11-21-2001

Form PTO-1595 R
(Rev. 03/01)
OMB No. 0651-0027 (exp. 5/31/2002)
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U.S. DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): 11.21.01
MEMC Pasadena, Inc.
PlasmaSil, L.L.C.
SiBond, L.L.C.
MEMC Southwest Inc.
MEMC International, Inc.
Additional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

2. Name and address of receiving party(ies)
Name: Citicorp USA, Inc.
Internal Address: Attention of David Grabar
Street Address: 2 Penns Way
Suite 200
City: New Castle State: DE Zip: 19720
Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:
☐ Assignment ☐ Merger
☒ Security Agreement ☐ Change of Name
☐ Other
Execution Date: November 13, 2001

11-21-01

4. Application number(s) or patent number(s):
If this document is being filed together with a new application, the execution date of the application is:
A. Patent Application No.(s)
09/370,349
B. Patent No.(s)
4,395,389
Additional numbers attached? ☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:
Name: Paul Shim
Internal Address: Cleary, Gottlieb, Steen & Hamilton
Street Address: One Liberty Plaza
City: New York State: N.Y. Zip: 10006

6. Total number of applications and patents involved: 262

7. Total fee (37 CFR 3.41).....$10,480.00
☒ Enclosed
☐ Authorized to be charged to deposit account

8. Deposit account number:
(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Brian N. Crist
Name of Person Signing

Signature

11/21/01
Date

Total number of pages including cover sheet, attachments, and documents: 36

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

11/21/2001 GTON11 00000032 09370349
01 FC:581 10480.00 OP

1

Additional Name of Conveying Party under Item 1 of the Recordation Form Cover Sheet

MEMC Electronic Materials, Inc.

Additional Application Numbers and Patent Numbers for Item 4 on the Recordation Form Cover Sheet

Patent Application Numbers	Patent Numbers
09/704,893	4,450,960
09/489,481	4,532,120
09/659,537	4,554,141
09/704,900	4,608,096
09/730,171	4,622,082
09/730,172	4,632,816
09/535,759	4,666,532
09/737,715	4,668,330
09/971,253	5,075,092
09/991,799	4,851,358
09/833,777	4,868,133
09/816,015	5,178,720
09/475,320	5,206,004
09/270,366	5,211,931
09/705,092	5,288,366
09/859,094	5,373,807
09/082,906	5,290,342
09/667,909	5,376,890
09/332,745	5,377,451
09/691,994	5,408,951
09/344,003	5,417,676
09/344,036	5,422,316
09/853,232	5,439,523
09/344,709	5,445,679
09/352,980	5,488,924
09/366,850	5,494,849
09/372,897	5,937,312
09/379,383	5,516,730
09/385,108	5,712,198
09/416,998	5,518,549
09/419,151	5,550,374
09/430,654	5,571,373
09/438,551	5,573,680
09/481,080	5,578,284
09/506,105	5,582,642
09/495,563	5,588,993
09/502,340	5,592,295
09/503,566	5,593,494

Additional Application Numbers and Patent Numbers for Item 4 on the Recordation Form Cover Sheet

Patent Application Numbers	Patent Numbers
09/505,269	5,593,498
09/507,811	5,766,341
09/512,529	5,593,505
09/521,525	5,626,159
09/521,288	5,605,487
09/859,826	5,622,568
09/543,194	5,855,859
09/543,192	5,632,666
09/566,890	5,653,799
09/752,222	5,665,159
09/568,356	5,656,078
09/568,751	5,668,045
09/607,389	5,676,751
09/607,391	5,679,055
09/608,302	5,735,258
09/608,304	5,746,834
09/610,277	5,753,567
09/631,089	5,762,491
09/633,532	5,765,890
09/633,958	5,770,522
09/661,821	5,779,791
09/661,822	5,787,595
09/711,198	5,789,309
09/723,847	5,791,493
09/751,897	5,792,273
09/757,121	5,795,381
09/684,266	5,799,728
09/769,773	5,814,148
09/681,160	5,816,274
09/811,982	5,827,113
09/815,508	5,837,662
09/817,929	5,839,460
09/834,118	5,840,120
09/834,819	5,840,202
09/865,083	5,843,234
09/892,002	5,843,322
09/874,487	5,846,318
09/929,585	5,849,076
09/896,945	5,865,670
09/928,559	5,870,881
09/797,391	5,882,402

Additional Application Numbers and Patent Numbers for Item 4 on the Recordation Form Cover Sheet

Patent Application Numbers	Patent Numbers
60/245,610	5,882,989
09/871,255	5,885,344
60/257,646	5,891,250
60/252,715	5,894,711
09/661,745	6,214,109
60/259,000	5,906,533
60/258,414	5,908,504
60/258,296	5,910,295
60/259,783	5,913,375
60/249,854	5,919,303
60/264,415	5,919,311
60/259,362	5,922,127
60/280,035	6,053,974
60/280,680	5,935,328
60/283,103	5,942,032
60/285,180	5,948,699
60/289,371	5,964,953
60/300,208	5,968,263
60/300,364	5,974,680
60/301,767	5,975,998
60/302,907	5,976,247
60/315,846	6,180,220
60/323,827	6,006,736
60/309,645	6,006,738
60/312,573	6,015,335
60/325,622	6,019,838
60/325,660	6,026,963
09/869,084	6,030,887
60/273,980	6,039,801
	6,039,807
	6,057,170
	6,063,235
	6,074,947
	6,086,678
	6,089,285
	6,093,913
	6,100,167
	6,112,738
	6,114,245
	6,120,350
	6,129,048

Additional Application Numbers and Patent Numbers for Item 4 on the Recordation Form Cover Sheet

Patent Application Numbers

Patent Numbers
6,135,863
6,168,961
6,171,391
6,177,279
6,164,299
6,179,950
6,183,553
6,187,089
6,189,546
6,191,010
6,197,111
6,200,908
6,203,611
6,203,614
6,210,640
6,214,704
6,227,944
6,230,720
6,236,104
6,238,483
6,241,818
6,294,469
6,287,380
6,254,672
5,919,302
6,190,631
6,284,039
6,284,040
6,284,384
6,285,011
6,287,382
6,293,139

PATENT SECURITY AGREEMENT

THIS PATENT SECURITY AGREEMENT made as of this thirteenth day of November, 2001 (the "Agreement").

By and among:

Grantors (as defined herein)

-and-

Collateral Agent (as defined herein)

WHEREAS, in accordance with the SECURITY AGREEMENT dated as of November 13, 2001, (as amended from time to time, the "Revolver Security Agreement") among MEMC ELECTRONIC MATERIALS, INC. (the "Borrower"), each subsidiary of Borrower listed on Schedule I hereto (each such subsidiary individually a "Subsidiary" or a "Guarantor" and, collectively, the "Subsidiaries" or "Guarantors"; and the Guarantors and Borrower are referred to collectively herein as the "Grantors") and CITICORP USA, INC., a Delaware corporation, as collateral agent (in such capacity, the "Collateral Agent") for the Secured Parties (as defined in the Revolver Security Agreement), which is attached as an exhibit to the revolving credit agreement among the Borrower, the lenders from time to time party thereto (the "Lenders") and CITICORP USA, INC., as administrative agent for the Lenders, the Grantors have agreed to grant to the Collateral Agent for the benefit of the Secured Parties a continuing security interest in, among other things, the Patents (as defined herein).

