



Applied Materials Ships Taiwan's 100th SACVD System to WSMC; Almost 500 Sub-Atmospheric CVD Systems Installed Worldwide

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HSINCHU, Taiwan--(BUSINESS WIRE)--Oct. 5, 1998--Applied Materials, Inc., the world's leading supplier of CVD (chemical vapor deposition) equipment to the semiconductor industry, announces the shipment of its 100th SACVD (Sub-Atmospheric CVD) system to Taiwan. The company's SACVD(TM) BPSG Centura(R) system was shipped to Worldwide Semiconductor Manufacturing Corp. (WSMC), a new foundry in Hsinchu, Taiwan. Nearly 500 SACVD systems have been installed in production worldwide for dielectric CVD applications covering several generations of semiconductor designs.

"Our evaluation confirmed Applied Materials' SACVD technology's reputation for outstanding film quality and productivity in dielectric CVD applications," noted Dr. P. H. Chang, vice president of WSMC. "Applied Materials' superior service and support in Taiwan also was a factor in our decision to choose this system for our new production line."

Tom St. Dennis, president of Applied Materials' Planarization and Dielectric Deposition Product Business Group, said, "We owe a great deal to our customers in Taiwan, whose encouragement and technical assistance has been invaluable in helping our product meet steadily advancing technical requirements over the past few device generations. We look forward to continuing this relationship as we assist WSMC and our other customers achieve the most cost-effective manufacturing solutions.

"SACVD has played a key role in enabling the semiconductor industry to move into deep submicron geometries when mainstream plasma-enhanced CVD technologies had reached the limit of their gap-filling ability. Our combination of single-wafer architecture, TEOS-ozone chemistry and controlled pressure was a primary technology driver enabling dielectric deposition for sub-half micron devices, and it is still effective down to 0.18-micron and 0.15-micron designs for many dielectric layers," said St. Dennis.

Applied Materials introduced the SACVD technology in 1994 on its Precision 5000(R) platform. Using TEOS (tetraethylorthosilicate) and Ozone (O3) chemistry at near-atmospheric pressure, SACVD quickly proved its ability to achieve excellent step coverage, void-free gap-filling and superior planarization characteristics in high aspect ratio structures down to 0.25 micron with high throughput and reliable operation.

Today, SACVD technology has been further enhanced with the Giga-Fill(TM) SACVD Centura system, which extends the technology's gap-filling capability to high aspect ratio applications on sub-0.18 micron devices. As the industry's TEOS/O3 market leader, Giga-Fill is the only TEOS/O3 system to repeatedly demonstrate up to 40,000 mean wafers between cleans (MWBC), with greater than 90% uptime.

The market for atmospheric pressure and sub-atmospheric pressure CVD (APCVD and SACVD) equipment was estimated by Dataquest at \$518 million in 1998, with projected growth to \$816 million by 2003. Dataquest estimated the market for dielectric CVD at \$1.55 billion in 1998, growing to \$3.41 billion by 2003.

Worldwide Semiconductor Manufacturing Corporation (WSMC) is a start-up wafer foundry venture focused on deep submicron manufacturing. The company is headquartered in Science Based Industrial Park (SBIP), Hsinchu, Taiwan. WSMC plans to build two fabs within three years, both located in SBIP. WSMC broke ground on its first fab in March 1997, with pilot production expected to begin in Q3 1998. The 30,000 wafer/month, 8-inch wafer facility is designed for 0.35 micron to 0.18 micron design rules. WSMC's web site is <http://www.wsmc.com>.

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the Nasdaq National Market System under the symbol, "AMAT." Applied Materials' web site is <http://www.AppliedMaterials.com>.