504417734 06/16/2017

PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| TUNG-HE CHOU | 06/09/2017 |
| HSUN-CHUNG KUANG | 06/09/2017 |

RECEIVING PARTY DATA

| Name: | TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD. | |
|-----------------|---|--|
| Street Address: | NO.8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK | |
| City: | HSINCHU | |
| State/Country: | TAIWAN | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15625371 |

CORRESPONDENCE DATA

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| NAME OF SUBMITTER: | ANTHONY KING | |
| SIGNATURE: | /Anthony King/ | |
| DATE SIGNED: | 06/16/2017 | |

Total Attachments: 2

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PATENT 504417734 REEL: 042734 FRAME: 0865

Your Ref.; P20170938US00

US ONLY

ASSIGNMENT

WHEREAS, I(we), <u>CHOU, TUNG-HE</u> and <u>KUANG, HSUN-CHUNG</u> whose post office address(es) appear(s) below, hereinafter referred to as ASSIGNOR, have invented certain new and useful invention entitled

CHEMICAL MECHANICAL POLISHING APPARATUS, SLURRY, AND METHOD OF USING THE SAME

| (hereinafter referred to as the INVENTION) for which an a is executed on even date herewith unless at least one of the ☐ United States Design Patent was ☐ executed on: | pplication for United S ne following is checked | tates Letters Patent /Utility Patent d: | | |
|---|---|---|--|--|
| ☐ established by PCT International Patent Applicat United States of America | | d: designating the | | |
| WHEREAS, TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD. whose post office address is NO.8, LI-HSIN RD. 6, HSINCHU SCIENCE PARK, HSINCHU, TAIWAN, R.O.C. hereinafter referred to as ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to the same in | | | | |
| the United States and its territorial possessions; | ing the chine right, th | te and interest in and to the same in | | |
| NOW, THEREFORE, for good and valuable consider ASSIGNOR, by these presents do sell, assign and transfer and to said INVENTION and application throughout the Patent granted on any division, continuation, continuation terms for which the same may be granted, including all presents and the same may be granted. | unto said ASSIGNEE, t United States of Ame n-in-part and reissue of | the entire right, title, and interest in crica, including any and all Letters said application for the full term or | | |
| ASSIGNOR further covenants that no assignments, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment; | | | | |
| ALSO, ASSIGNOR hereby agrees to execute any docu filing, prosecution and maintenance of said application of said INVENTION, including additional documents that massaid INVENTION, all without further consideration. ASSIGNEE'S expense, to identify and communicate to ASSIGNEE'S expense, to identify and communicate to ASSIGNEE'S expense, to identify and communicate to ASSIGNEE INVENTION that are within ASSIGNOR'S potestimony on behalf of ASSIGNEE that lawfully may be maintenance, litigation and defense of any patent applied instrument. ASSIGNOR'S obligations under this instruments administrators and other legal representatives. | or any other patent apply be required to affire SIGNOR also agrees, we SIGNEE at ASSIGNEE'S assession or control, and required of ASSIGN ication or patent enco | plication(s) in the United States for in the rights of ASSIGNEE in and to without further consideration and at request documents and information in to provide further assurances and for in respect of the prosecution, compassed within the terms of this | | |
| ALSO, ASSIGNOR hereby authorizes and requests the and all Letters Patent referred to above to ASSIGNEE, as the same, for ASSIGNEE'S sole use and behoof; and for the successors, to the full end of the term for which such Lesame would have been held by ASSIGNOR had this assignment. | ne ASSIGNEE of the entering the entering and behoof of A setters Patent may be g | tire right, title and interest in and to SSIGNEE'S legal representatives and ranted, as fully and entirely as the | | |
| Assignor Name CHOU, TUNG-HE | Address NO.8, LI-HSIN R PARK, HSINCHU, | RD. 6, HSINCHU SCIENCE TAIWAN (R.O.C.) | | |
| Signature of Assignor (X) Chow, Twenty He | Date of Signature (X) ンケノク で | 3 09 | | |
| Name of Witness (optional) | Name of Witness (optiona | | | |
| Signature of Witness (optional) | Signature of Witness (Opt | ional) | | |

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Signature of Witness (Optional)

| Assignor Name KUANG, HSUN-CHUNG | Address NO.5, LN.71, DUNFENG RD., XIANGSHAN DIST., HSINCHU CITY 300, TAIWAN (R.O.C.) |
|---------------------------------------|--|
| Signature of Assignor (X) Jan-Chy Huf | Date of Signature (X) 20/7/6/9 |
| Name of Witness (optional) | Name of Witness (optional) |
| Signature of Witness (optional) | Signature of Witness (Optional) |

PATENT REEL: 042734 FRAME: 0867

RECORDED: 06/16/2017