NOW THEREFORE, in consideration of good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of the parties), the parties agree as follows:

1. As used herein, the following terms shall have the following meanings:

"Patents" means all of the issued United States patents and pending United States patent applications listed on Schedule III.

2. As security for the payment or performance, as the case may be, in full of the Revolver Obligations (as defined in the Revolver Security Agreement), each Grantor hereby bargains, sells, conveys, assigns, sets over, mortgages, pledges, hypothecates and

transfers to the Collateral Agent, its successors and assigns, for the ratable benefit of the Secured Parties, a security interest in, all of such Grantor's right, title and interest in, to all of the Patents.

3. This Agreement is made to secure the satisfactory performance and payment of all the Revolver Obligations, as such term is defined in the Revolver Security Agreement. Upon termination or release under Section 7.15 of the Revolver Security Agreement, the Collateral Agent shall, upon such satisfaction, execute, acknowledge, and deliver to the Grantors an instrument in writing releasing the security interest in the Patents acquired under this Agreement. Additionally, upon such satisfaction, Collateral Agent shall reasonably cooperate with any efforts made by Grantor to make of record or otherwise confirm such satisfaction including, but not limited to, the release and/or termination of the Agreement and any security interest in, to or under the subject collateral.

4. The security interest in this Agreement has been granted as a supplement to, and not in limitation of, the security interest granted to the Collateral Agent for the benefit of the Secured Parties under the Revolver Security Agreement. The Revolver Security Agreement (and all rights and remedies of the Collateral Agents and Secured Parties) shall remain in full force and effect in accordance with its terms. The rights and remedies of the Collateral Agent and Secured Parties with respect to the security interest granted herein are without prejudice to, and are in addition to those set forth in the Security Agreement, all terms and provisions of which are incorporated herein by reference.

5. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

MEMC ELECTRONIC MATERIALS, INC.

By _____
Name: James M. Stolze
Title: Executive Vice President,
Chief Financial Officer

By _____
Name: Kenneth L. Young
Title: Treasurer

EACH OF THE OTHER GUARANTORS LISTED ON SCHEDULE I HERETO,

By _____
Name: Kenneth L. Young, in his capacity as Treasurer for each of the other Guarantors listed on Schedule I hereto

CITICORP USA, INC., as Administrative Agent and Collateral Agent

By _____
Name:
Title:

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

MEMC ELECTRONIC MATERIALS, INC.

By _____
Name: James M. Stolze
Title: Executive Vice President,
Chief Financial Officer

By _____
Name: Kenneth L. Young
Title: Treasurer

EACH OF THE OTHER GUARANTORS
LISTED ON SCHEDULE I HERETO,

By _____
Name: Kenneth L. Young, in his capacity as Treasurer for each of the other Guarantors listed on Schedule I hereto

CITICORP USA, INC., as Administrative Agent and Collateral Agent

By _____
Name:
Title: EDWARD T. CROOK
Managing Director and Vice President

SCHEDULE I

GUARANTORS

MEMC Pasadena, Inc. (United States)

PlasmaSil, L.L.C. (United States)

SiBond, L.L.C. (United States)

MEMC Southwest Inc. (United States)

MEMC International, Inc. (United States)

SCHEDULE II

PATENTS

SPLR FILE	COUNTRY	PAT. OR * APPLN	GRANT DATE	EXP. YEAR	MEMC FILE #	INVENTOR(S)	TITLE		
1493	USA	4,395,389	07/26/83	2002	95-EM4978	Seth	Chlorosilane Disproportionation Process	SPLR	MEMC (US)
1121	USA	4,450,960	05/29/84	2002	89-8337	Johnson	Package	SPLR	MEMC (US)
							Rates from Silicon Halide - Hydrogen reaction Gases		
1498	USA	4,532,120	07/30/85	2003	95-EM5155	Smith & Nelson	Silane Purification Process	SPLR	MEMC (US)
1512	USA	4,554,141	11/19/85	2004	95-EM5340	Scull & Laurent	Gas Stream Purification	SPLR	MEMC (US)
1119	USA	4,608,096	08/26/86	2003	89-8341/	Hill	Gettering	SPLR	MEMC (US)
1118	USA	4,622,082	11/11/86	2004	89-8326	Dyson & Rossi	Conditioned Semiconductor Substrates	SPLR	MEMC (US)
1513	US(CIP)	4,632,816	12/30/86	2003	95-EM5128A	Marlett	Process for Production of Silane	SPLR	MEMC (US)
1117	USA	4,666,532	05/19/87	2004	89-8307	Korb, Reed & Shaw	Denuding Silicon Substrates with Oxygen and Halogen	SPLR	MEMC (US)
1116	USA	4,668,330	05/26/87	2005	89-8348	Golden	Furnace Contamination	SPLR	MEMC (US)

1534	USA	5,075,092	12/24/91	2008	95-EM5563A	Boone, Richards & Bossier III	Process for Preparation of Silane	SPLR	MEMC (US)
1065	USA	4,851,358	07/25/89	2008	89-12175-1-1	Huber	Semiconductor Wafer Fabrication with Improved Control of Internal	SPLR - US	MEMC (US)
1066	US(DIV)	4,868,133	09/19/89	2008	89-12175-1	Huber	Semiconductor Wafer Fabrication with Improved Control of Internal Gettering Sites Using RTA	SPLR	MEMC (US)
1072	USA	5,178,720	01/12/93	2011	91-0100	Frederick	Method for Controlling Oxygen Content of Silicon Crystals Using	SPLR	MEMC (US)
1544	USA	5,206,004	04/27/93	2010	95-EM6158A	Park	Silane Compositions and Process	SPLR	MEMC (US)
1545	USA	5,211,931	05/18/93	2012	95-EM6517	Allen & Richards	Removal of Ethylene From Silane Using A Distillation Step After	SPLR	MEMC (US)
1095	USA	5,288,366	02/22/94	2012	91-0950	Holder	Method for Growing Multiple Single Crystals And Apparatus	SPLR	MEMC (US)
1318	US(DIV)	5,373,807	12/20/94	2012	93-1050	Holder	Method for Growing Multiple Single Crystals and Apparatus For Use Therein	SPLR	MEMC (US)
1547	USA	5,290,342	03/01/94	2011	95-EM6157A	Wilkman, Park & Everly	Silane Compositions and Process	SPLR	MEMC (US)
1313	USA	5,340,437	08/23/94	2013	93-0500	Erk & Vandamme	Process and Apparatus for Etching Semiconductor Wafers	SPLR	MEMC (US)
1301	USA	5,376,890	12/27/94	2013	93-0450	Keevil, Burgdorf,	Capacitive Distance Measuring Apparatus Having Liquid Ground	SPLR	MEMC (US)

