



Applied Materials Enters Mask Metrology Market with High-Performance SEM Technology; New RETicleSEM System Delivers Unmatched Measurement Precision and Imaging Performance

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SANTA CLARA, Calif.--(BUSINESS WIRE)--Sept. 9, 2003--Applied Materials, Inc. introduces its Applied RETicleSEM(TM) system, the industry's only CD-SEM* to offer sub-1nm precision for 65nm-generation masks. The RETicleSEM system's high performance is enabled by its patented SEM column with 2.8nm resolution and a unique 15 degree electronic tilt capability for sidewall and edge profile analysis. The RETicleSEM system is based on Applied Materials' proven NanoSEM(TM) 3D platform, which is known for its excellent production-worthiness and reliability, with more than 100 systems installed worldwide.

The Applied RETicleSEM system provides high-precision measurements on a broad range of materials, including photoresist, glass, chrome and MoSi. It supports various mask applications, including pre/post-etch resist reticles, attenuated and alternating phase-shift masks and other advanced mask technologies. The system also measures both masks and wafers, allowing chipmakers to cross-reference patterns printed on a wafer to the mask, to assure production quality.

"The new RETicleSEM system is Applied Materials' first entry into the mask metrology market, broadening our mask product line to include pattern generation, etch, inspection and metrology," said Gilad Almogy, vice president and general manager of Applied Materials Process Diagnostics and Control product business group. "This system provides maskmakers with the industry's most technologically advanced and production-worthy CD-SEM system to help overcome the daunting challenges of 65nm generation and beyond masks. With the RETicleSEM system, maskmakers now can easily and accurately control CD to enhance mask quality and improve manufacturing cycle time."

With the most advanced SEM column and 3D electronic tilt capability, the RETicleSEM provides more information about mask topography than ever before available, enabling maskmakers to greatly increase the number of measurements per mask, while improving metrology performance. Like the NanoSEM 3D, the RETicleSEM system's fully automated operation executes the recipe and produces a detailed report without operator intervention, contributing to very high throughput.

Multiple RETicleSEM systems have been shipped to customers. According to Gartner Dataquest, a market research firm, the market for mask metrology systems is expected to total \$15 million in 2003, and is expected to grow to \$44 million by 2005.

Applied Materials, the largest supplier of products and services to the global semiconductor industry, is one of the world's leading information infrastructure providers. Applied Materials enables Information for Everyone(TM) by helping semiconductor manufacturers produce more powerful, portable and affordable chips. Applied Materials' web site is www.appliedmaterials.com.

*Critical Dimension Scanning Electron Microscope

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