Form PTO-1595 RI U.S. DEPARTMENT OF COMMERCE (Rev. 03/01) U.S. Patent and Trademark Office OMB No. 0651-0027 (exp. 5/31/2002) 102688079 To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. Name of conveying party(ies): 2. Name and address of receiving party(ies) 1) Mei-Yin Shen 5-0CM Name: Taiwan Semiconductor Manufacturing Co., Ltd. Internal Address: ______ Additional name(s) of conveying party(les) attached? Yes V No 3. Nature of conveyance: Merger ✓ Assignment Street Address: No. 8, Li-Hsin Road 6 Security Agreement Change of Name Science Based Industrial Park Other City: Hsin-Chu State: Zip: Country: Taiwan 300-77 R.O.C. Execution Date: February 11, 2004 Additional name(s) & address(es) attached? 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) 10/681,619 B. Patent No.(s) Additional numbers attached? Yes V No 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: 7. Total fee (37 CFR 3.41).....\$\,\delta\$0.00 Name: William H. Murray, Esquire Enclosed Internal Address: Duane Morris LLP Authorized to be charged to deposit account 8. Deposit account number: Street Address: One Liberty Place City: Philadelphia State: PA Zip: 19103 DO NOT USE THIS SPACE 9. Signature. Gerry K. Kita 03/03/2004 Name of Person Signing Date 10681619 Total number of pages including cover sheet, attachments, and documents: 03/08/2004 DBYRNE 00000027 041679 01 FC:8021 40.00 DA

Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

Attorney Docket No. N1085-00169 [TSMC 2002-1146]

ASSIGNMENT AND AGREEMENT

For value received, I, Mei-Yin Shen, hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd., with its principal place of business located at No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to TOOL RESERVE FOR SINGLE FABRICATION AND HOMOGENOUS MES described in Application Serial No. 10/681,619 filed 10/08/2003 for Letters Patent of the United States and all the rights and privileges in said application and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof that may be granted in the United States for said inventions; and I also concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

I authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from me, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

I hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

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Attorney Docket No. N1085-00169 [TSMC 2002-1146]

I agree that, when requested, I shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Dated: Feb. 11, >004

Mei-Yin Shen

Mei-Yin Shen

Residence: 5F., No. 96, Dongming St., Hsinchu City 300, Taiwan (R.O. C.)

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