						Ketterer & Wood	Contact		
1173	USA	5,377,451	01/03/95	2013	92-0600	Leoni, Morganti	Wafer Polishing Apparatus and Method	SPLR	MEMC (US)
1369	USA	5,408,951	04/25/95	2013	94-1050	Tamida	Improved Method for Growing Silicon Crystal	SPLR	MEMC (US)
1312	USA	5,417,767	05/23/95	2013	93-0550	Stinson	Wafer Carrier	SPLR	MEMC (US)
1326	USA	5,422,316	06/06/95	2014	93-0900	Desai, Wisnieski & Golland	Semiconductor Wafer Polisher and Method	SPLR	MEMC (US)
1314	USA	5,439,523	08/08/95	2014	93-0600	Yamaguchi	Device for Suppressing Particle Splash Onto a Semiconductor Wafer	SPLR	MEMC (US)
1246	USA	5,445,679	08/29/95	2012	92-0650	Hansen & Banan	Plasma Cleaning of Polysilicon for Charging into a Czochralski Crystal Growing Process	SPLR	MEMC (US)
1319	USA	5,488,924	02/06/96	2013	93-0750	Horvath, Jones	Hopper and Method For Use in Charging Semi-Conductor Source	SPLR	MEMC (US)
7606	USA	5,494,849	02/27/96	2015	SSI 94-01	Iyer, Baran,	Single-Etch Stop Process for the Manufacture of Silicon-on-Insulator	SPLR	SiBond LLC
7608	US(CIP)	5,937,312	08/10/99	2015	SSI 94-01	Iyer, Baran, Mastroianni & Craven	Single-Etch Stop Process for the Manufacture of Silicon-on-Insulator Substrates	SPLR	SiBond LLC
1363	USA	5,516,730	05/14/96	2014	94-0700	Shive & Pirooz	Pre-Thermal Treatment Cleaning Process	SPLR	MEMC (US)
1652	USA(CONT)	5,712,198	01/27/98	2014	95-2150	Pirooz & Shive	Pre-Heat Treatment Cleaning Process	SPLR	MEMC (US)

1407	USA	5,518,549	05/21/96	2015	94-1450	Hellwig	Susceptor and Baffle Therefor	SPLR	MEMC (US)
1340	USA	5,550,374	08/27/96	2014	94-0150	Holzer & Drescher	Method and Apparatus for Determining Interstitial Oxygen Content of Relatively Large Diameter Silicon Crystals by Infrared Spectroscopy	SPLR	MEMC (US)
1315	USA	5,571,373	11/05/96	2014	93-0700	Vepa, Wisnieski	Method of Rough Polishing Semiconductor Wafers to Reduce	SPLR	MEMC (US)
1356	USA	5,573,680	11/12/96	2014	94-0300	Shaw & Holzer	Apparatus and Method for Etching a Semiconductor Material Without Altering Flow Pattern Defect Distribution	SPLR	MEMC (US)
1367	USA	5,578,284	11/26/96	2015	94-0600	Chandrasekhar	Process For Eliminating Dislocations In the Neck of A Silicon	SPLR	MEMC (US)
1799	USA(DIV)	5,628,823	05/13/97	2015	96-1150	Chandrasekhar, Kim	A Silicon Single Crystal Having Eliminated Dislocation in its Neck Crystal	SPLR	MEMC (US)
1417	USA	5,582,642	12/10/96	2015	94-1900	Korb, Williams, Schrenker & Lauher	Apparatus and Method for Adjusting The Position of A Pull Wire of A Crystal Pulling Machine	SPLR	MEMC (US)
1412	USA	5,588,993	12/31/96	2015	94-1650	Holder	Method for Preparing Molten Silicon Melt from Polycrystalline	SPLR	MEMC (US)
1411	USA	5,592,295	01/07/97	2015	94-1600	Stanton & Krause	Apparatus and Method for Semiconductor Wafer Edge Inspection	SPLR	MEMC (US)
1392	USA	5,593,494	01/14/97	2015	94-1700	Falster	Precision Controlled Precipitation of Oxygen in Silicon	SPLR	MEMC (US)
1462	USA	5,593,498	01/14/97	2015	95-0800	Kimbel, Korb &	Apparatus and Method for Rotating A Crucible of a Crystal	SPLR	MEMC (US)

1871	USA(DIV)	5,766,341	06/16/98	2015	95-0800(DIV)	Kimble, Korb & Hall	Method for Rotating A Crucible of a Crystal Pulling Machine	SPLR	MEMC (US)
1380	USA	5,593,505	01/14/97	2015	94-0900	Erk, Bartram,	Apparatus and Method for Cleaning Semiconductor Wafers	SPLR	MEMC (US)
1826	USA(DIV)	5,626,159	05/06/97	2015	96-1500	Erk, Bartram, Hollander & Chai	Apparatus and Method for Cleaning Semiconductor Wafers	SPLR	MEMC (US)
1331	USA	5,605,487	02/25/97	2014	93-1400	Hileman, Walsh	Semiconductor Wafer Polishing Apparatus and Method	SPLR	MEMC (US)
1317	USA	5,622,568	04/22/97	2014	93-1000	Shive & Pirooz	Gettering of Metals from Solution	SPLR	MEMC (US)
1874	USA	5,855,859	01/05/99	2014	93-1000(CIP)	Shive & Pirooz	Gettering Agent	SPLR	MEMC (US)
1366	USA	5,632,666	05/27/97	2014	94-0550	Peratello & Leoni	Method and Apparatus for Automated Quality Control in	SPLR	MEMC (US)
1444	USA	5,653,799	08/05/97	2015	94-1250	Fuerhoff	System and Method for Controlling Crystal Growth	SPLR	MEMC (US)
1735	USA(DIV)	5,665,159	09/09/97	2015	96-0300	Fuerhoff	System and Method for Controlling Growth of a Silicon Crystal	SPLR	MEMC (US)
1445	USA	5,656,078	08/12/97	2015	94-1300	Fuerhoff	Non-Distorting Video Camera for Use With A System for	SPLR	MEMC (US)
7605	USA	5,668,045	09/16/97	2014		Golland, Craven	Process for Stripping Outer Edge of BESOI Wafers	SPLR	SiBond LLC
7629	US(DIV)	5,834,812	11/10/98	2014		Golland, Craven & Bartram	Edge Stripped BESOI Wafer	SPLR	SiBond LLC

1416	USA	5,676,751	10/14/97	2016	94-1750	Banan, Korb & Kim	Rapid Cooling of CZ Silicon Crystal Growth System	SPLR	MEMC (US)
1669	USA	5,679,055	10/21/97	2016	95-1900	Greene, Albrecht,	Automated Wafer Lapping System	SPLR	MEMC (US)
1773	US	5,735,258	04/07/98	2016	WP01823	& Horii		SPLR	MEMC (US)
1667	USA	5,746,834	05/05/98	2016	95-1850	Hanley	Method and Apparatus for Purging Barrel Reactors	SPLR	MEMC (US)
1353	USA	5,753,567	05/19/98	2012	94-0400	Hansen & Banan	Cleaning of Metallic Contaminants From the Surface of	SPLR	MEMC (US)
1487	USA	5,762,491	06/09/98	2015	95-0750	Williams & Luter	Solid Material Delivery System for a Furnace	SPLR	MEMC (US)
1765	USA	5,765,890	06/16/98	2016	95-2400	Gaylord & Taylor	Device for Transferring a Semiconductor Wafer	SPLR	MEMC (US)
1770	USA	5,770,522	06/23/98	2016	96-0200	Bronson	Polishing Block Heater	SPLR	MEMC (US)
1675	US(CONT)	5,779,791	07/14/98	2016	95-2050		Process for Controlling Thermal History of Chochralski-Grown Silicon	SPLR	MEMC (US)
1658	USA	5,787,595	08/04/98	2016	95-1050	Desai, Adcock,	Method and Apparatus for Controlling Flatness of Polished	SPLR	MEMC (US)
1877	USA	5,789,309	08/04/98	2016	96-0450	Hellwig	Method and System for Monocrystalline Epitaxial Deposition	SPLR	MEMC (US)
1660	USA	5,791,493	08/11/98	2016	95-1500	Meyer	Polysilicon Particle Classifying Apparatus	SPLR	MEMC (US)

