|--|
| NAME OF FIFTH INVENTOR:   |           |                               |                 |  |  |
|   |           |                               |                 |  |  |
| First Name: ANIL  | Middle:   | Family Name or Surname: KUMAR |                 |  |  |
|   |           |                               |                 |  |  |
| Residence: City: Murrysville                                      | State: PA | Country: US                   | Citizenship: US |  |  |
|   |           |                               |                 |  |  |
| Mailing Address: 2402 Oak Hurst Court, Murrysville, PA 15668 U.S. |           |                               |                 |  |  |
|   |           |                               |                 |  |  |
| Signature; Date:  |           |                               |                 |  |  |

| Witness    |  |
|------------|--|
| AA 3635022 |  |

from said application, or from any division, reissue, or extension thereof, to PRC DE-SOTO INTERNATIONAL, INC., as sole assignee.

### IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals

| First Name: CYNTHIA  | Middle:   | Family Name or Sum | ame: KUTCHKO    |  |  |
|--|-----------|--------------------|-----------------|--|--|
| Residence: City: Plitsburgh                                      | State: PA | Country: US        | Citizenship: US |  |  |
| Mailing Address: 1405 Greendale Drive, Pittsburgh, PA 15239 U.S. |           |                    |                 |  |  |
| Signature:   |           | Daie:              | Date:           |  |  |
| V  |           |                    |                 |  |  |

| NAME OF FIFTH INVENTOR:   |                              |                               |              |                 |
|---|------------------------------|-------------------------------|--------------|-----------------|
| First Name: ANIL Middle:  |                              | Family Name or Surname: KUMAR |              |                 |
|   | Residence: City: Murrysville | State: PA                     | Country: US  | Citizenship: US |
| Mailing Address: 2402 Oak Hurst Court, Murrysville, PA 15668 U.S. |                              |                               |              |                 |
|   | Signature: And K             | ,<br>Илла <b>»</b>            | Date: 11/27/ | J7              |

Halin I Quener

Witness

|   | IOR:      | name of sixth inventor: |                                 |  |  |  |
|---|-----------|-------------------------|---------------------------------|--|--|--|
| First Name: ROMAIN  | Middle:   | Family Name or Sum      | ame: STALDER                    |  |  |  |
| Residence: City: Pittsburgh   | State: PA | Country: US             | Citizenship: FR                 |  |  |  |
| Mailing Address: 118 Maple Ave. #4, Pittsburgh, PA 15218, U.S.      |           |                         |                                 |  |  |  |
| Signature:  |           |                         | Date: 11/27/17                  |  |  |  |
| Gagrie L. Ceenne<br>Witness   |           |                         |                                 |  |  |  |
| NAME OF SEVENTH INVI  | ENTOR:    |                         |                                 |  |  |  |
| First Name: DAVID   | Middle:   | Family Name or Sum      | Family Name or Surname: WALTERS |  |  |  |
| Residence: City: Slippery Rock                                      | State: PA | Country: US             | Citizenship: US                 |  |  |  |
| Mailing Address: 120 Sassafras Drive, Slippery Rock, PA 16057, U.S. |           |                         |                                 |  |  |  |
| managerungs, 120 dassimi  |           |                         |                                 |  |  |  |

.. 3 ..

Witness

| ,  |           |                           |                 |  |
|--|-----------|---------------------------|-----------------|--|
| NAME OF SIXTH INVENTOR:  |           |                           |                 |  |
|  |           |                           |                 |  |
| First Name: ROMAIN   | Middle:   | Family Name or Surname: 5 | STALDER         |  |
|  |           |                           |                 |  |
| Residence: City: Pittsburgh                                    | State: PA | Country: US               | Citizenship: US |  |
|  |           |                           |                 |  |
| Mailing Address: 118 Maple Ave. #4, Piutsburgh, PA 15218, U.S. |           |                           |                 |  |
|  |           |                           |                 |  |
| Signature:   |           | Date:                     |                 |  |
|  |           |                           |                 |  |
|  |           |                           |                 |  |
|  |           |                           |                 |  |
|  |           |                           |                 |  |

| NAME OF SEVENTH INVENTOR:   |           |                                 |                 |  |
|---|-----------|---------------------------------|-----------------|--|
| First Name: DAVID   | Middie:   | Family Name or Surname: WALTERS |                 |  |
| Residence: City: Slippery Rock                                      | State: PA | Country: US                     | Citizenship: US |  |
| Mailing Address: 120 Sassafras Drive, Slippery Rock, PA 16057, U.S. |           |                                 |                 |  |
| Signature: / / / / / Date: 8 - 25 - 17                              |           |                                 |                 |  |

<u> CAUGE Gluss</u> Witness

Witness