1932	USA	5,792,273	08/11/98	2017	96-3100	Ries, Hellwig & Rossi	Secondary Edge Reflector for Horizontal Reactor	SPLR	MEMC (US)
1436	USA	5,795,381	08/18/98	2016	95-0150	Holder	SiO Probe for Real-Time Monitoring and Control of Oxygen During	SPLR	MEMC (US)
1733	USA	5,799,728	09/01/98	2016	95-1450	Blume	Dehumidifier	SPLR	MEMC (US)
1671	USA	5,814,148	09/29/98	2016	95-1950	Kim & Allen	Method for Preparing Molten Silicon Melt from Polycrystalline	SPLR	MEMC (US)
1886	USA	5,816,274	10/06/98	2017	96-1650	Bartram & Hollander	Apparatus for Cleaning Semiconductor Wafers	SPLR	MEMC (US)
1774	US	5,827,113	10/27/98	2016	WPO1824	Okuno, Itoh	Cutting Machine	SPLR	MEMC (US)
2027	USA	5,837,662	11/17/98	2017	97-1000	Chai, Erk,	Post-Lapping Cleaning Process for Silicon Wafers	SPLR	MEMC (US)
1924	USA	5,839,460	11/24/98	2017	96-2250	Chai & Watson	Apparatus for Cleaning Semiconductor Wafers	SPLR	MEMC (US)
1364	USA	5,840,120	11/24/98	2016	94-0750	Kim, Shaw, Chandrasekhar & Schrenker	Apparatus and Method for Controlling Nucleation of Oxygen Precipitates in Silicon Crystals	SPLR	MEMC (US)
1664	USA	5,840,202	11/24/98	2016	95-1750	Walsh	Apparatus and Method for Shaping Polishing Pads	SPLR	MEMC (US)
1662	USA	5,843,234	12/01/98	2016	95-1650	Finn & Hellwig	Method and Apparatus for Aiming A Barrel Reactor Nozzle	SPLR	MEMC (US)
1911	USA	5,843,322	12/01/98	2016	96-1952	Chandler, Jr.	Process for Etching N, P, N+ and P+ Type Slugs and Wafers	SPLR	MEMC (US)

1771	USA	5,846,318	12/08/98	2016	96-0250	Javidi	Method and System for Controlling Growth of a Silicon Crystal	SPLR	MEMC (US)
1764	USA	5,849,076	12/15/98	2016	95-2300	Gaylord & Mueller	Cooling System and Method for Epitaxial Barrel Reactor	SPLR	MEMC (US)
2021	USA	5,865,670	02/02/99	2017	97-0350	Frank, Durkee, Bronson & Heim	Wafer Demount Apparatus	SPLR	MEMC (US)
2016	USA	5,870,881	02/16/99	2017	96-2750	Rice, Suddarth Edwards & Roberts	Box Closing Apparatus	SPLR	MEMC (US)
2039	USA	5,882,402	03/16/99	2017	97-1650	Fuerhoff	Method and System for Controlling Growth of a Silicon Crystal	SPLR	MEMC (US)
1354	USA	5,882,989	03/16/99	2017	94-0450	Falster	Process for the Preparation of Silicon Wafers Having a Controlled	SPLR	MEMC (US)
1768	USA	5,885,344	03/23/99	2017	96-0100	Kim & Chandrasekhar	Method and Apparatus for Non-Dash Neck Process for Single Crystal	SPLR	MEMC (US)
2072	USA	5,891,250	04/06/99	2018	97-2150	Lottes & Torack	Injector for Reactor	SPLR	MEMC (US)
1959	USA	5,894,711	04/20/99	2017	97-0850	Davidson, Lunday, Hampton, Lenk, Anderson & Shive	Box Handling Apparatus and Method	SPLR	MEMC (US)
1434	USA	5,904,768	05/18/99	2016	95-0100	Holder	Process and Apparatus for Controlling the Oxygen Content in	SPLR	MEMC (US)
2396	US(DIV)	6,214,109	04/10/01	2016	95-0100(DIV)		Apparatus for Controlling The Oxygen Content in Silicon Wafers Heavily Doped with Antimony or Arsenic	SPLR	MEMC (US)

2061	US(CONT)	5,906,533	05/25/99	2016	95-0650(CONT)	Harris, Hall	Radiant Polishing Block Heater	SPLR	MEMC (US)
1490	USA	5,908,504	06/01/99	2015	95-0950	Hanley	Method for Tuning Barrel Reactor Purge System	SPLR	MEMC (US)
1876	USA	5,910,295	06/08/99	2017	96-0350	DeLuca	Closed Loop Process for Producing Polycrystalline Silicon and	SPLR	MEMC (US)
2075	USA	5,913,975	06/22/99	2018	97-2900	Holder	Crucible and Method of Preparation Thereof	SPLR	MEMC (US)
2028	USA	5,919,303	07/06/99	2017	97-1050	Holder	Process for Preparing A Silicon Melt From a Polysilicon Charge	SPLR	MEMC (US)
1381	USA	5,919,311	07/06/99	2016	94-0950	Shive & Malik	Control of SiO_2 Etch Rate Using Dilute Chemical Etchants in the	SPLR	MEMC (US)
2038	USA	5,922,127	07/13/99	2017	97-1200	Luter & Ferry	Heat Shield For Crystal Puller	SPLR	MEMC (US)
2352	US(DIV)	6,053,974	04/25/00	2017	97-1200(DIV)	Luter & Ferry	Heat Shield For Crystal Puller	SPLR	MEMC (US)
1878	USA	5,935,328	08/10/99	2017	96-0600	Cherko, Korb,	Apparatus for Use in Crystal Pulling	SPLR	MEMC (US)
1923	USA	5,942,032	08/24/99	2017	96-2200	Kim, Luter, Ferry,	Heat Shield Assembly and Method of Growing Vacancy Rich	SPLR	MEMC (US)
7633	USA	5,948,699	09/07/99	2017	SB 97-01	Lawrence, Bansal	Wafer Backing Insert for Free Mount Semiconductor Polishing Apparatus and Process	SPLR	SiBond LLC

2019	USA	5,964,953	10/12/99	2018	97-0200	Mettifogo	Post-Etching Alkaline Treatment Process	SPLR	MEMC (US)
1920	USA	5,968,263	10/19/99	2018	96-1600	Grover & Kimbel	Open-Loop Method and System for Controlling Growth of	SPLR	MEMC (US)
2359	US(DIV)	09/370,349*		PEND.	96-1600(DIV)		Open Loop Apparatus for Controlling Crystal Growth	SPLR	MEMC (US)
2041	USA(FWC)	5,974,680	11/02/99	2016	93-0200	Anderson & Wilson	Apparatus for Use in Cleaning Wafers	SPLR	MEMC (US)
2023	USA	5,975,998	11/02/99	2017	97-0700	Olmstead	Wafer Processing Apparatus	SPLR	MEMC (US)
1352	USA	5,976,247	11/02/99	2015	94-0350	Hansen, Shelley,	Surface-Treated Crucibles For Improved Zero Dislocation	SPLR	MEMC (US)
2105	US(CIP)	6,180,220	01/30/01	2017	95-2350(CIP)		Ideal Oxygen Precipitating Silicon Wafers and Oxygen Out-Diffusion-Less Process Therefor	SPLR	MEMC (US)
2888	USA(CONT)	09/704,893*		PEND.	95-2352 (cont. of 2105)	Ideal Oxygen Precipitating Epitaxial Silicon Wafers and	Oxygen Out-Diffusion-Less Process Therefor	SPLR	MEMC (US)
2082	US	6,006,736	12/28/99	2016					
1885	USA	6,006,738	12/28/99	2017	WP2130M004			SPLR	MEMC (US)
1933	USA	6,015,335	01/18/00	2017	97-0100	Roberts	Apparatus for Dressing Inside Diameter Saws	SPLR	MEMC (US)
1887	USA	6,019,838	02/01/00	2018	96-1700	Canella	Crystal Growing Apparatus with Melt-Doping Facility	SPLR	MEMC (US)

1650	USA	6,026,963	02/22/00	2016	95-0550	Gray & Cooke	Moisture Barrier Bag Having Window	SPLR	MEMC (US)
2107	USA	6,030,887	02/29/00	2017	97-0600	Desai, Vadnais	Flattening Process for Epitaxial Semiconductor Wafer	SPLR	MEMC (US)
2156	USA	6,039,801	03/21/00	2018	98-0900	Holder & Johnson	Continuous Oxidation Process for Crystal Pulling Apparatus	SPLR	MEMC (US)
2529.5	EPO	99948481.9*		2019					
2633	US(CONT)	09/489,481*		PEND	98-0900(CONT)	Holder & Johnson	Continuous Oxidation Process for Crystal Pulling Apparatus	SPLR	MEMC (US)
1931	USA	6,039,807	03/21/00	2018	96-2900	Guarniero, Magon,	Apparatus for Moving Exhaust Tube of Barrel Reactor	SPLR	MEMC (US)
2241	USA	6,057,170	05/02/00	2019	98-3900	Witte	Method and System of Measuring Waviness in Silicon Wafers	SPLR	MEMC (US)
1091	USA	6,063,235	05/16/00	2018	PS-98-002	Taylor	Gas Discharge Apparatus for Wafer Etching System	SPLR	PlasmaSil LLC
1090	USA	6,074,947	6/13/00	2018	PS-98-001	Mumola	Process for Improving Uniform Thickness of Semiconductor Substrates Using Plasma Assisted Chemical Etching	SPLR	PlasmaSil LLC
2154	USA	6,086,678	07/11/00	2019	98-0500	Wilson, Ries	Pressure Equalization System for Chemical Vapor Deposition	SPLR	MEMC (US)
2069	USA	6,089,285	07/18/00	2018	97-1750	DeStefano, Eoff,	Method and System for Supplying Semiconductor Source	SPLR	MEMC (US)
2024	USA	6,093,913	07/25/00	2018	97-0800	Schrenker & Luter	Electrical Resistance Heater for Crystal Growing Apparatus	SPLR	MEMC (US)
2171	USA	6,100,167	08/08/00	2017	92-0350	Falster, Leoni,	Process for the Removal of Copper From Polished Boroon	SPLR	MEMC (US)

2253	USA	6,112,738	09/05/00	2019	98-3600	Witte, Ragan	Method of Slicing Silicon Wafers for Laser Marking	SPLR	MEMC (US)
2477	US(CONT)	6,114,245	09/05/00	2017	96-2850(CONT)	Vandamme, Xin & Pei	Method of Processing Semiconductor Wafers	SPLR	MEMC (US)
2393	USA	6,120,350	09/19/00	2019	98-5450	Zhou & Davis	Apparatus and Process for Reconditioning Polishing Pads	SPLR	MEMC (US)
2076	USA	6,129,048	10/10/00	2018	97-2950	Sullivan	Improved Susceptor for Barrel Reactor	SPLR	MEMC (US)
2256	USA	6,135,863	10/24/00	2019	98-3950	Zhang, Vogelgesang	Method of Conditioning Wafer Polishing Pads	SPLR	MEMC (US)
1922	USA	6,168,961	01/02/01	2018	96-2050	Vaccari	Process for the Preparation of Epitaxial Wafers for Resistivity	SPLR	MEMC (US)
2153	USA	6,171,391	01/09/01	2018	98-0450	Fuerhoff, Banan	Method and System for Controlling Growth of a Silicon Crystal	SPLR	MEMC (US)
2077	USA	6,177,279	01/23/01	2018	97-3000	Sun & Adams	Ion Extraction Process and Apparatus for Single Side Wafers	SPLR	MEMC (US)
2724	US(DIV)	6,164,299	12/26/00	2018	97-3000(DIV)		Ion Extraction Process for Single Side Wafers		
2233	USA	6,179,950	01/30/01	2019	98-2000	Zhang, Vogelgesang,	Polishing Pad and Process for Forming Same	SPLR	MEMC (US)
2071	USA	6,183,553	02/06/01	2018	97-1950	Holder, Joslin	Process and Apparatus for Preparation of Silicon Crystals With	SPLR	MEMC (US)
2071.1	USA(CONT)	09/659,537*		PEND.	97-1951		Process and Apparatus for Preparation of Silicon Crystals With Reduced Metal Content	SPLR	MEMC(US)

2152	USA	6,187,089	02/13/01	2019	97-3500	Phillips, Keltner	Tungsten Doped Crucible and Method for Preparing Same	SPLR	MEMC (US)
2473	USA	6,189,546	02/20/01	2019	99-0450	Zhang, Brumer, Erk	Polishing Process for Manufacturing Dopant-Striation-Free Polished	SPLR	MEMC (US)
2507	US FORMAL	6,191,010	02/20/01	2019	98-3700	Falster	Ideal Oxygen Precipitating Silicon Wafers and Oxygen	SPLR	MEMC (US)
2890	US (CONT)	09/704,900*		PEND.	98-3701		Ideal Oxygen Precipitating Silicon Wafers and Oxygen Out-Diffusion-Less Process Therefor	SPLR	MEMC (US)
2289	USA	6,197,111	03/06/01	2019	98-4600	Ferry & Ishii	Heat Shield Assembly for Crystal Puller	SPLR	MEMC (US)
2074	USA	6,200,908	03/13/01	2019	97-2550	Vandamme, Desai,	Process for Reducing Waviness in Semiconductor Wafers	SPLR	MEMC(US)
2493	USA	6,203,611	03/20/01	2019	99-2450	Kimbel, Wyand, III.	Method of Controlling Growth of a Semiconductor Crystal to	SPLR	MEMC (US)
2384	USA	6,203,614	03/20/01	2019	98-5000	Cherko	Cable Assembly for Crystal Puller	SPLR	MEMC (US)
2030	USA	6,210,640	04/03/01	2018	97-1150	Ruth & Schmidt	Collector for an Automated On-Line Bath Analysis System	SPLR	MEMC (US)
2672	USA(DIV)	09/730,171*		PEND.	97-1151		Process for Collecting and Analyzing the Content of a Liquid in an Automated On-line Bath Analysis System	SPLR	MEMC(US)
2673	USA(DIV)	09/730,172*		PEND.	97-1152		Process for Collecting and Analyzing the Content of a Liquid in an Automated On-line Bath Analysis System	SPLR	MEMC(US)

2499	US FORMAL	6,214,704	04/10/01	2019	98-1050	Xin	Method of Processing Semiconductor Wafers to Build in a Back	SPLR	MEMC (US)
2190	USA	6,227,944	05/08/01	2019	98-1650	Xin, Yoshimura,	Method and Pressure Jetting Machine for Processing A	SPLR	MEMC (US)
2190.1	US (DIV)	09/535,759*		PEND.	98-1650(DIV)		Pressure Jetting Machine for Processing a Semiconductor Wafer	SPLR	MEMC (US)
2512	US FORMAL	6,236,104	5/22/01	2019	98-3050	Falster	Silicon on Insulator Structure From Low Defect Density	SPLR	MEMC (US)
2512.1	US(CONT)	09/737,715*		PEND.	98-3051		Silicon on Insulator Structure From Low Defect Density Single Crystal Silicon	SPLR	MEMC (US)
2387	USA	6,238,483	05/29/01	2019	99-0100	Cherko	Apparatus for Supporting A Semiconductor Ingot During Growth	SPLR	MEMC(US)
2385	USA	6,241,818	06/05/01	2019	98-5850	Kimbel & Wyand III	Method and System of Controlling Taper in a Semiconductor	SPLR	MEMC (US)
2518	USA	6,257,954	07/10/01	2020	99-2300	Ng, Walsh, Erk	Apparatus and Process for High Temperature Wafer Edge Polishing	SPLR	MEMC (US)
1096	USA	6,294,469	09/25/01	2020	PS 98-007	Kulkarni, Desai	Silicon Wafering Process Flow	SPLR	PlasmaSil LLC
1339	USA (CONT)	08/971,253*		PEND.	94-0200	Shive & Pirooz	Cleaning Process for Hydrophobic Silicon Wafers	SPLR	MEMC (US)
1880	USA	08/991,799*		PEND.	96-0950	Davis & Smith	Process for the Control of NO_x Generated by Etching of	SPLR	MEMC (US)
2100	USA	6,287,380	09/11/01	2018	96-0050	Falster & Holzer	Low Defect Density Single Crystal Silicon	SPLR	MEMC (US)
2100.1	USA(CONT)	09/833,777*		PEND.	96-0051	Falster & Holzer	Low Defect Density Silicon And a Process for Producing Low Defect		

							Density Silicon Wherein V/Go Is Controlled by Controlling Heat Transfer at the Melt/Solid Interface		
2101	US(CIP)	6,254,672	07/03/01	2018	96-0050(CIP)	Falster, Holzer,	Low Defect Density Self-Interstitial Dominated Silicon	SPLR	MEMC (US)
2101.1	US(CONT)	09/816,015*		PEND.	96-0052		Process for Producing Low Defect Density, Self-Interstitial Dominated Silicon Wherein V/Go is Controlled by Controlling Heat Transfer at the Melt/Solid Interface		
2614	US(DIV)	09/475,320*		PEND.	96-0050(DIV)		Low Defect Density, Self-Interstitial Dominated Silicon		
(2130 also based on 1734 Provisional (TP-96-0050))									
2130	USA	5,919,302	07/06/99	2017	98-0950	Falster, Holzer,	Low Defect Density, Vacancy Dominated Silicon	SPLR	MEMC (US)
2410	US(CIP)	09/270,366*		PEND.	98-0950(CIP)		Vacancy Dominated, Defect-Free Silicon	SPLR	MEMC (US)
(2131 also based on 1734 Provisional (TP-96-0050))									
2131	USA	6,190,631	02/20/01	2018	97-2700	Falster, Holzer,	Low Defect Density, Ideal Oxygen Precipitating Silicon	SPLR	MEMC (US)
2889	US(CONT)	09/705,092*		PEND.	97-2701		Low Defect Density, Ideal Oxygen Precipitating Silicon	SPLR	MEMC (US)
2553	US FORMAL	6,284,039	09/04/01	2019	98-0700	Mule'Stagno, Fei	Epitaxial Silicon Wafers Substantially Free of	SPLR	MEMC (US)
2553.1	US(CONT)	09/874,487		PEND.	98-0701	Mule'Stagno, Fei Holzer, Korb & Falster	Epitaxial Silicon Wafers Substantially Free of Grown-In Defects	SPLR	MEMC (US)
2191	USA	6,284,040	09/04/01	2019	98-1400	Holder &	Process of Stacking and Melting Polycrystalline Silicon for	SPLR	MEMC (US)

2345	USA	6,284,384	09/04/01	2019	98-3750	Wilson, Rossi	An Epitaxial Silicon Wafer With Intrinsic Gettering and a	SPLR	MEMC (US)
2345.1	US(DIV)	09/859,094*		PEND.	98-3751	Wilson, Rossi & Yang	An Epitaxial Silicon Wafer With Intrinsic Gettering and a Method for The Preparation Thereof	SPLR	MEMC (US)
2397	USA	6,285,011	09/04/01	2019	99-0600	Cherko	Electrical Resistance Heater for Crystal Growing Apparatus	SPLR	MEMC (US)
2073	USA	6,287,382	09/11/01	2018	97-2250	Cherko	Electrode Assembly for Electrical Resistance Heater Used in	SPLR	MEMC (US)
2172	USA	09/082,906*		PEND.	96-2700	Shive & Vitus	Process for the Removal of Copper and Other Metallic Impurities	SPLR	MEMC (US)
2098.1	USA(CONT)	09/667,909*		PEND.	97-3351		Radio Frequency Identification System and Method for Tracking Silicon Wafers	SPLR	MEMC (US)
2291	USA	09/332,745*		PEND.	98-4200	Yang & Watkins	A Method for the Preparation of an Epitaxial Silicon Wafer With	SPLR	MEMC (US)
2466.1	USA(DIV)	09/691,994*		PEND.	97-0451		Electrical Resistance Heater and Method for Crystal Growing Apparatus	SPLR	MEMC (US)
2467	USA	09/344,003*		PEND.	98-2900	Schrenker & Luter	Crystal Puller for Growing Low Defect Density, Self-Interstitial	SPLR	MEMC (US)
2458	USA	09/344,036*		PEND.	98-4900	Falster & Voronkov	Process for Preparing Defect Free Silicon Crystals Which Allows	SPLR	MEMC (US)

(2458 also claims priority from 2182/TP-98-4850 and 2268/TP-98-4350)

2458.1	US(CONT)	09/853,232*	PEND.	98-4901	Falster & Voronkov	Process for Preparing Defect Free Silicon Crystals Which Allows for Variability in Process Conditions	SPLR	MEMC (US)
2471	USA	09/344,709*	PEND.	98-4350	Falster	Process for Growth of Defect Free Silicon Crystals of Arbitrarily Large Diameters at Arbitrary Growth Rates Maximum Throughput	SPLR	MEMC (US)

(2471 claims priority from TP-98-0350, TP-98-4350 and also MEMC 2310/TP-98-4900)

2232	USA	09/352,980*	PEND.	98-1950	Anderson	Process for Fabricating Semiconductor Wafers With External	SPLR	MEMC (US)
2489	US FORMAL	09/366,850*	PEND.		Falster	Non-Uniform Minority Carrier Lifetime Distributions in High	SPLR	MEMC (US)
2481	US FORMAL	09/372,897*	PEND.	98-4450	Wyand, Fuerhoff	Apparatus for Accurately Pulling a Crystal and Lifting a Crucible	SPLR	MEMC (US)
2495	US FORMAL	09/379,383*	PEND.	98-3100	Falster	Non-Oxygen Precipitating Czochralski	SPLR	MEMC (US)
2495.1	US (CONT)	09/929,585	PEND.	98-3101	Falster	Non-oxygen Precipitating Czochralski Silicon Wafers	SPLR	MEMC(US)
2503	US FORMAL	09/385,108*	PEND.	98-1500	Falster	Thermally Annealed Wafers Having Improved	SPLR	MEMC (US)
2554	US FORMAL	09/416,998*	PEND.	98-1450	Falster, Binns & Wang	Thermall Annealed, Low Defect Density Single Crystal Silicon	SPLR	MEMC (US)
2482	US FORMAL	09/419,151*	PEND.	98-1350	Holder, Joslin,	Method and System for Measuring Polycrystalline Chunk Size	SPLR	MEMC (US)
2394	USA	09/430,654*	PEND.	98-5900	Schmidt, Seilkop	Apparatus for Cleaning Semiconductor Wafers	SPLR	MEMC (US)

2158	USA	09/438,551*	PEND.	98-1250	Stefanescu & Erk	Etching Solution and Process for Etching Semiconductor Wafers	SPLR	MEMC (US)
2464	USA	09/481,080*	PEND.	99-1550	Vasat, Stefanescu,	Semiconductor Wafer Manufacturing Process	SPLR	MEMC (US)
2691	USA	09/506,105*	PEND.	99-2150	Zhang, Ng & Erk	Semiconductor Wafer Manufacturing Process	SPLR	MEMC (US)
2358	USA	09/495,563*	PEND.	98-5750	Mutti & Voronkov	Method for Controlling Growth of a Silicon Crystal to Minimize	SPLR	MEMC (US)
2632	US FORMAL	09/502,340*	PEND.	99-0900	Fuerhoff & Kimbel	Method and System for Controlling Diameter of a Silicon Crystal	SPLR	MEMC (US)
2651	USA	09/503,566*	PEND.	00-0050	Holder	Process for Producing A Silicon Melt	SPLR	MEMC (US)
2607	USA	09/505,269*	PEND.	99-3350	Ng, Xin, Erk, Harris,	Process for Reducing Surface Variations for Polished Wafer	SPLR	MEMC (US)
2524	USA	09/507,811*	PEND.	99-1150	Ng & Teasley	Method for Wafer Processing	SPLR	MEMC (US)
1095	USA	09/512,529*	PEND.	PS 98-006	Miura, Desai, Erk &	A Method of Processing Semiconductor Wafers	SPLR	PlasmaSil LLC
2689	1st FORMAL	09/521,525*	PEND.	99-0051	Phillips, Keltner	Doping of Molten Silicon For Use in Crystal Growing Process	SPLR	MEMG (US)
2690	2nd FORMAL	09/521,288*	PEND.	99-0052		Barium Doping of Molten Silicon for Use in Crystal Growing Process		
2690.1	US(DIV)	09/859,826*	PEND.	99-0053		Barium Doping of Molten Silicon for Use in Crystal Growing Process		
2149.1	USA	09/543,194*	PEND.	97-3250	Erk, Stefanescu,	Process for Etching a Silicon Wafer	SPLR	MEMC (US)

2187.1	USA	09/543,192*	PEND.	98-1800	Stefanescu, Pei, Erk	Method for the Detection of Processing-Induced Defects	SPLR	MEMC (US)
2641	USA	09/566,890*	PEND.	99-3550	Yang, Standley	Modified Susceptor for Use in Chemical Vapor Deposition Process	SPLR	MEMC (US)
2643	US (CIP)	09/752,222*	PEND.	99-3850	Ries, Yang & Standley	An Epitaxial Silicon Wafer Free From Autodoping and Backside Halo	SPLR	MEMC (US)
2580	USA	09/568,356*	PEND.	99-2200	Cherko, Banan,	Method and Device for Feeding Arsenic Dopant into A Silicon	SPLR	MEMC(US)
2582	USA	09/568,751*	PEND.	99-2400	Banan, Kulkarni,	A Multi-Stage Arsenic Doping Process to Achieve Low Resistivity in	SPLR	MEMC (US)
2235.1	FORMAL US	09/596,493*	PEND.	98-2150	Kojima, Ishii	Process for Preparing Single Crystal Silicon Having Uniform	SPLR	MEMC (US)
2294	USA	09/607,389*	PEND.	98-4700	Torack, Ries	A Method and Apparatus for Forming an Epitaxial Silicon Wafer	SPLR	MEMC(US)
2294.1	US(DIV)	to be filed		98-4701				
2292	USA	09/607,391*	PEND.	98-4250	Yang	A Method and Apparatus for Forming A Silicon Wafer with a	SPLR	MEMC (US)
2293	USA	09/608,302*	PEND.	98-4650	Wilson, Ries	Method and Apparatus for Forming a Silicon Wafer with a Denuded Zone	SPLR	MEMC (US)
2583	USA	09/608,304*	PEND.	99-2250	Williams, Andrus, Kulage, Harrell	Non-Contaminating Gas-Tight Valve for Semiconductor Applications	SPLR	MEMC (US)
2254.1	FORMAL US	09/610,277*	PEND.	98-3650	Basic & Illig	Polishing Mixture and Process for Reducing Incorporation of Copper Into	SPLR	MEMC (US)

2522	USA	09/631,089*	PEND.	99-2850	Lu, Frank, Edwards	Method of Polishing a Semiconductor Wafer	SPLR	MEMC (US)
2737	USA	09/633,532*	PEND.	00-2350	Zhang, Erk, Ragan,	Method for Processing a Semiconductor Wafer Using Double-Side Polishing	SPLR	MEMC(US)
2644	USA	09/633,958*	PEND.	99-3650	Zhang, Xin, Erk	Method and Apparatus for a Wafer Carrier Having an Insert		
2444.1	US FORMAL	09/661,745	PEND.	99-1750	McCallum, Alexander,	Process for Suppressing the Nucleation and/or Growth of Interstitial	SPLR	MEMC (US)
2443.1	U.S. FORMAL	09/661,821*	PEND.	99-1650	Mule=Stagno, Libbert	Method for Producing Czochralski Silicon Free of Agglomerated	SPLR	MEMC (US)
2442.1	FORMAL US	09/661,822*	PEND.	99-1600	Mule=Stagno & Falster	Process for Detecting Agglomerated Intrinsic Point Defects by	SPLR	MEMC (US)
2704	USA	09/711,198*	PEND.	98-5800	Fuerhoff, Banan, Holder	Method and Apparatus for Preparing Molten Silicon Melt From Polycrystalline Silicon Charge	SPLR	MEMC(US)
2642	USA	09/723,847*	PEND.	99-3600	Ruprecht	Defect Classification Using Scattered Light Intensities at Various Angels	SPLR	MEMC(US)
2763	USA	09/751,897*	PEND.	00-0900	Ries	Semiconductor Wafer Holder	SPLR	MEMC(US)
2702	USA	09/757,121*	PEND.	99-3950	Sreedharamurthy Banan, Holder & Ferry	Crystal Puller and Method for Growing Single Crystal Semiconductor Material	SPLR	MEMC (US)
2810	USA	09/684,266*	PEND.	00-0100	Ferry, Kimbel,	Heat Shield Assembly for Crystal Pulling Apparatus	SPLR	MEMC(US)
2738	USA	09/769,773*	PEND.	00-0400	Stefanescu, Brangenberg & Duly	Method and Apparatus for Reconditioning A Shipping Container	SPLR	MEMC(US)

2784	USA	09/681,160*	PEND.	00-2150	Anderson, Schmidt, Teasley, Buese & Callahan	Method and Apparatus to Place Wafers Into and Out of Machine	SPLR	MEMC(US)
2904	USA	09/811,982*	PEND.	00-3400	Phillips, Drafall, & McCallum	Crystal Puller and Method for Growing Monocrystalline Silicon Ingots	SPLR	MEMC(US)
2581	USA	09/815,508*	PEND.	99-2250	Ferry, Schrenker Banan	Heat Shield Assembly for Crystal Puller	SPLR	MEMC(US)
2520	USA	09/817,929*	PEND.	99-2600	Stanton	Method for Evaluating A Wafer Cleaning Operation	SPLR	MEMC(US)
2919	USA	09/834,118*	PEND.	00-2900	Iwamoto, Lenk, Schmidt, Spohr, Stanton	Method of Calibrating a Semiconductor Wafer Drying Apparatus	SPLR	MEMC(US)
2782	USA	09/834,819*	PEND.	00-1750	Blume	*System and Method for Reconditioning a Chiller*	SPLR	MEMC(US)
2765	USA	09/865,083*	PEND.	00-2300	Fei, Yang	A Method for Calibrating Nanotopographic Measuring Equipment	SPLR	MEMC(US)
2903	USA	09/892,002*	PEND.	00-3550	Lu, Banan, Tao, Ferry & Cherko	Crystal Puller and Method for Growing Monocrystalline Silicon Ingots	SPLR	MEMC(US)
2992	USA	unknown*	PEND.	01-1000	Albrecht, Hull, *Vadnais*	Polishing Apparatus, Polishing Head and Method	SPLR	MEMC (US)

2987	USA	unknown*	PEND.	00-2950	Ng, Jose, Hensiek, Albrecht	Apparatus and Process for Producing Polished Semiconductor Wafers	SPLR	MEMC (US)
2523.1	US FORMAL	09/896,945*	PEND.	99-1100	Kulkarni, Erk, Schmidt	Process for Etching a Silicon Wafer	SPLR	MEMC (US)
2788.1	US FORMAL	09/928,559*	PEND.	98-2350	Zhang, Erk, Xin	Method for Processing a Semiconductor Wafer Using Two-Stage	SPLR	MEMC (US)
2739.1	US FORMAL	09/797,391*	PEND.	00-0700	Keller	Statistical Control Method for Proportions with Small Sample Sizes	SPLR	MEMC(US)
2579	US PROV (related to 2340)	60/245,610*	11/2001	99-1800	Falster, Voronkov	Process for Preparing Low Defect Density Silicon Using High Growth Rates	SPLR	MEMC(US)
2579.1	US FORMAL	09/871,255*	PEND.	99-1801				
2808	US PROV	60/257,646*	12/2001	00-1100	Holder, McGuire, Burger	Process for Monitoring the Gaseous Environment of a Crystal Puller for Semiconductor Growth	SPLR	MEMC(US)
2340	US PROV (related to 2579)	60/252,715*	11/2001	98-5400	Voronkov, Falster, Banan	A Method for the Production of Low Defect Density Silicon	SPLR	MEMC(US)
2340.1	US FORMAL	unknown*	PEND.	98-5401				
2440	US PROV	60/259,000*	12/2001	99-1050	Mohr, Mule=Stagno Fei, Banan	Silicon Wafers Substantially Free of Oxidation Induced Stacking Faults	SPLR	MEMC(US)

2734	US PROV	60/258,414*	12/2001	00-1050	Ries, Wilson, Standley Shive, Rossi	Semiconductor Wafer Manufacturing Process	SPLR	MEMC(US)
2441	US PROV	60/258,296*	12/2001	99-1250	Sreedharamurthy, Banan, Holder	Apparatus and Process for the Preparation of Low-Iron Single Crystal Silicon Substantially Free of Agglomerated Intrinsic Point Defects	SPLR	MEMC(US)
2462	US PROV	60/256,783*	12/2001	98-6050	Falster	Process for Reclaiming Semiconductor Wafers and Reclaimed Wafers	SPLR	MEMC(US)
2811	US PROV	60/249,854*	11/2001	00-2750	Kommu, Wilson	High Throughput Epitaxial Growth by Chemical Vapor Deposition	SPLR	MEMC(US)
2960	US PROV	60/264,415*	01/2002	01-0150	Kim, Kimbel Libbert & Banan	Low Defect Density Silicon Substantially Free of Oxidation Induced Stacking Faults	SPLR	MEMC(US)
2806	US PROV	60/259,362*	01/2002	00-1400	Falster, Voronkov, Mutti & Bonoli,	Process for Preparing Single Crystal Silicon Having Improved Gate Oxide Integrity	SPLR	MEMC(US)
2880	US PROV	60/280,035*	03/2002	00-0450	Vasat, Stefanescu, Torack & Wilson	Thermal Annealing Process for Producing Silicon Wafers With Improved Surface Characteristics	SPLR	MEMC(US)
2521	US PROV	60/280,680*	03/2002	99-2750	Grabbe, Doane	Solution Compositions and Process for Etching Silicon	SPLR	MEMC(US)
2764	US PROV	60/283,103*	04/2002	00-1650	Binns	Control of Thermal Donor Formation in High Resistivity CZ Silicon	SPLR	MEMC(US)
2748	US PROV	60/285,180*	04/2002	00-1600	Borgini, Gambaro, Ravani, Ries, Sacchetti & Standley	A Method for the Preparation of an Epitaxial Silicon Wafer with Intrinsic Gettering	SPLR	MEMC(US)